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, 2022 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 210,680,834 Common Shares outstanding as at December 31, 2022.

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 ☒ 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 ☒ 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 ☐
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. ☐

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. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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 (the "**CIM**") — *CIM Definition Standards on Mineral Resources and Mineral Reserves*, adopted by the CIM Council, as amended (the "**CIM Standards**"). NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and 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" as defined in accordance with NI 43-101 and the CIM Standards.

Further to recent amendments, mineral property disclosure requirements in the United States (the " **U.S. Rules**") are governed by subpart 1300 of Regulation S-K of the U.S. Securities Act of 1933, as amended (the "**U.S. Securities Act**") which differ from the CIM Standards. 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 U.S. Rules and will continue to provide disclosure under NI 43-101 and the CIM Standards. 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 U.S. Rules, which differ from the requirements of NI 43-101 and the CIM Standards. Pursuant to the new U.S. Rules, the SEC recognizes estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources." In addition, the definitions of "proven mineral reserves" and "probable mineral reserves" under the U.S. Rules are now "substantially similar" to the corresponding standards under NI 43-101. 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. 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 and CIM Standards, there are differences in the definitions under the U.S. Rules and CIM Standards. 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 U.S. 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, 2022, 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, 2022, the Registrant's disclosure controls and procedures were effective. See "Disclosure and Internal Control Procedures" in Management's Discussion and Analysis for the fiscal year ended December 31, 2022, 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 Reporting1 in the Registrant's Audited Consolidated Financial Statements for the fiscal years ended December 31, 2022 and 2021, 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, 2022 and 2021, 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, 2022.

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, 2022.

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, 2022, 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, 2022, 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, 2022, 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, 2022.
1.2	Management's Discussion and Analysis for the fiscal year ended December 31, 202 2.
1.3	Audited Consolidated Financial Statements for the fiscal years ended December 31, 202 2 and 2021.
23.1	Consent of Deloitte LLP.
23.2	Consent of Martin Wafforn.
23.3	Consent of Christopher Emerson.
23.4	Consent of Americo Delgado.
23.5	Consent of Alain Mainville.
23.6	Consent of Eric Lachapelle.
23.7	Consent of Dave Felsher.
23.8	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 22, 2023

/s/ "Delaney Fisher"

By: Delaney Fisher

Title: SVP Associate General Counsel and Corporate Secretary



Annual Information Form

For the Year Ended December 31, 2022

February 22, 2023

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

www.panamericansilver.com

PAN AMERICAN SILVER CORP.
ANNUAL INFORMATION FORM

WHAT'S INSIDE

WHAT'S INSIDE	1
IMPORTANT INFORMATION ABOUT THIS DOCUMENT	2
CORPORATE STRUCTURE	9
GENERAL DEVELOPMENT OF THE BUSINESS	14
NARRATIVE DESCRIPTION OF THE BUSINESS	19
RISKS RELATED TO OUR BUSINESS	60
DIVIDENDS	85
MARKET FOR SECURITIES	86
DIRECTORS AND EXECUTIVE OFFICERS	87
CONFLICTS OF INTEREST	91
LEGAL PROCEEDINGS AND REGULATORY ACTIONS	91
INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS	91
TRANSFER AGENTS AND REGISTRAR	91
SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER	91
MATERIAL CONTRACTS	92
INTERESTS OF EXPERTS	92
EXCEPTIONS FROM NASDAQ CORPORATE GOVERNANCE REQUIREMENTS	92
ADDITIONAL INFORMATION	93
GLOSSARY OF TERMS	94
APPENDIX "A" - AUDIT COMMITTEE CHARTER	A-1

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, 2022 (the "2022 MD&A") for a detailed description and reconciliation of these non-GAAP measures. The 2022 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.

Included in the Silver Segment for 2022 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 imperial units 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 60, and our 2022 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;
- the sufficiency of our liquid assets to satisfy our 2023 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;
- 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 expectations with respect to successfully closing the Arrangement (as defined below), and the timing for the same;
- our expectation that the Arrangement, if completed, will result in a transformational growth in scale for Pan American;
- our expectation that the Arrangement, if completed, will meaningfully impact our production profile, increase our financial flexibility and enhance our ability to advance internal growth projects;
- our ability to take advantage of further strategic opportunities as they are identified and become available;
- expectations with respect to the anticipated impact of COVID-19 on our operations, assumptions related to the global supply and effectiveness of vaccines, the lessening or increase in pandemic-related restrictions, and the impacts on and duration of global supply chain of goods and services resulting from COVID-19;
- 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;
- our plan to provide our 2023 operating outlook and guidance in the second quarter of 2023 following completion of the Arrangement;
- the Escobal and Morococha mines remaining on care and maintenance, and the Manantial Espejo mine entering into the reclamation phase, in 2023;
- 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;
- the potential 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;
- our expectation that the ventilation shaft project at La Colorada mine will be completed in mid-2023;
- that we will continue to oppose the SEDATU (as defined below) process relating to La Colorada mine's surface lands;
- our expectation that UNDRIP and the UNDRIP Act (as those terms are defined below) are likely to result in more robust consultation processes with potentially affected Indigenous peoples;
- estimated exploration expenditures to be incurred on our various 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 meet climate-related goals 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;
- 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;
- our dividend policy;
- 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 costs of production; 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 peoples 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 risk that the Mexican Federal Economic Competition Commission will not approve the Arrangement;
- if the Arrangement is completed, our ability to successfully integrate the operations and employees of Yamana Gold Inc. ("Yamana") and its subsidiaries;
- if the Arrangement is completed, the risks associated with maintaining required credit ratings in respect of Pan American, Yamana and Yamana's $500 million aggregate principal amount of 2.63% senior notes due August 2031 and $300 million aggregate principal amount of 4.625% senior notes due December 2027 (collectively, the “Senior Notes”) by third party rating organizations
- Pan American will incur substantial costs in connection with the proposed Arrangement, even if the Arrangement is not completed;
- the consummation of the Arrangement may result in one or more ratings organizations taking actions which may adversely affect Pan American’s business, financial condition and operating results, as well as the market price of the Pan American Shares;
- the Arrangement Agreement may be terminated in certain circumstances;
- if the Arrangement is completed, the integration of Pan American and Yamana may not occur as planned;
- we may not realize the benefits of our newly acquired projects;
- there may be potential undisclosed liabilities associated with the Arrangement;
- failure to complete the Arrangement could also negatively impact the market price of the Pan American Shares;
- if the Arrangement is completed, Pan American will be subject to risks that Yamana currently faces with respect to its business and affairs
- 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 peoples, 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 and cost estimates, or the prices to be received before mineral reserves or mineral resources are actually mined;
- inadequate or unreliable infrastructure (such as roads, bridges, power sources and water supplies);
- environmental regulations and legislation;
- our ability to obtain, maintain, and, when necessary, defend challenges to surface rights or other access that are necessary for continuing and future operations and planned developments, including with respect to the La Colorada mine;
- 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, 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, or securities class actions or derivative lawsuits in connection with the Arrangement; 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 8 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 June 30, 2022, 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 October 30, 2022, by M. Wafforn, C. Emerson, and A. Delgado;
- a report relating to the Shahuindo mine entitled "Technical Report on the Shahuindo Mine, Cajabamba, Peru" dated effective November 30, 2022, by M. Wafforn, C. Emerson, and A. Delgado;
- 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 Martin Wafforn, P. Eng., Christopher Emerson, FAusIMM, Americo Delgado, P.Eng., Alain Mainville, P.Geo., Eric Lachapelle, P.Eng., Dave Felsher, P.Eng., 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

Unless otherwise indicated, all reserve and resource estimates included in this AIF and the documents incorporated by reference herein 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 (the "CIM") — *CIM Definition Standards on Mineral Resources and Mineral Reserves* , adopted by the CIM Council, as amended (the "CIM Standards"). NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and 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 AIF and the documents incorporated by reference herein use the terms "measured resources," "indicated resources" and "inferred resources" as defined in accordance with NI 43-101 and the CIM Standards.

Further to recent amendments, mineral property disclosure requirements in the United States (the "U.S. Rules") are governed by subpart 1300 of Regulation S-K of the U.S. Securities Act of 1933, as amended (the "U.S. Securities Act") which differ from the CIM Standards. 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 U.S. Rules and will continue to provide disclosure under NI 43-101 and the CIM Standards. 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 U.S. Rules, which differ from the requirements of NI 43-101 and the CIM Standards.

Pursuant to the new U.S. Rules, the SEC recognizes estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources." In addition, the definitions of "proven mineral reserves" and "probable mineral reserves" under the U.S. Rules are now "substantially similar" to the corresponding standards under NI 43-101. 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. 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 under the U.S. Rules are "substantially similar" to the standards under NI 43-101 and CIM Standards, there are differences in the definitions under the U.S. Rules and CIM Standards. 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 U.S. 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 consists of 400,000,000 Common Shares and there were 210,680,834 Common Shares issued and outstanding as at December 31, 2022. 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 (the "Tahoe Acquisition") of Tahoe, Pan American issued 313,887,490 contingent value rights (each, a "CVR") to Tahoe shareholders. Each CVR has a term of ten years and is exchangeable for 0.0497 of a Common Share upon first commercial shipment of concentrate following restart of operations at the Escobal mine. 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.

In connection with Pan American's proposed acquisition of all of the issued and outstanding common shares in the authorized share capital of Yamana (the "Yamana Shares") following the sale by Yamana of its Canadian assets, including certain subsidiaries and partnerships which hold Yamana's interests in the Canadian Malartic mine, to Agnico Eagle Mines Limited ("Agnico Eagle"), by way of a plan of arrangement (the "Arrangement") under the *Canada Business Corporations Act* (the "CBCA"), our shareholders approved the issuance of up to 156,923,287 Common Shares to the shareholders of Yamana as part of the consideration payable under the Arrangement.

More details about the Arrangement 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, 2022.

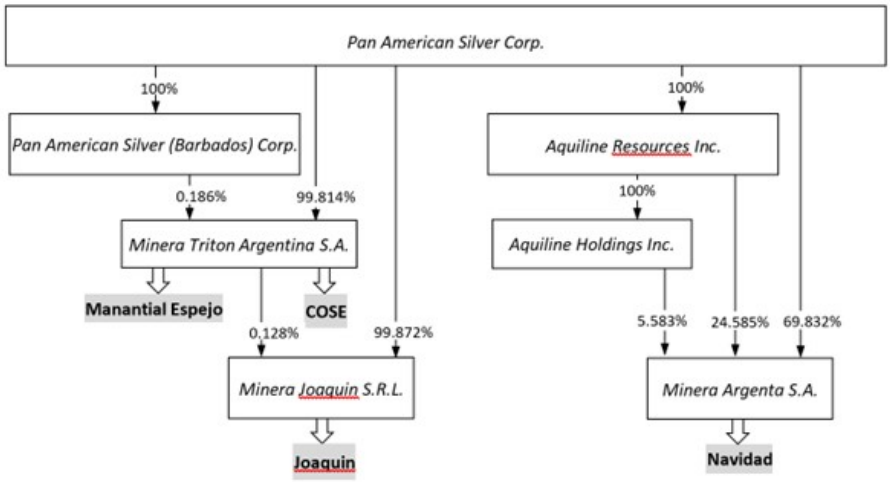
Name of Subsidiary	Jurisdiction
Tahoe Resources Ltd.	Alberta
0799714 B.C. Ltd.	British Columbia
Corner Bay Silver Inc. ("Corner Bay")	Canada
Lake Shore Gold Corp. ("Lake Shore")	Canada
Aquiline Resources Inc. ("Aquiline")	Ontario

Name of Subsidiary	Jurisdiction
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
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

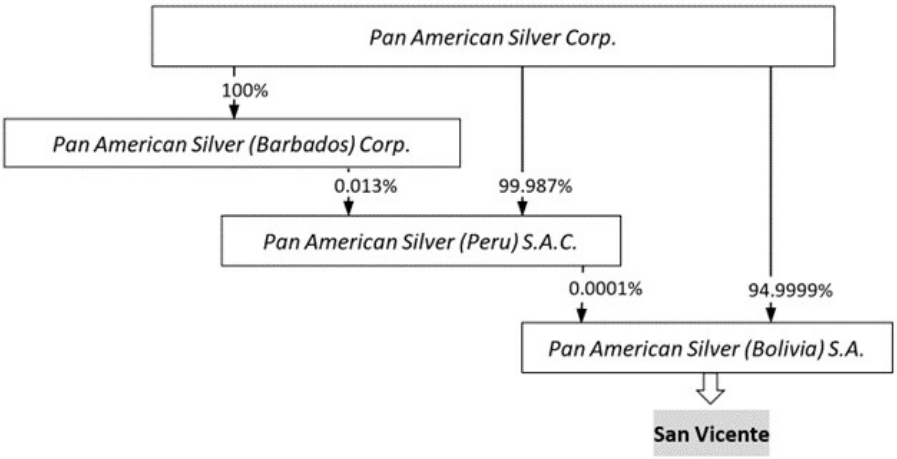
Corporate Organization by Material Mineral Property Location

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, 2022 and identify the main property asset interests (including non-material properties, as applicable) held by the respective entities[1].

Argentina Properties



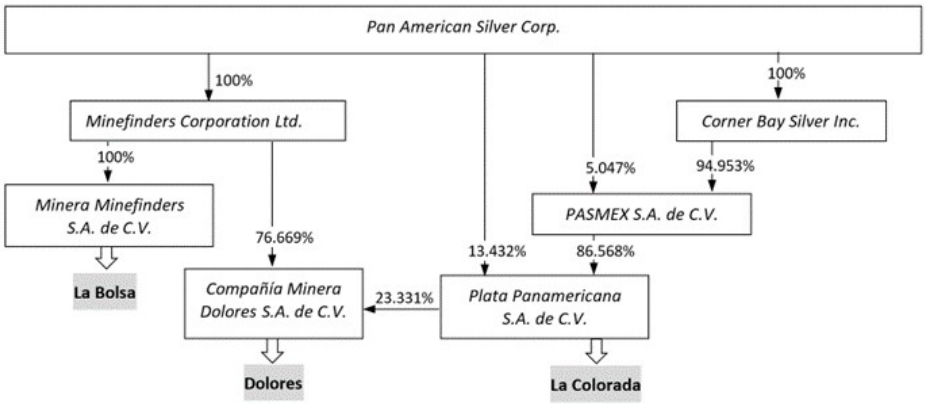
Bolivia Properties



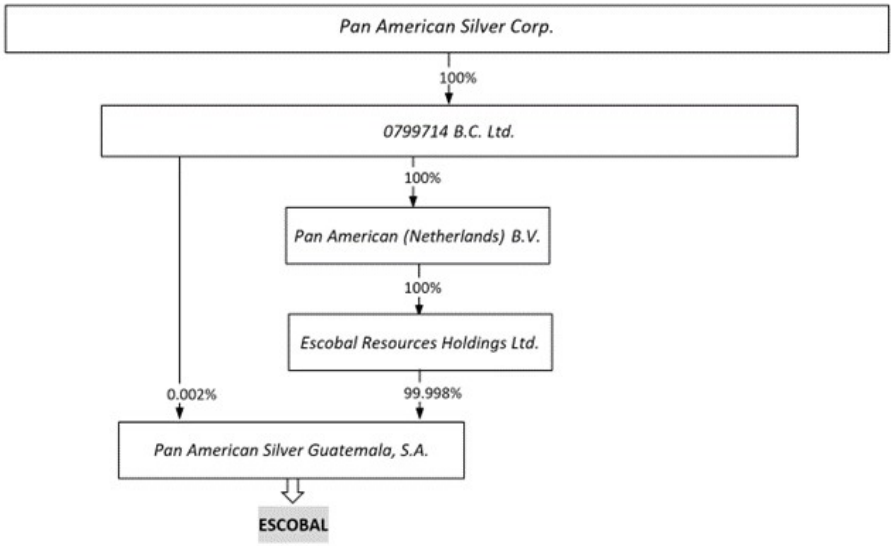
Canada Properties



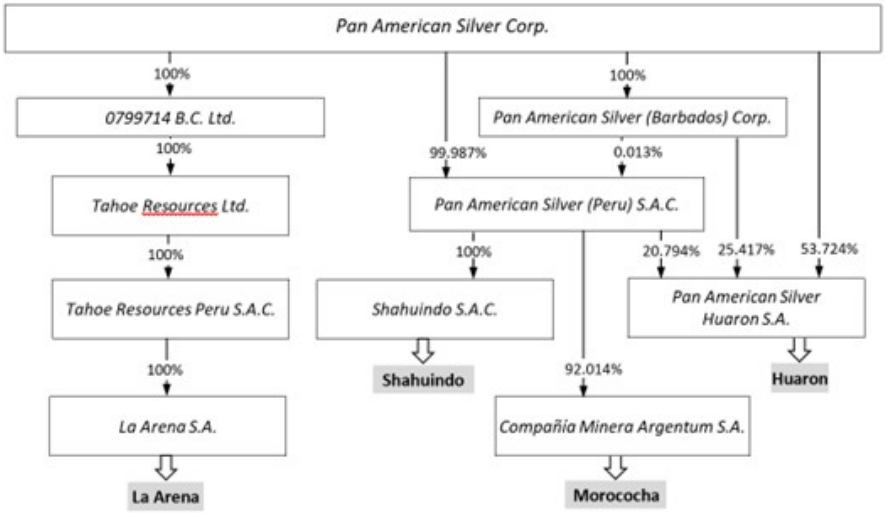
Mexico Properties



Guatemala Properties



Peru Properties



Note:

1. 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 0.0005% 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, 2022, 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.

With the completion of the Tahoe Acquisition in February 2019, 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 communities which is currently underway and which is being led 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.

Pan American, Agnico Eagle and Yamana entered into an arrangement agreement dated November 4, 2022 (the "Arrangement Agreement"), in connection with the proposed Arrangement pursuant to which Pan American will acquire all of the issued and outstanding Yamana Shares following the sale by Yamana of its Canadian assets to Agnico Eagle. Pursuant to the Arrangement, the Yamana shareholders will receive for each Yamana Share: (i) 0.1598 of a Common Share to be issued by Pan American; (ii) 0.0376 of a common share in the authorized share capital of Agnico Eagle (an "Agnico Share") to be issued by Agnico Eagle; and (iii) $1.0406 in cash to be paid by Agnico Eagle. The aggregate consideration represents a value of approximately $4.8 billion or $5.02 per Yamana Share, based on the closing price of our Common Shares and the Agnico Shares on November 3, 2022, the day prior to the announcement of the proposed Arrangement. Both Yamana and Pan American received shareholder approvals related to the Arrangement in their respective special meetings of shareholders held on January 31, 2023, and the final court order in respect of the Arrangement was granted by the Ontario Superior Court of Justice on February 6, 2023. The Arrangement is expected to be completed within the first quarter of 2023, subject to approval from the Mexican Federal Economic Competition Commission and satisfaction or waiver of certain other closing conditions.

Yamana is a leading Canadian-based precious metals producer with significant gold and silver production, development stage properties, exploration properties, and land positions throughout the Americas, including Canada, Brazil, Chile and Argentina. The Arrangement, if completed, will result in a transformational growth in scale for Pan American, adding Yamana's four producing mines from Latin America – the Jacobina mining complex in Brazil, the El Peñón and Minera Florida mines in Chile, and the Cerro Moro mine in Argentina – plus two development projects in Argentina, to Pan American's existing portfolio of eight producing mines and other non-operating and development projects in the Americas.

The following map depicts the location of our operating mines and certain of our exploration and non-operating projects as at December 31, 2022.



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	Our long-term growth over the years has been accomplished through a combination of acquisition, exploration, development and expansion efforts. The Tahoe Acquisition in February 2019 contributed significantly to our production, particularly gold, and we anticipate meaningful impacts to our future production profile if the Arrangement with Yamana completes. In 2022, we produced 18.5 million ounces of silver, which was slightly less than the 19.2 million ounces produced in 2021. Gold production was 552,500 ounces, slightly less than the 579,300 ounces produced in 2021.
Increase mineral reserves and mineral resources	Historically, we have achieved increases in our mineral reserves and mineral resources through exploration and acquisitions. Pan American invests in mine and near-mine exploration programs throughout the silver and gold price cycles and to replace and add to our mineral reserves and mineral resources. However, much like production, our ability to conduct exploration between 2020 and 2022 was hampered by COVID-19. Effective June 30, 2022, our proven and probable silver and gold mineral reserves were approximately 514.9 million ounces and 3.6 million ounces, respectively, which was less than the 529 million ounces of silver and 4.2 million ounces of gold as at June 30, 2021. Similarly, our measured and indicated mineral resources (excluding mineral reserves) were approximately 933.0 million ounces of silver and 8.1 million ounces of gold effective the end of June 2022, which represents an increase of approximately 115 million ounces of silver and a decrease of 0.2 million ounces of gold compared to our June 30, 2021, estimates. Please refer to the complete mineral resource and mineral reserve information for each of our material properties under the heading "Mineral Reserve and Mineral Resource Estimate Information" 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 Tahoe Acquisition, we began reporting Cash Costs[1] and AISC[1] on both a Silver Segment and Gold Segment basis in order to better reflect our assets' production profiles. For 2022, Silver Segment Cash Costs and AISC were $12.72 and $16.56 per silver ounce sold, respectively, and Gold Segment Cash Costs and AISC in 2022 were $1,113 and $1,459 per gold ounce sold which excludes $98.9 million of net realizable value ("NRV") adjustments related to the impairment of Dolores in Q2 2022, respectively.

Acquire additional silver properties	We actively investigate and evaluate strategic opportunities to acquire promising silver production, development and exploration properties primarily in those jurisdictions where we are presently active. In November 2022, we announced the proposed Arrangement between Pan American, Agnico Eagle and Yamana. Yamana is a Canadian-based precious metals producer with significant gold and silver production, development stage properties, exploration properties, and land positions throughout the Americas, including Brazil, Chile and Argentina. The proposed acquisition of Yamana is consistent with Pan American's vision to be the world's premier silver mining company. In February 2019, we acquired all of the issued and outstanding shares of Tahoe pursuant to the Tahoe Acquisition. 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 peoples, as well as the renewal of certain other permits. In addition to the Arrangement with Yamana and the Tahoe Acquisition, we acquired 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 page60 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.
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 2021 has been incorporated into our 2021 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
2022	• Announced the proposed Arrangement between Pan American, Yamana and Agnico Eagle, which is expected to be transformative for Pan American in terms of scale, provide meaningful increases in our production of gold and silver, increase our financial flexibility, and enhance our ability to advance internal growth projects, such as the La Colorada Skarn project. • Produced 18.5 million ounces of silver and 552,500 ounces of gold. Despite ventilation issues at the La Colorada mine, it continued to lead our silver production with 5.9 million ounces of silver produced in 2022. Huaron and Manantial Espejo followed with 3.7 million and 3.5 million ounces respectively. Shahuindo led gold production with 151,400 ounces of gold produced, followed closely by the Dolores mine and the Timmins West and Bell Creek mines (combined) with 136,900 and 134,600 ounces of gold produced, respectively. • We successfully completed 77,745 metres of underground and surface drilling on the La Colorada Skarn project during 2022, discovering and extending the high-grade silver mineralization zone located to the west of the main skarn resource. • We released an updated mineral resource estimate on the La Colorada Skarn project in September 2022 assuming a sub level caving underground mining method and reported an indicated mineral resource of 95.9 million tonnes with grades averaging 31 grams per tonne ("g/t") silver, 1.28% lead and 2.77% zinc containing 94.4 million ounces of silver, 1.2 million tonnes of lead and 2.7 million tonnes of zinc, and an inferred mineral resource estimate of 147.8 million tonnes with grades averaging 28 g/t silver, 1.04% lead and 2.29% zinc and containing 132.9 million ounces of silver, 1.5 million tonnes of lead, and 3.4 million tonnes of zinc, using a cut-off value of $45 per tonne after accounting for transportation, smelting and refining costs. • Completed 25,000 meters of drilling at Huaron in 2022 and added 7.0 million ounces of silver mineral reserve in the updated mineral resource and reserve statement in August 2022. Successful exploration drilling to the southeastern portion of the deposit at shallower depths has identified new structures. • The La Colorada mine had a very successful year for exploration with almost a 50% increase in the inferred mineral resource for silver ounces while replacing 108% of the mined production with new mineral reserves. The increase in inferred mineral resources came from the Candelaria mine and the discovery of new veins as well as along strike and down dip projection of the known veins and mineralisation. • The pre-consultation phase of the ILO 169 consultation process relating to the Escobal mine in Guatemala was concluded and the process advanced to the consultation phase. • We placed the Morococha operation on care and maintenance and began to explore strategic alternatives for the asset. • As part of our continued commitment to ESG practices and responsibilities, in May 2022 we released our 2030 greenhouse gas emissions reduction goal to reduce our emissions by 30% from the 2019 baseline by 2030.
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. The La Colorada mine continued to lead our silver production with 5.2 million ounces of silver produced in 2021. Huaron and Manantial 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. • We successfully completed 72,500 metres of underground and surface drilling on the La Colorada skarn increasing the footprint of the mineralisation from 500 metres x 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.
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-19. 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.

Outlook for 2023

Pan American, Agnico Eagle and Yamana entered into the Arrangement Agreement in November 2022 in connection with the proposed Arrangement pursuant to which Pan American will acquire all of the issued and outstanding Yamana Shares following the sale by Yamana of its Canadian assets to Agnico Eagle as previously described. Both Yamana and Pan American received shareholder approvals related to the Arrangement in their respective special meetings of shareholders held on January 31, 2023, and the final court order in respect of the Arrangement was granted by the Ontario Superior Court of Justice on February 6, 2023. The Arrangement is expected to be completed within the first quarter of 2023, subject to approval from the Mexican Federal Economic Competition Commission and satisfaction or waiver of certain other closing conditions.

We plan to provide our 2023 operating outlook and guidance following the completion of the Arrangement, which would be inclusive of the Latin American assets that are expected to be acquired through the Arrangement, as well as a consolidated forecast for annual general and administrative, exploration and project development costs.

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 2022, 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, 2022, 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]	641,100	938,400	100,500	346,000	642,600	7,956,600	13,754,800	11,486,100	1,694,300	37,560,500
Grade										
Silver - g/t	316	146	112	250	195	18	6	1		
Gold - g/t	0.26	0.24	0.21		1.47	0.64	0.50	0.33	2.60	
Zinc %	1.85	2.25	3.12	3.29						
Lead %	1.05	1.52	0.96	0.30						
Copper %		0.63	0.60	0.18						
Production										
Ounces Silver[6]	5,927,200	3,659,700	324,300	2,525,600	3,462,800	2,242,000	260,300	37,600	15,300	18,454,800
Ounces Gold[6]	3,300	900	100	100	26,600	136,900	151,400	98,500	134,600	552,500
Tonnes Zinc[7]	10,020	16,430	2,670	9,510						38,620
Tonnes Lead[7]	5,650	11,440	730	890						18,710
Tonnes Copper[7]	10	4,300	470	480						5,270

Notes:

1 Morococha data represents our 92.3% interest in mine production based on ownership of the operating entity. Morococha was placed on care and maintenance in February 2022.

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, 2022 and December 31, 2021 was as follows:

Product Revenue	2022	2021
	($000's)	($000's)
Silver and Gold Doré	1,106,793	1,177,388
Zinc Concentrate	98,341	119,059
Lead Concentrate	167,673	145,524
Copper Concentrate	65,096	133,025
Silver Concentrate	56,815	57,754
Total	**1,494,718**	**1,632,750**

Additional segmented information is set forth in Note 28 to Pan American's Audited Consolidated Financial Statements for the year ended December 31, 2022, and further information on individual mine performance and other metrics is presented in the 2022 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 25 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. Concentrate production from the La Colorada mine is delivered to the buyers at various ports and smelting facilities in Mexico. Concentrate production from the Huaron mine 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. Concentrate production from the San Vicente mine is delivered to the buyers at ports in Chile and Peru. 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 2022, we had approximately 6,200 employees and about 6,820 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 7,210 employees and contractors as of December 31, 2022, while our Mexican operations had approximately 3,440 total employees and contractors. Our Argentina and Bolivia operations had approximately 510 and 640 employees and contractors, respectively, and there were approximately 280 employees and contractors in Guatemala. In Canada, our operations had about 860 employees and contractors, and approximately 70 employees 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. However, we are deeply saddened to report that there were three fatal accidents at our operations in 2022. We have conducted full accident investigations with assistance from our local safety committees and relevant authorities and seek to use these accidents as learning tools to prevent recurrences in accordance with our commitment to improving safety performance.

We are advancing several additional safety initiatives, including working with a third-party consultant to incorporate the 'do safety differently' concept, the expansion of our training and the technical abilities of our workforce, focussing on the development of leadership skills, and raising even greater awareness and prioritization of safety. In 2022, Pan American joined the Mining Safety Roundtable, a group of participant companies that are committed to eliminating fatalities and major incidents by sharing strategies and best practices to address mining industry hazards and risks. 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 2020, 2021 or 2022.

Working Capital and Liquidity Position

As at December 31, 2022, we had cash and cash equivalents and short-term investment balances of $142.3 million and working capital of $423.5 million. The Company also maintained a long-term investment in Maverix which was sold in January 2023 for $105.3 million net of transaction costs. Total debt of $226.8 million included $66.8 million related to lease liabilities and construction loans and $160.0 million related to the Facility to fund transaction costs related to the Arrangement with Yamana.

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 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 $160.0 million as at December 31, 2022, which is primarily related to the funding of $150 million towards the termination fee payable by Yamana to Gold Fields Limited (“Gold Fields”) in connection with the proposed transaction between Yamana and Gold Fields that was terminated as a result of the Arrangement constituting a superior proposal by Pan American and Agnico.

If the Arrangement with Yamana closes, Pan American would assume Yamana’s obligations with respect to the Senior Notes. The Senior Notes contain certain change of control provisions, the triggering of which would result in a mandatory repurchase of the Senior Notes in accordance with their terms. We do not currently expect that the change of control provisions would be triggered. However, to support the potential financial requirements and to provide financial flexibility and liquidity in connection with the Arrangement, we have obtained a commitment from a Canadian chartered bank to underwrite an amendment to the Facility to increase it to $750 million following closing of the Arrangement as well as to include an additional term loan of up to $500 million to be available for a limited period of time in connection with the Arrangement.

Our financial position as at December 31, 2022, and the operating cash flows that are expected over the next twelve months lead management to believe that our liquid assets and available credit from the Facility are sufficient to satisfy our 2023 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 TSM performance system, a world class management standard designed to help mining companies responsibly drive sustainability performance and manage risk. In 2022, we achieved or maintained Level A or higher for all TSM protocols at all operations, except for the Safety protocol at Huaron, Dolores and La Arena where we had fatal accidents.

During 2022, 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 corporate 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. The ability to complete the environmental audit program was partially affected by pandemic-related travel restrictions in 2022; however the Huaron, La Arena, Shahuindo and La Colorada mine audits were completed. In intervening years between audits, the implementation of the corrective actions required by each audit is monitored and confirmed. The Timmins, Dolores, Escobal, San Vicente and Manantial Espejo mines' corrective actions were found to be satisfactory in 2022.

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 2022, tailings management audits and follow-up reviews were undertaken at the Huaron and Timmins mines. Dam safety reviews, or annual inspections in the case of heap leach facilities, were conducted in 2022 by the respective third-party engineers of record on 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 2022, an independent review was carried out at Dolores, which is a heap leach operation. The TSM Tailings Management protocols do not apply directly to heap leach operations or water reservoirs, however, we have adapted these protocols as best practices to heap leach operations. All tailings storage facilities and heap leach pads are in satisfactory condition and monitoring results are normal.

Our Timmins, Dolores, La Colorada, Escobal, La Arena, Shahuindo, Huaron and Manantial Espejo mines were all inspected by government agencies in 2022 and no material environmental issues were recorded.

In the financial year ended December 31, 2022, our environmental expenditures for concurrent reclamation were approximately $4.2 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 $296.2 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 2021, we conducted sustainability audits at the San Vicente, Huaron, Morococha, Shahuindo, La Arena, La Colorada and Dolores mines and in 2022, we conducted sustainability audits at Manantial Espejo and the Timmins West and Bell Creek 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 of Directors 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, as well as the Voluntary Principles on Security 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, including discrimination and harassment. In 2022, all of our operations met the internal audit requirements of the Voluntary Principles on Security and Human Rights and the UNICEF Child Rights and Security Checklist, with three of our Peruvian sites being externally assessed as part of our ongoing external assessment process. In 2022, we also conducted a human rights impact assessment and due diligence process relating to the Escobal mine. During the year, we achieved signatory status with the Voluntary Principles on Security and Human Rights Institute, which has helped us improve our approach to maintaining the safety and security of our operations within an operating framework that supports and respects human rights and fundamental freedoms. We also became observers of the International Code of Conduct Association ("ICoCA") for Security Providers. Our Latin America security providers are required to be members of the ICoCA for Security Providers and work towards certification if the mining operation has at least three years of life remaining. The Code of Conduct provides a framework for our security providers to improve their services with focus on human rights and humanitarian law. We received external limited assurance from Apex Companies LLC for our compliance with the World Gold Council Conflict Free Standard. This Standard provides us with an approach for identifying and minimizing the risk that our goldproduction could cause, contribute to, or support unlawful armed conflict. In 2022, we completed the second module of our Building Respect together program ("awareness" module) and covered all of our contractors and employees. We also trained key supervisors and managers in harassment prevention.

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 peoples in the regions where we operate 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, 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.

In addition to other goals and objectives, we believe that it is important to include ESG matters in our corporate goals. Unfortunately, we did not meet our most important goal of zero fatalities, as we suffered three fatal accidents in 2022, one at each of the Huaron, Dolores, and La Arena mines. As a result of the fatalities, we also fell short on our lost time injury severity target. On our key environmental metrics, we exceeded our goals, including reduction of greenhouse gas emissions, energy use and water use compared to the 2022 base case. We also met all of our human capital, inclusion and diversity, and governance goals. However, we did not meet our social goal regarding grievances closed, environmental audit or biodiversity targets and our waste recycling was less than our goal due to less recyclable waste generation. We remain committed to increasing the representation of women in our workforce.

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. Climate-related goals were incorporated into our 2021 Sustainability Report 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 2022 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, 2022.

Our 2021 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 2021 Sustainability Report is available on our website at www.panamericansilver.com. Our 2022 Sustainability Report will be made available on our website once completed.

Please refer to our 2022 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, 2022: 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 2022. 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 60 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 ("km") south of the city of Durango and 155 km 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 2022, the Maverix Gold Stream resulted in Maverix acquiring 2,659 ounces of gold (2021 – 2,239 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, 2022, Plata Panamericana had successfully applied approximately $1.1 million 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-2022 (while Plata Panamericana was applying the previously paid Zacatecas Tax payments against other taxes and fees payable), Plata Panamericana paid approximately $0.1 million 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 60 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 holes had been diamond 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 newly discovered 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 two 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 use fire assay with gravimetric finish for gold and acid digestion with ICP finish for silver, lead, zinc, and copper. Bureau Veritas uses 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 uses 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, 2022, are as follows:

La Colorada Mineral Reserves [1, 2, 3, 4]					
Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne	% Zinc	% L
Proven	3.8	340	0.23	2.02	1.
Probable	6.2	303	0.18	1.97	1.
TOTAL	10.0	317	0.20	1.99	1.

Notes:

1 Estimated using a price of $19 per ounce of silver, $1,300 per ounce of gold, $2,600 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.

4 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at the La Colorada mine, effective June 30, 2022, 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	1.9	216	0.14	-	1.30	0.76
Indicated	3.4	191	0.17	-	1.65	0.95
Inferred	14.9	195	0.20	-	1.89	1.05
Indicated Skarn[4]	95.9	31	-	-	2.77	1.28
Inferred Skarn[4]	147.8	28	-	-	2.29	1.04

Notes:

1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using a price of $19 per ounce of silver, $1,300 per ounce of gold, $2,600 per tonne of zinc and $2,000 per tonne of lead, except for the Skarn deposit, where metal prices of $22 per ounce of silver, $2,800 per tonne of zinc, and $2,200 per tonne of lead were used. At the Skarn deposit, a cut-off value of $45 per tonne, which used metallurgical recoveries of 87.4% silver, 88% lead, and 93% zinc 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.

4 Effective date for the La Colorada Skarn mineral resource estimate is September 13, 2022.

Three dimensional interpretations are made for 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. Three dimensional interpretations are also made for set two metre hanging wall and footwall dilution volumes, at least some of which are expected to be mined with each structure. The wireframe interpretations are filled with blocks and grade is estimated into each block using capped composites and a multi-pass Ordinary Kriging interpolation approach. An average density value is assigned to each block based on whether it is ore, hanging wall or footwall. The block model is classified into confidence categories based on the proximity and density of sample information in each block, as well as the interpretation and the experience of the mine geologists. The final block model is depleted annually for mining in the previous year and a value per tonne is applied to each block. The block model is imported into Mine Site Optimiser for the generation of economic stope shapes. Mineral resources that can be economically mined are converted to mineral reserves.

For the skarn, three dimensional interpretations of the geological units were completed and filled with blocks. Grade and density values were estimated for each geological unit using capped composites, multiple search passes and ordinary kriging or inverse distance interpolation methods. The block model was classified into cohesive confidence categories based on drillhole spacing and estimation confidence. A mineral value per tonne was calculated using assumed metal prices, metallurgical recoveries obtained from testing, and estimates for transportation of concentrates, payability and refining and selling costs. Reasonable prospects for eventual economic extraction were assessed by generating mineable shapes to constrain the model and are therefore

inclusive of some must-take low grade material. The total in-situ tonnes and grade were reported inside these constraining volumes.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation, and economic parameters, and are reduced for losses expected during mining. 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 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, and on-site smelting 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 83.9% for silver and 48.9% for gold in 2022. In the sulphide plant, recoveries in 2022 averaged 92.0% for silver, 63.5% for gold, 84.2% for lead, and 84.5% for zinc.

During 2022, we processed 641.1 thousand tonnes, producing 5.9 million ounces of silver, 3.3 thousand ounces of gold, 10.0 thousand tonnes of zinc, and 5.6 thousand tonnes of lead.

All precious metal doré produced at the La Colorada mine is sent to one arm's length precious metals refinery 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:

2022	**Revenue[1, 2]**	**Quantity Sold**
Silver and Gold in Doré	$12.9 million	717,043 ounces of silver 490 ounces of gold
Lead Concentrate[4]	$113.9 million	13,447 tonnes
Zinc Concentrate[4]	$29.3 million	17,649 tonnes
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

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, gold and copper. 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 has an electrical power purchase agreement with a third-party provider of renewable energy. Back up diesel power is available for some of the critical operating systems. 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 new Guadalupe Ventilation Shaft was permitted in 2022 and is currently in construction.

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 the La Colorada mine is prepared according to State of Nevada approved Standard Reclamation Cost Estimator ("SRCE") methodology is updated every year for unit costs and discount rates, and every other year for physical disturbance if necessary. Pan American has estimated the present value of site reclamation costs for the La Colorada mine to be approximately $7.0 million effective December 31, 2022. 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 2022, total capital additions at La Colorada were approximately $91.7 million, with $62.4 million invested in expenditures related to the expansion activities, including exploration and development of the La Colorada Skarn project, including partial advancing construction of the new concrete-lined shaft and completion of the refrigeration plant.

In 2022, direct operating costs at La Colorada were $98.3 million.

The determination of 2023 capital and operating costs has been deferred as a result of the pending Arrangement.

Exploration, Development, and Production

We currently plan to undertake approximately 59,000 metres of exploration drilling at the La Colorada mine, including the Skarn, in 2023. Production guidance for 2023 has been deferred as a result of the pending Arrangement.

(ii) Dolores Mine

Project Description, Location, and Access

The Dolores mine is an open pit silver-gold mine located in Chihuahua state, Mexico, approximately 250 km west of the city of Chihuahua. The main road access to the Dolores mine is via 92 km of unpaved roads leading north from Yepachic, Chihuahua. An unpaved landing strip suitable for light aircraft is located about 8 km from the mine and provides access for personnel.

The Dolores mine mineral rights are held under three contiguous mining concessions with a total area of 27,700 hectares. We make the required payments to maintain the mining concessions and have agreements in place granting surface rights and legal access to the mining operations. To our knowledge, all obligations required for the conduct of mining operations at the Dolores mine are currently in good standing.

Ejido Huizopa, a local ejido community, owns the majority of the surface rights on the Dolores mine. An ejido is an area of communal land registered with the National Agrarian Registry of Mexico and parceled out to community members for agricultural use. We have surface rights agreements with Ejido Huizopa and with several individual members of Ejido Huizopa dating from November 2006, which allow for 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. The agreement was renegotiated in 2009 so the initial 15-year period extends until 2024. Discussions on the terms of the 15-year extension are already in progress. 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. The EMD results in a further 0.5% royalty payable to the government of Mexico on gold and silver sales, such that the royalties to RG Mexico Inc. and the government of Mexico results in a combined total 2.5% on silver and 3.75% on gold. 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, however, subject to governmental taxes, fees and duties, including the SMD, 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 60 for a general discussion of the risks relating to our operations.

History

After some earlier work consisting of Placer mining, which began in the region of the Dolores mine in the 1860s and was, followed by lode mining in 1898, the Dolores mine lay idle until Minefinders acquired the Dolores mine in 1993.

We acquired the Dolores mine from Minefinders at the end of March 2012 and assumed control of open pit mining operations in April 2012. We have operated the mine since then, have built increased heap leach pad capacity, connected the mine to the Chihuahua electrical grid with a power line and constructed a pulp agglomeration plant. In addition, we commenced underground mining in 2016 and after nearly six years of mining put the underground mining operation on care and maintenance in April 2022.

Geological Setting, Mineralization, and Deposit Types

The Dolores mine 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 the Dolores mine. 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 five metres to ten 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 at the Dolores mine occurs within the San Francisco Breccia, a well-defined and continuous hydrothermal breccia and stockwork zone that occurs in the immediate footwall of the post-mineralization 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 millimetres, 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, staff and consulting structural geologists have carried out near mine surface geological and structural mapping, and surface sampling on the continuity of the San Francisco and Alma Maria structures. The Dolores mine has been in operation for some time and exploration has not been a focus. Mapping and sampling adjacent to the deposit has assisted in demonstrating continuity of the structures and aided in interpretation.

Drilling

From September 2016 until June 2022, we have carried out both surface and underground drilling. Drilling is conducted by private drilling contractors under the supervision of the mine geology department. Drilling is by diamond drilling from surface and underground and by reverse circulation drilling using industry standard drill machines and downhole survey tools.

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.

For Minefinders, samples were collected by truck from the Dolores mine by the commercial sample preparation laboratory in use at the time, which included Bondar-Clegg (since acquired by ALS) of Chihuahua, Mexico, ALS of Hermosillo, Mexico, or Inspectorate of Hermosillo, Mexico. For Pan American, the samples were collected weekly from site by the Durango laboratory of SGS until 2019. Currently, samples for offsite analysis are collected by Actlabs laboratories located in Zacatecas. This alternates with our own internal laboratory. Offsite samples are taken to the laboratory for sample preparation and analysis, and the handover is at the Dolores mine. The cores are kept in a secure core storage area where all historical and Pan American cores are stored.

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 inductively coupled plasma atomic emission spectroscopy (“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 reference material ("CRM"), blanks and duplicate samples. QAQC compliance over the 2012 to mid 2022 period is slightly below the accepted norms for the whole period. CRMs contain standard, predetermined concentrations of material (silver and gold in this case) which are inserted into the sample stream to check the analytical accuracy of the laboratory. While most CRMs have performed well, significant dispersion on certain CRMs for silver and gold has been recorded. All samples associated with the failed standard were sent for re-analysis as part of the QAQC protocol. The silver failures are a mixture of high and low and do not show any bias. The gold failures mostly associated with the higher CRM gold grade. We have implemented a program whereby any failures are noted immediately and re-analyzed where appropriate. Overall, the CRM performance shows acceptable laboratory accuracy..

Mineral Processing and Metallurgical Testing

Following acquisition of the mine in April 2012, Pan American established a metallurgical test program. Pan American selected 521 drill core samples that represented the deposit in terms of grade, ore type (oxidation state), and lithology in the proportions expected to be processed during the LOM. Test work included cyanidation column leach tests, grinding and comminution studies, filtration tests, compaction and permeability tests. In addition, monthly production composites of the heap leach material and pulp agglomerates are collected, and column leach tests are carried out as part of the metallurgical test-work quality control.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves for the Dolores mine, effective June 30, 2022, are as follows:

Dolores Mineral Reserves [1, 2, 3]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne
Proven	12.9	21	0.57
Probable	4.1	18	0.60
TOTAL	17.0	20	0.57

Notes:

1 Estimated using a price of $19 per ounce of silver and $1,600 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.

3 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at Dolores, effective June 30, 2022, are as follows:

Dolores Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne
Measured	2.1	30	0.53
Indicated	0.8	57	1.13
Inferred	2.5	29	0.92

Notes:

1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using metal prices of $22 per ounce of silver and $1,700 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.

Three-dimensional geological interpretations were carried out for each of the principal vein structures on the property and filled with blocks. Grade was estimated into each block using capped composites and a multi-pass kriging interpolation approach. Density was assigned to each block using a nearest neighbour approach. 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 is depleted annually for mining in the previous year. Planned dilution and loss are applied to the block model and a value per tonne is applied to each block. An optimized pit shell was selected after using Whittle software to generate a series of nested pits using geotechnical parameters and the measured and indicated class only blocks in the mineral resource model. Inferred and waste class blocks were assigned no value. Using the selected pit shell as a basis, MineSight software was used to add in ramps, phases, and practical access to complete a pit design. The final pit design develops in a series of phased outward expansions. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve and mineral resource estimates are based on assumptions that include mining, metallurgical, infrastructure, permitting, taxation, and economic parameters. Increasing costs and taxation and lower metal prices will have a negative impact on the quantity of estimated mineral reserves and mineral resources. There are no other known factors that may have a material impact on the estimate of mineral reserves and mineral resources.

Mining Operations

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

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 21,300 tonnes per day (tpd).

During 2022, we stacked 8.0 million tonnes on the leach pads and produced approximately 2.2 million ounces of silver and 136.9 thousand ounces of gold.

We have contracts in place with Asahi Refining USA Inc. of Salt Lake City, Utah and Met-Mex Peñoles S.A. de C.V. of Torreon, Mexico, for refining the doré produced at the Dolores mine. The doré is transported to these facilities where it is refined to the London Good Delivery specification. Once refined, the good delivery gold and silver is sold on the international market to bullion banks, financial institutions, and traders. To date, no issues have been encountered in securing the sale of the refined metal from the Dolores mine, 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:

2022	Revenue[1,2]	Quantity Sold
Silver and Gold in Doré	$302.8 million	2,250,916 ounces of 140,973 ounces o
2021	**Revenue[1,2]**	**Quantity Sold**
Silver and Gold in Doré	$342.6 million	2,309,100 ounces of 158,071 ounces o
2020	**Revenue[1,2]**	**Quantity Sold**
Silver and Gold in Doré	$250.2 million	4,063,450 ounces of 96,179 ounces o

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. A 98 km long power line, connected to the Mexican national grid in 2016, supplies power to the mine and is sufficient for the current needs of the operation. Back -up power is available on site by six 1,800 kilowatt Cummins and two 1,200 kilowatt Caterpillar diesel generators.

To the best of our knowledge, we hold all necessary environmental and operating permits for the development and operation of the mine and are in compliance with Mexican law in all material aspects. The Environmental Impact Study or Manifestation permit, originally obtained in 2006, was updated in 2022 to cover phase 11 of the pit and the remaining mine life.

Water for the operations is sourced from wells, pit and underground dewatering, and an onsite water storage dam (the Chabacan dam has a capacity of 1.2 million cubic metres), with a back-up system to supply water from the nearby Tutuaca River, if required. The permitted water usage from the Tutuaca River is 2.0 million cubic metres per annum at a maximum rate of 64 liters per second and the water extraction permit remains in good standing should it be required in the future.

A closure cost estimate for the Dolores mine prepared according to State of Nevada approved SRCE methodology is updated every year. Pan American has estimated the present value of the site reclamation costs for the Dolores mine to be approximately $87.6 million effective December 31, 2022. Reclamation bonds are not currently a legal requirement in Mexico. 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 2022, total capital additions at the Dolores mine were approximately $35.9 million, primarily related to capitalized waste mining, heap leach pad expansions, and plant and facility upgrades.

In 2022, direct operating costs at the Dolores mine were $189.2 million.

The determination of 2023 capital and operating costs has been deferred as a result of the pending Arrangement.

Exploration, Development, and Production

There is no brownfield exploration planned at Dolores in 2023. Production guidance for 2023 has been deferred as a result of the pending Arrangement.

B. Peru

(i) Huaron Mine

Project Description, Location, and Access

The Huaron mine is an underground silver mine located 320 km northeast of Lima in the Huayllay district of 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 mineral rights are held on 171 mining concessions with a combined area of 15,576.31 hectares. There are three types of concessions present on the Huaron mine, including mining concessions, which grant holders of the concessions the right to explore and exploit the mineral resources within the concession; processing concessions, which grant the right to process minerals, and concessions which grant the right to provide auxiliary services to the mining concessions. 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. Huaron, like other Peruvian operations, is subject to various government taxes, fees and duties, including the Modified Mining Royalty, El Organismo Supervisor de la Inversión en Energía y Minería (OSINERGMIN) payment, El Organismo de Evaluación y fiscalización Ambiental (OEFA) payment, corporate taxes, a Temporary Net Assets Tax, special mining tax ("SMT"), and a worker profit-sharing payment which requires Huaron to share 8% of its taxable income with its workers.

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 Huaron mine, including permitting and environmental liabilities, please refer to "Risks Related to Our Business" starting on page 60 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 Huaron mine 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 mine 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 forming the Huaron mine deposit.

The main lithology in the area of the Huaron mine is a sequence of continental redbeds of the Casapalca Formation which unconformably overlie massive marine limestones. North-south trending sub-vertical porphyritic quartz monzonite dykes crosscut the mine stratigraphy. The Huaron mine deposit 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 mine 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

The historical exploration work was carried out in the form of underground drifting and mining, and no historical mineral resource and mineral reserve estimates were completed or published. 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 underground holes are drilled by an external drilling contractor under Pan American supervision. Drilling is carried out using industry standard underground diamond drill rigs capable of drilling BQ, NQ, and HQ diameter core. The collar coordinates and bearing and dip are surveyed with a total station instrument and the drillhole deviation is measured regularly using a down hole survey instrument.

Sampling, Analysis, and Data Verification

Diamond drillhole and underground channel samples vary between 0.1 metres and 1.5 metres in length. No specific security measures are taken with the samples, but as the samples are prepared and analyzed within the confines of the general mine security enclosures, there is no reason to believe that the validity and integrity of the samples have been compromised.

Both channel and drill core samples are placed in new, clean plastic bags with two sample number tags on the inside and one number and barcode tag on the outside. The bags are sealed with a metal strip prior to transmission 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 (Certifications: ISO 14001, OHSAS 18001, NTP-ISO/IEC 17020, NTP-ISO/IEC 17025 AND NTP-ISO/IEC 17065) until June 2021 and Inspectorate Bureau Veritas (Certifications: ISO 9001, ISO 17025, ISO 45001 and ISO 14001) after June 2021. 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. There is evidence of standard and blank identification labelling errors, but overall, the results were acceptable and indicate reasonable accuracy at the laboratory.

Mineral Processing and Metallurgical Testing

As part of normal plant operating procedures, routine metallurgical test work is undertaken on an annual basis to evaluate veins metallurgical performance and to manage the ore blend necessary to produce an optimal concentrate product. 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, 2022, are as follows:

Huaron Mineral Reserves [1, 2, 3]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	% Zinc	% Lead	% Copper
Proven	7.0	169	2.97	1.51	0.54
Probable	3.9	167	2.97	1.63	0.30
TOTAL	11	168	2.97	1.55	0.45

Notes:
1 Estimated using a price of $19 per ounce of silver, $2,600 per tonne of zinc, $2,000 per tonne of lead and $7,000 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.
3 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at the Huaron mine, effective June 30, 2022, are as follows:

Huaron Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Silver per tonne	% Zinc	% Lead	% Copper
Measured	2.1	163	3.05	1.58	0.42
Indicated	2.4	166	2.92	1.71	0.40
Inferred	7.2	155	2.73	1.47	0.26

Notes:
1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using a price of $19 per ounce of silver, $2,600 per tonne of zinc, $2,000 per tonne of lead and $7,000 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.

Mineralization domains representing most of the principal vein structures were defined in Leapfrog Geo software, while sub-block model estimates were completed within Datamine software, using capped composites and a multi-pass ordinary kriging or inverse distance squared interpolation approach. While individual blocks were not classified, the mined panels were classified considering local drillhole spacing and proximity to existing development.

The smaller, peripheral mineralized structures are estimated in 2D using a variation of the polygonal method in AutoCAD and Excel software. Each vein structure is projected onto a longitudinal section and divided into a series of geometrical blocks created to best fit an area of mineralization into a minable block, if the mineralization present is considered economic. The average true width of the vein intersection is projected for that block. The planned mining dilution (minimum mining width) based on, expected ground conditions is then added to the vein width of that block and the volume determined. Sample grades are reviewed and treated for extreme values if necessary, and then the average grade of the intersections (including the internal dilution) is assigned to the block. Bulk density values are applied to the volume of the block to estimate the tonnes of each block, based on the average bulk density measured from samples selected from each respective veins.

A value per tonne is applied to each block based on metal content, metal prices, concentrate sales terms, concentrate quality, processing recovery, transportation, refining, and other selling costs such as storage fees, port fees, etc. Processing costs are assumed to be the same for all ore types, and metallurgical recoveries are determined separately for each group of veins or structures to account for variability in the metal recovery. Any blocks that do not meet the criteria of resources are removed.

Mineral resource blocks classified as measured and indicated mineral resources that can be mined economically are converted to mineral reserves. Some small isolated blocks may be removed if the cost and the logistics make them uneconomic to mine. A minimum required value per tonne cut-off is calculated for the blocks depending on the block location and the mining method used to mine the block.

Mineral reserve estimates are based on assumptions that included mining, metallurgical, infrastructure, permitting, taxation, and economic parameters. Increasing costs and taxation and lower metal prices will have a negative impact on the quantity of mineral reserve estimates. There are no other known factors that may have a material impact on the mineral reserve estimates at the Huaron mine.

Mining Operations

Mining is undertaken using a combination of mechanized cut and fill and mechanized sub-level open 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 operation is a 3,200 tpd mill with froth induced flotation to produce silver in copper, lead, and zinc concentrates. Metallurgical recoveries in 2022 averaged approximately 84.3% for silver, 13.1% for gold, 78.2% for zinc, 80.4% for lead, and 73.2% for copper.

In 2022, the mill processed approximately 0.94 million tonnes of ore producing approximately 3.7 million ounces of silver, 0.9 thousand ounces of gold, 16.4 thousand tonnes of zinc, 11.4 thousand tonnes of lead, and 4.3 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. The Huaron mine 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 quotational periods negotiated on each contract 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 of the Huaron mine 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:

2022	**Revenue[1, 2]**	**Quantity Sold (Tonnes)**
Zinc Concentrate[3]	$40.3 million	34,341
Lead Concentrate[3]	$49.6 million	21,045
Copper Concentrate[3]	$55.8 million	19,500
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

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 concentrates contain payable silver. Lead concentrates contain payable silver and copper. Copper concentrates contain payable silver and gold.

Infrastructure, Permitting, and Compliance Activities

The known mineralized zones, mineral resources, mineral reserves, mine workings, the processing plant, existing tailing impoundments, effluent management and treatment systems, and waste rock storage facilities are located within 119 of the 171 concessions. The mine is authorized to use up to 10.11 million cubic metres per annum of water obtained from a system of nearby lakes for mining activities through payment of a water use permit. This volume of water is more than sufficient for the mine's requirements. The primary source of power for the mine is the Peruvian national power grid and is sufficient for the mine's current requirements. The power consumption is approximately 66 million kilowatt hours per year.

To the best of our knowledge, all permits and licenses required to conduct our activities at the Huaron mine have been obtained and are currently in good standing. In 2022 we commenced a technological improvement permitting process to enable the construction of a tailings filtration plant and dry stack tailings facility.

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 metal and sediment concentrations in the waters discharged from the mine and localized areas of acid rock drainage from the mine's tailings deposit areas. All waters are captured and treated in a treatment plant to achieve compliance with discharge limits.

An agreement signed in 2000 allows the Chungar mine, owned by Volcan Compañia Minera S.A. (" **Volcan**"), which neighbours the Huaron mine, to discharge water from its mine dewatering into the Huaron mine 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 mine 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 is 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. Pan American has estimated the present value of the site reclamation costs for the Huaron mine to be approximately $13.7 million effective December 31, 2022. 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 2022 totalled $13.9 million, primarily on mine deepening, mine ventilation infrastructure, equipment leases, near mine exploration, and equipment replacements and refurbishments.

In 2022, direct operating costs at the Huaron mine were $100.5 million.

The determination of 2023 capital and operating costs has been deferred as a result of the pending Arrangement.

Exploration, Development, and Production

We currently plan to undertake 20,000 metres of exploration drilling in 2023. Production guidance for 2023 has been deferred as a result of the pending Arrangement.

(ii) Shahuindo Mine

Project Description, Location, and Access

The Shahuindo mine is an open pit gold mine located in northern Peru, 970 km north-northwest of Lima. The site is approximately 130 km from Cajamarca via asphalt-paved highway (100 km on Highway 3N), and gravel and dirt roads. There are daily flights between Lima and Cajamarca on Peruvian national airlines.

Shahuindo comprises one mineral right, ACUMULACION SHAHUINDO, 100% controlled by Pan American's wholly owned subsidiary, Shahuindo SAC, and has an approximate area of 7,338.91 hectares. The mining claims have no expiry date. All concessions are subject to an annual payment of $3 per hectare to the Peruvian government. To the best of our knowledge, all claims are currently in good standing.

Shahuindo SAC has acquired 612 surface rights within Shahuindo covering a total area of about 3,144.68 ha. Some of these surface rights were used to relocate local land owners into new areas.

Shahuindo is subject to various government taxes, fees and duties, including the Modified Mining Royalty, OSINERGMIN payment, OEFA payment, corporate taxes, a Temporary Net Assets Tax, SMT, and a worker profit-sharing payment which requires Shahuindo to share 8% of its taxable income with its workers.

While Pan American believes that there are no significant risks to Shahuindo in regard to surface and concession title, the ability to access Shahuindo, the receipt of any remaining permits and licenses, or Pan American's ability to perform the work as described in the Shahuindo Technical Report. Please refer to "Risks Related to Our Business" starting on page 60 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 SAC, a wholly owned subsidiary of Sulliden Gold Ltd. ("Sulliden"). Rio Alto Mining Limited ("Rio Alto") acquired Sulliden in 2014, and in April 2015, Tahoe completed its acquisition of Rio Alto, thereby acquiring control of Sulliden Shahuindo SAC (renamed Shahuindo SAC). Pan American completed the Tahoe Acquisition in February 2019.

Exploration and mining activities have taken place on Shahuindo since 1945. Between 1945 and 1989, Minera Algamarca S.A. ("Algamarca") conducted mining and exploration work on Shahuindo. 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 642 holes, geophysical surveys, geological mapping and trenching, soil and surface rock sampling, metallurgical testing, geotechnical drilling and economic analyses between 2002 and 2012. Rio Alto conducted a campaign of 351 reverse circulation drillholes and 68 diamond drill core holes totaling 56,298 metres between 2014 and 2015, and drilling was continued on Shahuindo by Tahoe. Tahoe attained production, with the first gold poured in December 2015. We have been producing from the Shahuindo mine since acquiring it in the Tahoe Acquisition in late February 2019.

Geological Setting, Mineralization, and Deposit Types

The Shahuindo mine is located on the eastern flank of the Andean Western Cordillera in northern Peru, within a regional fold and thrust belt of predominantly Mesozoic sedimentary rocks intruded by felsic stocks located along faults and cores of anticlinal structures. The principal zone of mineralization in the Shahuindo district occurs in a belt between two large-amplitude regional-scale folds, the Algamarca anticline and the San Jose anticline. Important structural elements such as fold flanks, axial fold surfaces, fold-related fractures, faults, extension-related fractures, dikes, and intrusive contacts as well as favorable stratigraphy were used in modeling. The 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 cores of anticlinal structures.

Mineralization at Shahuindo can best be described as an intermediate-sulfidation epithermal system, though high-sulfidation mineralization occurs at depth and in the core of hydrothermal breccias. Oxidation of mineralization extends to a depth of 150 metres below surface.

Exploration

Algamarca and Exploraciones Algamarca S.A. commenced exploitation of the Algamarca mine in the 1940s and continued mining and exploration work on Shahuindo until 1989. From about 1990 to 1998, three companies explored the Shahuindo area – Alta Tecnología e Inversión Minera y Metalúrgica S.A. ("Atimmsa"), Asarco LLC ("Asarco"), and Southern Peru Copper Corporation ("Southern Peru"). Atimmsa, Asarco, and Southern Peru completed geological mapping; soil, outcrop, and rock chip sampling; and reverse circulation and core drilling. From the acquisition of Sulliden in 2014, Rio Alto completed infill and "step out" holes in and around the Shahuindo deposit to confirm and expand the mineral resource. In total Rio Alto completed 56,298 metres of reverse circulation and diamond drilling. Further confirmatory infill drilling and exploration continued between 2016 and 2018 with Tahoe resources of 51,439 metres and thereafter with Pan American from 2019. Val Dór Geofisica Peru conducted magnetic and induced polarization geophysical surveys between 2002 and 2012 on behalf of the prior owners of Shahuindo.

Drilling

Pan American's 2019 to 2022 drill programs were executed by various contractors. Drilling during this time period was principally reverse circulation (217 holes) and, to a lesser extent, diamond core holes (56 holes). Diamond core was generally HQ and to a lesser degree NQ size, depending upon ground conditions. From the completion of the Tahoe Acquisition in 2019 through June 30, 2022, Pan American continued infill drilling within the current mineral resource and pit shell and exploration drilling to test potential mineral resource extensions outside of the defined pit, principally testing the deep sulfide targets. The drill hole database used for the mineral resource estimate contains 1,822 drillholes totaling 288,127 metres. All drill data corresponding to the reverse circulation and diamond drill data from Pan American and previous drilling campaigns were reviewed and verified.

Sampling, Analysis, and Data Verification

Pan American employs the following procedure for diamond drill core sampling: competent core is split lengthwise with a diamond-blade rotary saw; and disaggregated core was sampled using a spatula to take half of the sample. Sample lengths are typically 2.0 metres but are reduced to break samples at lithologic contacts or changes in oxidation state. Where the core was completely disaggregated, sample lengths were changed to coincide with drill runs to minimize mixing between samples of differing core recoveries.

For reverse circulation drill sampling Pan American employs the following procedure: reverse circulation drilling cuttings were sampled on 1.5 metre intervals at the rig and 30% of the cuttings of each individual sample were bagged and sent to the laboratory for analyses. The remaining 70% of the sample cuttings were bagged and kept as rejects. Two reference chip trays, one with a complete sample and the other with a sieved sample (one millimetre mesh), were collected for geologic logging and archiving.

Pan American maintains core-storage facilities at the project site and one leased storage warehouse in the city of Cajamarca. All core generated at Shahuindo is stored at either of these facilities. Reverse circulation drilling rejects are stored at the project site. Since 2014, all samples for the Shahuindo drill programs have been analyzed by CERTIMIN laboratory, an independent contract laboratory located in Lima. Gold was assayed using a 50-gram fire assay with an AA finish. Silver was assayed from a 5-gram split, which was digested by aqua regia and read by AA.

Shahuindo has continually maintained oversight of sample security from Shahuindo to laboratory facilities. Since 2014, all samples were shipped directly from the project site to the CERTIMIN laboratory in Lima. Tahoe's and Pan American's drill programs, over the period from July 2016 to May 2022, utilized standard reference materials, blanks, and field duplicates. The QAQC samples were inserted into drill sample sequences and submitted for analysis to the CERTIMIN and SGS laboratories in Lima.

During the period from July 2016 to May 2022, a total of 41,496 drillhole samples were submitted for laboratory analyses. A total of 5,530 control samples were inserted with drillhole samples; these comprise samples taken from both reverse circulation and diamond drillholes. The sampling methods, security, and analytical procedures are considered to be adequate. The QAQC performance indicates reasonable levels of accuracy and precision.

It is the opinion of the qualified persons responsible for the preparation of the Shahuindo Technical Report that the data used to support the conclusions presented therein are adequate for the purposes used in the Shahuindo Technical Report.

Mineral Processing and Metallurgical Testing

The mineral processing and metallurgical testing includes cyanidation, including column leach tests, agglomeration testing and flotation testing conducted on composites samples since 1996. As part of normal plant operations and processing procedures, metallurgical analysis and testing is undertaken as required. The results of the laboratory testing program indicate excellent gold recoveries for run-of-mine oxide ore with low to moderate reagent requirements, which are in line with current production data. Silver recoveries are generally low. Maintaining heap permeability and minimizing channeling at higher heap heights constitutes a risk to the project which is currently being mitigated by blending of less permeable material types with more competent ore.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at the Shahuindo mine, effective November 30, 2022, are as follows:

Shahuindo Mineral Reserves [1, 2, 3]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne
Proven	58.9	8	0.51
Probable	45.3	6	0.41
TOTAL	104.2	7	0.47

Notes:

1 Estimated using a price of $19 per ounce of silver and $1,500 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.

3 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at the Shahuindo mine, effective November 30, 2022, are as follows:

Shahuindo Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne [3]
Measured	8.3	5	0.29
Indicated	13.2	4	0.23
Inferred	14.6	8	0.41

Notes:

1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using a price of $22 per ounce of silver and $1,700 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 are comprised of oxide mineralization.

In order to prepare mineral resource estimates, Leapfrog software was used to model lithology, oxidation state and structural domains. A total of 23 grade shells were modeled using a cut off of 0.1 g/t. A regular model from a sub cell block model in Maptek Vulcan software was used. Grade was estimated into each domain using capped composites and a multi-pass ordinary kriging interpolation approach. The estimate was classified into spatially continuous measured, indicated, and inferred categories based on distance and number of drillhole composite samples. Reasonable prospects for reasonable eventual economic extraction were addressed by constraining the resource within an open pit shell.

The mineral reserve estimate was completed by first identifying the optimal pit limits using the mineral reserve metal prices and economic parameters with Lerch-Grossman pit optimization techniques using Whittle™ software. The results of the optimization were used to guide the detailed pit design which included ramp access for

mine equipment and personnel, and the detailed batter slope and berm configurations. A comparison between the LOM pit design and the Whittle optimization showed a close alignment. The designed pit was used to convert the economic portion of the measured and indicated mineral resources to mineral reserves. Historical reconciliation performance shows that the resource normally underestimates the contained metal tonnes and grade, hence no additional ore loss or dilution were applied.

Mineral reserve estimates are based on assumptions that include mining, metallurgical, infrastructure, permitting, taxation, and economic parameters. Increasing costs and taxation and lower metal prices will have a negative impact on the quantity of estimated mineral reserves. There are no other known factors that may have a material impact on the estimate of mineral reserves.

Mining Operations

Shahuindo consists of an open pit mine and heap leach processing facility that is currently in production and has been operating since November 2015. The open pit is being mined in a sequence of phased cutbacks. The mining method utilizes conventional drill and blast. Loading of ore and waste is by diesel powered excavators into heavy duty highway rigid frame dump trucks. This type of truck is common in this style of operation in Peru. The ore and waste are hauled to the leach pad or waste dumps correspondingly.

Processing and Recovery Operations

The Shahuindo mine uses conventional cyanide run-of-mine heap leaching and a carbon-in-column adsorption circuit process. Gold and silver are recovered by electrowinning with the resulting electrowinning sludge being dried and smelted onsite to produce the final doré product. Average throughput is 36,000 tpd. A 36,000 tpd crushing and agglomeration plant is also available but is currently not in use.

In 2022, a total of 13.8 million tonnes of ore were stacked on the pads. Metal production in 2022 was approximately 151.4 thousand ounces of gold and 0.3 million ounces of silver.

Shahuindo produces gold in the form of doré bars and has contracts in place with Asahi Refining Canada, Argor Heraeus and Metalor in Switzerland, for refining the doré produced on site. The doré is transported to these facilities where it is refined to the London Good Delivery specification. Once refined, the good delivery gold and silver is sold on the international market to bullion banks and financial institutions. To date, no issues have been encountered in securing the sale of the refined metal from Shahuindo. No hedging takes place at this time. Please see “Risks Related to Our Business – Trading Activities and Credit Risk”.

The revenues per type of doré produced at the Shahuindo mine for the past three years are as follows:

2022		
Silver and Gold in Doré	$266.4 million	271,149 ounces of silver 145,320 ounces of gold
2021	**Revenue[1, 2]**	**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

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

Shahuindo is a mature operating mine and site infrastructure including site roads that are fully developed to support the existing mine production of 33 million tonnes of total material (ore and waste) and 13 million ore tonnes per annum. Exploration, construction, and operations conducted to date have been performed under the relevant local and national permits. Pan American does not anticipate delays to the production schedule presented in the Shahuindo Technical Report due to the timing of receipt of necessary permits and licenses.

The Shahuindo mine operates under an environmental impact assessment ("EIA") approved in 2013. The first modification of the EIA was approved in 2016 and included an increase in the mineral reserves, the pit and infrastructure footprints, and expansion of production to 36,000 tpd delivered to leach pad.

The primary source of power for the mine is the Peruvian national power grid. Water for the operation is obtained from groundwater wells and a collection pond. The current LOM plan considers that pit dewatering may be required from 2026 and this water source is currently in the permit process with the governmental authority for use as part of the fresh water supply for Shahuindo.

A closure cost estimate for the Shahuindo mine prepared according to State of Nevada approved SRCE methodology is updated every year. Pan American has estimated the present value of the site reclamation costs for the Shahuindo mine to be approximately $45.1 million effective December 31, 2022.

Capital and Operating Costs

In 2022, capital additions at the Shahuindo mine totalled $49.8 million, including $49.2 million of sustaining capital, primarily for the Choloque waste dump construction, water treatment plant, surface water management, truckshop, new warehouse, infill drilling, camp kitchen expansion and the construction of heap leach pad capacity.

In 2022, direct operating costs at the Shahuindo mine were $146.2 million.

The determination of 2023 capital and operating costs has been deferred as a result of the pending Arrangement.

Exploration, Development, and Production

We currently plan to undertake approximately 7,000 metres of exploration drilling at Shahuindo in 2023. Production guidance for 2023 has been deferred as a result of the pending Arrangement.

C. Canada

(i) Timmins West Mine

Project Description, Location, and Access

The Timmins West mine is an underground gold mine located approximately 19 km 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 2022, approximately $33.7 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 60 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 the Tahoe Acquisition.

Geological Setting, Mineralization, and Deposit Types

The Timmins West mine includes the Timmins, Thunder Creek, and 144 Gap Deposits, all of which occur along the 144 Trend, a broad structural corridor that extends to the southwest from the Timmins Deposit area. This corridor generally coincides with the northeast trending contact zone between southeast facing mafic metavolcanic rocks of the Tisdale Assemblage (to the northwest) and dominantly southeasterly facing metasedimentary rocks of the Porcupine Assemblage (to the southeast). The contact dips steeply to the northwest and is modified, and locally deflected by folds and shear zones that are associated with gold mineralization.

Gold mineralization occurs in steep north-northwest plunging zones which occur within, or along favorable lithostructural settings in proximity (within hundreds of metres to the 144 Trend and related structures. Mineralization comprises multiple generations of quartz-carbonate-tourmaline, albite veins, associated pyrite alteration envelopes, and disseminated pyrite mineralization. Textural evidence suggests that veining formed progressively through D3 and D4 deformation events. All phases of gold-bearing veins cut and post-date the Alkalic Intrusive Complex and syenitic to monzonitic intrusions, although mineralization is often spatially associated with, and ore preferentially developed within, these intrusive suites.

Exploration

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.

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. Annual near mine diamond drilling exploration campaigns for mineral resource and mineral reserve estimates are ongoing.

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, 2022, are as follows:

Timmins West Mineral Reserves [1, 2, 3, 4]

Reserve Category	Tonnes (Mt)	Grams of Gold per tonne
Proven	2.4	2.68
Probable	3.0	2.70
TOTAL	5.4	2.69

Notes:

1 Estimated using a price of $1,500 per ounce of gold and an exchange rate of 1.3 CAD/USD. Totals may not add due to rounding.

2 Mineral reserves are supported by a mine plan that uses variable stope thicknesses (depending on zone) and cost levels (depending on the mining methods utilised). Minimum cut-off grades used for the mineral reserve are 2.0 g/t gold for stoping and 0.8 g/t gold for development. Cut-off grade calculations used estimated mining costs of $64.52 per tonne, site G&A costs of $3.38 per tonne, transportation to mill costs of $6.78 per tonne, milling costs of $18.38 per tonne, mining recovery of 95% and a metallurgical recovery rate of 97%. External dilution has been included in the mineral reserves at variable percentages and grades depending on the area.

3 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.

4 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at Timmins West, effective June 30, 2022, are as follows:

Timmins West Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Gold per tonne
Measured	0.4	3.70
Indicated	1.2	3.57
Inferred	0.8	3.06

Notes:

1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using a price of $1,500 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.

Three dimensional geological interpretations, based on a nominal cut-off grade and a minimum mining width, were carried out. Grade was estimated into these geological domains using capped composite data, multiple search passes and an inverse distance squared grade interpolation method. 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 with waste rock from development and paste from a mixture of reclaimed tailings, alluvial sand and cement being used as backfill. 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. Tailings from Bell Creek are back hauled to Timmins West for use as backfill. 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 Lake Shore. 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 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 as required based on changes at site. Pan American has estimated the present value of reclamation costs for the Timmins West mine to be approximately $2.7 million effective December 31, 2022. 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 km 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 60 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 the Tahoe Acquisition.

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. Annual near mine diamond drilling exploration campaigns for mineral resource and mineral reserve estimates are ongoing.

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, 2022, are as follows:

Bell Creek Mineral Reserves [1, 2, 3, 4]

Reserve Category	Tonnes (Mt)	Grams of Gold per tonne
Proven	2.9	3.06
Probable	1.9	2.80
TOTAL	4.8	2.96

Notes:

1 Estimated using prices of $1,500 per ounce of gold and an exchange rate of 1.3 CAD/US. Totals may not add due to rounding.

2 Mineral reserves are supported by a mine plan that uses variable stope thicknesses (depending on zone) and cost levels (depending on the mining methods utilised). Incremental material supported by pre-allocated development which shows positive economic results are included in the reserves. Minimum cut-off grades used for the Mineral Reserve are 2.2g/t gold for stoping, 2.0 g/t gold for incremental stoping and 1.5 g/t gold for ore development. Cut-off grade calculations used estimated mining costs of $78.63 per tonne, site G&A costs of $2.51 per tonne, milling costs of $18.38 per tonne, mining recovery of 95%, external dilution of 25% and a metallurgical recovery rate of 94.5%

3 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.

4 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at the Bell Creek mine, effective June 30, 2022, are as follows:

Bell Creek Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Gold per tonne
Measured	3.0	3.27
Indicated	3.3	2.9
Inferred	3.6	3.13

Notes:

1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using prices of $1,500 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.

Three dimensional geological interpretations, based on a nominal cut-off grade and a minimum mining width, were carried out. Grade was estimated into these geological domains using capped composite data, multiple search passes and an inverse distance squared grade interpolation method. 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 with waste rock being used for backfill. Ore is brought to the surface primarily by shaft. The mine has a ramp access to surface that may also be used.

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 95.1% for gold in 2022.

In 2022, we processed approximately 1.7 million tonnes of ore producing a combined 134.6 thousand ounces of gold and 15.3 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".

The revenue produced by the Bell Creek and Timmins West mines for the past three years are as follows:

2022	Revenue[1, 2]	Quantity Sold
Silver and Gold in Doré	$243.7 million	15,094 ounces of silver 135,400 ounces of gold
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	17,318ounces of silver 148,130ounces 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 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 regularly 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. Formal consultations have also been undertaken 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 as required based on changes at site. Pan American has estimated the present value of reclamation costs for the Bell Creek mine to be approximately $11.2 million effective December 31, 2022. 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 2022 totalled $37.7 million, including $35.7 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 $1.9 million primarily for exploration of the Wetmore property.

In 2022, direct operating costs at the Timmins West and Bell Creek mines were $179.4 million.

The determination of 2023 capital and operating costs has been deferred as a result of the pending Arrangement.

Exploration, Development, and Production

We currently plan to undertake approximately 46,000 metres of exploration drilling at the mines, including the 144 south brownfield target, in 2023. Production guidance for 2023 has been deferred as a result of the pending Arrangement.

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 km east-southeast of Guatemala City and 2 km east of the town of San Rafael Las Flores. Access to the Escobal mine is via 70 km 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 completed the Tahoe Acquisition.

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, 2022, are as follows:

Escobal Mineral Reserves [1, 2, 3]

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	24.6	333	0.35	0.80	1.30

Notes:

1 Estimated using a price 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.

3 Mineral reserves are in addition to mineral resources.

Management estimates that mineral resources at the Escobal mine, effective June 30, 2022, 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	0.9	0.22	0.42

Notes:

1 Mineral resources exclude those mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Estimated using a price 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, 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 and a new update will be completed in 2023.

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 $9.9 million effective December 31, 2022. 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 2022, Escobal was in care and maintenance and incurred $24.6 million in holding costs. Capital additions at Escobal during 2022 totalled $1.6 million. The determination of 2023 capital and operating costs has been deferred as a result of the pending Arrangement.

Exploration, Development, and Production

In 2023, 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 2023. 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 mine and the Pico Machay property in Peru, the San Vicente mine in Bolivia, and the Navidad property in Argentina, and certain other interests in Mexico and Canada. Our Morococha mine in Peru, and the Manantial Espejo, Joaquin and COSE mines in Argentina are in the reclamation phase and mining activity has ceased. 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:

			2022		2021		2020
Development	Huaron[1]	$	12,679	$	8,749	$	2,359
	Morococha[1]		327		6,163		6,563
	Alamo Dorado		—		—		—
	Dolores		33,872		38,928		43,236
	La Colorada		91,575		65,469		29,335
	Manantial Espejo		2,026		5,010		7,849
	Navidad		—		90		—
	San Vicente		7,156		5,340		4,877
	Shahuindo		41,441		24,652		20,330
	La Arena		46,369		45,130		37,300
	Timmins		36,905		41,520		20,081
	Escobal		1,606		778		4,807
	Other		733		1,649		1,818
	TOTAL[2]	$	274,688	$	243,478	$	178,555
Exploration	Huaron		438		—		—
	Morococha		154		686		138
	Alamo Dorado		—		—		—
	Dolores		49		225		338
	La Colorada		9,929		2,643		998
	Manantial Espejo		146		—		—
	Navidad		—		—		—
	San Vicente		—		—		—
	Shahuindo		540		828		(5)
	La Arena		—		—		—
	Timmins		4,015		3,628		3,418
	Other[3]		3,066		3,060		2,209
	TOTAL[2]	$	18,336	$	11,071	$	7,096

Notes:

1 Net of lease advances.

2 Numbers may not add due to rounding.

3 Includes spending on overhead corporate management charges, as well as other indirect exploration spending.

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 2020, 2021, and 2022 were as follows:

- During 2022, we had 3,900 tonnes of zinc exercised at an average strike price of $3,173 per tonne, resulting in a realized gain of $2.0 million, and 600 tonnes of zinc exercised at an average strike price of $4,033 per tonne, resulting in a realized loss of $0.2 million.
- 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.
- 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. During the year ended December 31, 2022, the Company entered into collars made up of put and call contracts and forward swap contracts for its exposure to zinc. The Company recorded losses of $0.1 million and gains of $1.7 million during the three and twelve months ended December 31,

2022, respectively. The Company did not have any zinc contracts outstanding during the comparable periods in 2021.

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 the Company entered into diesel swap contracts designed to fix or limit the Company's exposure to higher fuel prices. The Company recorded gains of $0.3 million and $4.5 million for the three and twelve months ended December 31, 2022, respectively. At December 31, 2022, the Company had no outstanding positions on its diesel exposure.

Please refer to the 2022 MD&A for more details, including a sensitivity analysis of the effect of certain metal prices on revenue and AISC.

Foreign Operations

In 2022, 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, which may include 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;

- government, union and community pressures to maintain unprofitable operations;
- 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 was completed in 2022 and the substantive consultation process commenced, 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. 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 2022, we paid approximately $4.9 million in export duties (2021: $5.7 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. COVID-19 resulted in unprecedented public health measures and massive increases in government spending which caused significant long-term damage to the global and most national economies. The resulting costs to governments, increased fiscal debt, interest rates, and inflation continue 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.

Similarly, in August 2022, the government of Peru instituted regulations that severely restricted the use contractors to perform core mining activities on behalf of mining companies, requiring instead that contractors be transitioned to, or become, employees of such companies. The application of these regulations has, however, been suspended by the Peruvian competition authority because of challenges to their legality. It is unknown whether these legal challenges will be successful or whether the application of these regulations will be reinstated, and if the regulations do become enforceable, there could be significant negative consequences to our Peruvian operations and financial results.

To manage the COVID-19 pandemic, governments in all of our operating jurisdictions implemented various regulations, orders, protocols and guidelines, many of which have negatively affected our business and our employees, contractors and local communities. COVID-19 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 71.

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 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. 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 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.

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 landowners 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.

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 landforms 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 are 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.

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 certain NGO's that oppose resource development have become more vocal and active with respect to the impact of mining activities. Adverse publicity related to extractive industries or specifically to Pan American's operations, could have an adverse effect on our reputation, impact our relationships with the communities in which we operate, and ultimately have a material adverse effect on our business, financial condition and results of operations. Some communities and NGOs have taken actions, such as installing road blockades, applying for injunctions for work stoppage, filing lawsuits for damages or to challenge our ownership or use of property, and intervening and participating in lawsuits seeking to cancel or revoke our rights, permits and licences that are necessary for our operations to continue, which could materially impact our business. These actions relate not only to current activities but are often in respect of past activities by prior owners of mining properties. NGOs may also lobby governments for changes to laws, regulations and policies pertaining to mining, which, if made, could have a material adverse effect on our business, financial condition and results of operations. 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. 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.

In early May 2021, PASG and the Guatemala MEM 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. The claim against the Guatemala MEM has subsequently been denied and the claims against PASG is pending determination by the Constitutional Court. While we believe that the claims against PASG are procedurally and substantively flawed and without merit, the outcome of this proceeding cannot be determined at this time.

Artisanal, or informal, mining is associated with a number of negative impacts, including environmental degradation, forced labour, human trafficking 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 for 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 annually report our progress on embedding the United Nations Global Compact Principles into business operations. These initiatives were designed, in part, to further reduce the risks of negative impacts on human rights and 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 peoples in the areas around 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, Bolivia, Guatemala, Mexico, and Peru, 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* (the "UNDRIP 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 in response we reduced throughput at our operations in order to enhance physical distancing and protect our personnel and the community. The spread of COVID-19 impacted our employees and contractors, not only as it related 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 were also impacted.

While COVID-19 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 imposition of future 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.

Moreover, the continued presence of, or spread, of COVID-19, and any future emergence and spread of COVID-19 mutations or other pathogens, globally may have material adverse effects on the economies and financial markets of many countries, including those we operate in, resulting in an economic downturn that could have significant impacts on commodity prices, demand for metals, investor confidence, and general financial market liquidity, all of which may adversely affect our business and the market price of our Common Shares. In addition, such a pandemic could also impact our ability to raise capital, cause continued interest rate volatility 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 or other pathogens becoming subject to quarantine or shut down. 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. Inflationary pressures relating to COVID-19 global financial support measures and current supply chain challenges continue to have 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 8.

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 2022. Morococha was placed on care and maintenance in early 2022. 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, 2022, we had receivable balances associated with buyers of its concentrates of $50.3 million (2021 - $40.0 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 seven 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 pursued a claim to collect damages. At December 31, 2022, we had approximately $37.0 million (2021 - $52.3 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. The refineries generally bear the risk of loss after metal inventories have been delivered to them.

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, 2022, we had made $8.9 million of supplier

advances (2021 - $11.2 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. Future changes in tax laws could also 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 $40.9 million in CAD, $3.1 million in MXN, $3.2 million in PEN, $9.3 million in ARS, $4.8 million in BOB, and $0.1 million in QTZ as at December 31, 2022. As at December 31, 2022, Pan American had outstanding positions on $18.0 million in foreign currency exposure of MXN purchases, $45.6 million of PEN purchases, and $108.0 million of CAD purchases. The MXN positions had weighted average USD put and call exchange rates of $21.00 and $24.35, respectively, expiring between January 2023 and December 2023. The PEN positions had a weighted average USD fixed exchange rate of $4.02, expiring between January 2023 and December 2023. The CAD collar positions ($84.0 million of CAD purchases) had weighted average USD put and call exchange rates of $1.30 and $1.34, respectively, expiring between January 2023 and December 2023. The CAD forward contracts ($24.0 million of CAD purchases) had a weighted average USD fixed exchange rate of $1.33, expiring between January 2023 and December 2023.

For the year ended December 31, 2022, we recorded gains of $1.5 million (2021 - losses of $0.2 million), gains of $3.5 million (2021 - losses of $3.7 million), and losses of $2.9 million (2021 - gains of $0.9 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 2022 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 2023, excluding Yamana assets.

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. In fact, in mid-2022 we limited all non-essential expenditures in response to the combined impacts of declining precious metals prices, inflation, and supply chain issues.

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 financing, 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.

While we have paid dividends to our shareholders for many years, the payment of dividends is impacted by our cash flows and liquidity situation. The payment of any future dividends is at the discretion of our Board of Directors after taking into account many factors, including availability of and sources of cash, future anticipated funding needs, our debt position, general and regional economic conditions, and expectations with respect to operational matters such as anticipated metals production and metals prices. There can be no assurance that dividends will continue to be paid in the future or on the same terms as are currently paid by Pan American.

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. Russia's invasion of the Ukraine has also had significant impacts on the supply of certain goods and fuels. 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 be 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 and gold production, development, and exploration, and are therefore subject to unique competitive advantages and disadvantages related to the price of silver and gold and to a lesser extent base metal by-products. If silver and gold 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 and gold. Conversely, if silver and gold 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 arrangements, 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 26 customers that account for 100% of the concentrate and silver and gold sales revenue. The Company has 3 customers that accounted for 28%, 14% and 12% of total sales in 2022. 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 significant 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;
- Russia's invasion of the Ukraine, the threat of expanded conflict in Europe and the impact on geo-political stability and the global economy; and
- the devaluation and volatility of global stock markets could impact the valuation of our equity and other securities.

As noted, COVID-19 had a dramatic impact on many countries and on the global economy. The ongoing efforts against the spread of COVID-19, including with respect to recent mutations, may result in further governmental restrictions that could impact economies around the world, reduce the availability of workforces, and drive up consumer costs for supplies and services. While vaccines have been successful in combating the virus, these vaccines have not been made available or distributed adequately or equitably in some jurisdictions. Furthermore, vaccines do not fully prevent against the spread of the disease, nor is the long-term efficacy or impact of the currently available vaccines known. The presence of COVID-19 and its continued spread may 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 and energy and water usage by increasing efficiency and 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 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 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, unions, 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, in November 2022, Pan American, Agnico Eagle and Yamana entered into the Arrangement Agreement in connection with the proposed Arrangement pursuant to which Pan American will acquire all of the issued and outstanding Yamana Shares following the sale by Yamana of its Canadian assets, including certain subsidiaries and partnerships which hold Yamana's interests in the Canadian Malartic mine to Agnico Eagle. The Arrangement is expected to close in the first quarter of 2023. Further, we completed the Tahoe Acquisition 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 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.

Please also refer to the risk factors included below under the heading, "Risks Relating to the Arrangement".

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 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. In some cases, we may also be subject to collective settlement obligations with our employees and contractors relating to closures of our operations, and such obligations may be significant.

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, and while a successful resolution of these lawsuits is anticipated, the outcomes are not determinable at this time.

We may also be subject to proceedings in our commercial relationships. While we would, where available and appropriate to do so, defend against any 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 directly or indirectly subject to claims or other legal processes by individuals, local communities, Indigenous peoples, private landowners or non-governmental organizations relating to land and mineral rights and tenure, or alleged environmental or social damage. Such claimants may seek sizeable monetary damages against us and/or the return or relinquishment of surface or mineral rights or revocation of permits and licenses that are valuable to us. 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 the SEDATU in Zacatecas to declare such lands as national property. If we are not able to maintain our interests in or title to lands or mineral rights, or if we are not otherwise successful in our defense against such claims, there could be significant impacts on our operations, including an inability to operate, and to our profitability.

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 could have a material adverse effect on our financial or operating position, cash flow and results of operations.

RISKS RELATING TO THE ARRANGEMENT

There are a number of risk factors pertaining to the Arrangement. The following risk factors are not a definitive list of all risk factors associated with the Arrangement. Additional risks and uncertainties, including those currently unknown or considered immaterial by us, may also adversely affect Pan American, or the combined businesses of Yamana and Pan American following completion of the Arrangement. In addition to the risk factors relating to the Arrangement set out below, there are many risk factors relating to the business of Yamana that are similar to those described for Pan American.

The Arrangement is subject to the satisfaction or waiver of several conditions

The Arrangement is subject to a number of conditions precedent, some of which are outside of the control of Pan American, including, among other things, Yamana, Pan American and Agnico having obtained certain approvals (including, among other things, those of the TSX, the NYSE, the NASDAQ, and the Mexican Competition Law Approval (as defined in the Arrangement Agreement)), and there being no Material Adverse Effect (as defined in the Arrangement Agreement) in respect of Yamana, Pan American or Agnico. There is no certainty, nor can we provide any assurance, that these conditions will be satisfied or, if satisfied, when they will be satisfied. A substantial delay in obtaining satisfactory approvals or the imposition of unfavourable terms or conditions in any required approvals could have an adverse effect on our business, financial condition or results of operations. In addition, if for any reason the conditions to the Arrangement are not satisfied or waived and the Arrangement is not completed or if the Arrangement Agreement is otherwise terminated, the market price of our shares may be adversely affected.

Pan American will incur substantial costs in connection with the proposed Arrangement, even if the Arrangement is not completed

Pan American has incurred and expects to incur additional material non-recurring expenses in connection with the Arrangement and completion of the transactions contemplated by the Arrangement Agreement, including $150 million of the $300 million termination fee that was paid to Gold Fields by Yamana in connection with the termination of the potential transaction between Gold Fields and Yamana, which was funded by Pan American, and costs relating to having obtained the required shareholder and regulatory approvals. Additional unanticipated costs may be incurred by the combined company in the course of coordinating the businesses of Yamana and Pan American after completion of the Arrangement. Certain costs relating to the Arrangement, such as legal, accounting and financial advisor fees, must be paid by us, even if the Arrangement is not completed. These costs, including, if applicable, the payment of the Pan American termination payment or the Pan American expense reimbursement as contemplated in the Arrangement Agreement, may adversely affect our results of operation, cash flow from operations and financial condition.

Yamana's outstanding Senior Notes contain change of control provisions that, if triggered, may require Pan American to refinance such notes at significantly higher rates of interest

Yamana's Senior Notes each contain provisions requiring Yamana to offer to purchase the Senior Notes at a price of 101% of the aggregate principal amount, plus accrued and unpaid interest, upon the occurrence of a Change of Control Repurchase Event (as defined in each of the indentures governing the Senior Notes (as each such indenture may be amended, supplemented or otherwise modified from time to time in accordance with the terms thereof, the "Indentures")). A Change of Control Repurchase Event occurs if each of Moody's and S&P downgrades the Senior Notes by at least one "notch" and, following such downgrade, the Senior Notes are rated below investment grade by each of Moody's and S&P, on any date during the 60-day period (which period shall be extended so long as the rating of the Senior Notes is under publicly announced consideration for a possible downgrade by either Moody's or S&P) after the earlier of the: (i) public announcement by Yamana of any Change of Control (as defined in the Indentures) or pending Change of Control; or (ii) consummation of such Change of Control. If the Arrangement results in a Change of Control Repurchase Event, Pan American or Yamana would be required to offer to purchase the Senior Notes and Pan American would be required to use its cash or obtain additional financing to fund such offer. Such additional financing may not be available on acceptable terms, if at all, and any additional debt financing would be expected to be obtained at rates of interest that are significantly higher than the rates of interest currently payable in respect of the Senior Notes. Any failure to complete such a Change of Control offer would result in a default under the Indentures. Pan American has received a commitment from a Canadian chartered bank to underwrite an upsized revolving credit facility of up to $750 million following closing of the Arrangement and a term loan of up to $500 million at interest rates that are higher than the Senior Notes.

The consummation of the Arrangement may result in one or more ratings organizations taking actions which may adversely affect Pan American's business, financial condition and operating results, as well as the market price of the Pan American Shares

Yamana has long-term credit ratings from S&P, Moody's and Fitch. Pan American may apply for long-term credit ratings from one or more of these ratings organizations conditional upon consummation of the Arrangement. Rating organizations regularly analyze the financial performance and condition of companies and may re-evaluate a company's credit ratings following the consummation of a material transaction, such as the Arrangement. Factors that may impact a company's credit ratings include debt levels, planned asset purchases or sales and near-term and long-term production growth opportunities, liquidity, asset quality, cost structure, product mix and commodity pricing levels. If a ratings downgrade were to occur in connection with the Arrangement or following the Arrangement, Pan American could experience higher borrowing costs in the future and more restrictive covenants which would reduce profitability and diminish operational flexibility. Pan American cannot provide assurance that it will apply for or receive a long-term credit rating or that any of Yamana's current ratings will remain in effect following the consummation of the Arrangement for any given period of time or that a rating will not be lowered by a rating agency if, in its judgment, circumstances so warrant.

The Arrangement Agreement may be terminated in certain circumstances

Each of Yamana, Agnico and Pan American has the right to terminate the Arrangement Agreement in certain circumstances, and if such right is exercised, the Arrangement will not be completed. Accordingly, there is no certainty, nor can Pan American provide any assurance, that the Arrangement Agreement will not be terminated by any of Yamana, Agnico or Pan American before the completion of the Arrangement. If the Arrangement is not completed and Pan American decides to seek another acquisition, there can be no assurance that it will be able to find an asset or target company for acquisition at an equivalent or more attractive price than the total consideration to be paid by Pan American pursuant to the Arrangement.

The integration of Pan American and Yamana may not occur as planned

The Arrangement Agreement has been entered into with the expectation that its successful completion will result in increased production growth at attractive cash costs to us. This expectation is partly based on presumed synergies from consolidation and successful operation of Yamana's mines. These anticipated benefits will depend in part on whether the operations, systems, management and cultures of each of Yamana and Pan American can be integrated in an efficient and effective manner and whether the expected bases or sources of synergies do, in fact, produce the benefits anticipated. Most operational and strategic decisions, and certain staffing decisions, with respect to the combined company post-acquisition will continue to be reviewed by us and may not have been fully identified. These decisions and the integration of Pan American and Yamana will present challenges to management, including the integration of systems and personnel of the two companies, and special risks, including possible unanticipated liabilities, significant one-time write-offs or restructuring charges, unanticipated costs and the loss of key employees. The integration of Yamana's and Pan American's businesses requires the dedication of substantial effort, time and resources on the part of management which may divert management's focus and resources from other strategic opportunities available to the combined company following completion of the Arrangement and from operational matters during this process. In addition, the integration process could result in disruption of existing relationships with suppliers, employees, customers and other constituencies of each company. There can be no assurance that there will be operational or other synergies realized by us, or that the integration of Pan American's and Yamana's operations, systems, management and cultures will be timely or effectively accomplished, or ultimately will be successful in increasing earnings and reducing costs. In addition, synergies assume certain long-term realized metals prices. If actual prices were below such assumed prices, that could adversely affect the synergies to be realized.

We may not realize the benefits of our newly acquired projects

As part of our strategy, we will continue our efforts to develop new projects and will have an expanded portfolio of such projects as a result of our proposed acquisition of Yamana. A number of risks and uncertainties are associated with the development of these types of projects, including political, legal, litigation, regulatory, design, construction, labour (including risks associated with expatriated employees), environmental, operating, technical and technological risks and uncertainties relating to capital and other costs and financing risks.

There may be potential undisclosed liabilities associated with the Arrangement

In connection with the Arrangement, there may be liabilities that Pan American failed to discover or was unable to quantify in its due diligence (which was conducted prior to the execution of the Arrangement Agreement). The representations, warranties and indemnities contained in the Arrangement Agreement will not survive past the effective date of the transaction.

Pan American and Yamana may be the targets of legal claims, securities class action, derivative lawsuits and other claims

Pan American and Yamana may be the target of securities class action and derivative lawsuits which could result in substantial costs and may delay or prevent the Arrangement from being completed. Securities class action lawsuits and derivative lawsuits are often brought against companies that have entered into an agreement to acquire a public company or to be acquired. Third parties may also attempt to bring claims against Pan American or Yamana seeking to restrain the Arrangement or seeking monetary compensation or other redress. Even if the lawsuits are without merit, defending against these claims can result in substantial costs and divert management time and resources. Additionally, if a plaintiff is successful in obtaining an injunction prohibiting consummation of the Arrangement, then that injunction may delay or prevent the Arrangement from being completed.

Failure to complete the Arrangement could also negatively impact the market price of the Pan American Shares

If the Arrangement is not completed for any reason, including a failure to satisfy the conditions precedent or a termination of the Arrangement Agreement, there are risks that such failure to complete the Arrangement could adversely impact the market price of the Pan American Shares to the extent that the current market price of the Pan American Shares reflects a market assumption that the Arrangement will be completed. Depending on the reasons for the Arrangement not being completed, such failure to complete the Arrangement could have an

adverse impact on our current and future business, operations, results of operations, financial condition and prospects.

Pan American will be subject to risks that Yamana currently faces with respect to its business and affairs

Upon completion of the Arrangement, the business of Pan American will be subject to the risks that Yamana currently faces with respect to its business and affairs. Many of these risks are similar to the risks with respect to Pan American's business as described herein, including the following:

- metal and commodity price risk;
- exploration, development and operating risks;
- foreign operations, political risks, government regulations, and changes in laws;
- uncertainty in the estimation of mineral reserves and mineral resources;
- health, safety and environmental risks and hazards;
- permitting and land title risks;
- relationships with communities, Indigenous peoples, governments, shareholders and other stakeholders; and
- supply availability, liquidity and credit risk.

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
2022	• November 9 • August 10 • May 11 • February 23	• $0.10 • $0.11 • $0.12 • $0.12
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

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 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 completed 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
$100 to less than $200	$0.10	$0.01	$0.11
$200 to less than $300	$0.10	$0.02	$0.12
$300 to less than $400	$0.10	$0.06	$0.16
$400 or greater	$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 of Directors will consider a variety of factors when making its dividend decisions, including availability of 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 2022:

Toronto Stock Exchange (CAD$)				Nasdaq Stock Market (USD$)			
Month	**High**	**Low**	**Volume**	**Month**	**High**	**Low**	**Volume**
January	31.16	$ 26.98	10,159,249	January	$ 24.9	$ 21.13	54,735,203
February	31.26	26.90	11,053,233	February	$ 24.6	$ 21.22	51,153,522
March	35.46	32.30	16,818,596	March	$ 28.3	$ 25.56	69,717,882
April	37.69	31.25	8,165,603	April	$ 29.95	$ 24.38	42,293,214
May	32.96	27.36	8,922,268	May	$ 25.89	$ 21.01	42,996,226
June	30.18	25.29	9,133,878	June	$ 23.99	$ 20.02	45,150,467
July	26.16	23.24	8,044,108	July	$ 20.33	$ 18.05	48,127,221
August	27.00	19.54	11,384,567	August	$ 21.08	$ 14.88	67,314,978
September	21.96	19.07	12,420,831	September	$ 16.57	$ 14.5	54,268,662
October	23.77	21.09	9,728,712	October	$ 15.32	$ 17.25	44,907,483
November	22.26	18.41	23,325,137	November	$ 16.39	$ 13.64	141,695,738
December	23.52	22.10	13,496,540	December	$ 17.5	$ 15.7	77,608,415

DIRECTORS AND EXECUTIVE OFFICERS

The names of our directors and executive officers as at December 31, 2022, 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[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.
IGNACIO COUTURIER Vancouver, B.C. Canada	CFO	CFO of Pan American since March 2022; prior to that, other senior management roles with Pan American since 2004

CHRISTOPHER EMERSON Vancouver, B.C. Canada	VP, Corporate Development & Geology	VP, Corporate Development & Geology of Pan American since August 10, 2015
DELANEY FISHER Vancouver, B.C. Canada	SVP, Associate General Counsel & Corporate Secretary	SVP, Associate General Counsel & Corporate Secretary since January 2022; prior to that, other senior management roles with Pan American since 2008
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
CAMERON PATERSON North Vancouver, B.C. Canada	SVP, Finance and IT	SVP, Finance and IT since January 2022; prior to that, other senior management roles with Pan American since 2014

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, 2022, 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.

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, 2022, is set forth in the preceding table.

As of the close of business on February 21, 2023, the directors and executive officers of Pan American named above as a group exercised control or direction or beneficially owned, directly or indirectly, 465,530 Common Shares, or approximately 0.22% 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:

(a) 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

(b) 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, 2022, 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, 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, 2022 and 2021 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 $2,828,000 and $2,394,100, respectively.

Audit-Related Fees

The aggregate fees billed by Deloitte LLP for the fiscal years ended December 31, 2022 and 2021 for assurance and related services 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 $287,300 and $243,400, respectively. The fees in both 2022 and 2021 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, 2022 and 2021 for professional services relating to tax compliance, tax advice, tax planning, and other services were approximately $1,900 and $31,300, respectively. In 2021, such fees related primarily to the provision of services related to tax compliance matters.

Other Fees

The aggregate fees billed by Deloitte LLP for the fiscal years ended December 31, 2022 and 2021 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 Pan American 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 31 to our Audited Consolidated Financial Statements for the year ended December 31, 2022, 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

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.

SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

As of December 31, 2022, to the knowledge of Pan American, the following table provides details with respect to all securities of Pan American that were subject to a contractual restriction on transfer. No securities of Pan American are subject to escrow.

Designation of Class	Number of Securities[1]		Percentage of Class
Common shares	3,605,712		1.71%
Options	120,267		31.90%
Restricted Share Units	248,708	45.07%	
CVRs	43,375		0.01%

Notes:

1 In connection with the Arrangement, on November 8, 2022, certain directors, officers and shareholders of Pan American (collectively, the "**Supporting Shareholders**") entered into voting and support agreements ("**Support Agreements**") with Yamana, pursuant to which the Supporting Shareholders agreed, among other things, not to, directly or indirectly, sell, transfer, pledge or assign, or agree to sell, transfer pledge or assign any of their securities of Pan American, other than in accordance with the Support Agreements. The Support Agreements, along with the contractual restrictions on transfer contained therein, will be terminated upon completion of the Arrangement, which is expected to occur in the first quarter of 2023.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business and the Arrangement Agreement, no other material contracts have been entered into by Pan American during the financial year ended December 31, 2022, 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, 2022, 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.

Martin Wafforn, P. Eng., Chris Emerson, FAusIMM, Americo Delgado, P.Eng., Alain Mainville, P.Geo., Eric Lachapelle, P.Eng., Dave Felsher, 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. Wafforn, Emerson, Delgado, Mainville, Lachapelle, Felsher, 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, 2022 and 2021, and management's discussion and analysis for the year ended December 31, 2022. 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, 2022

February 22, 2023

TABLE OF CONTENTS

Introduction	2
Core Business and Strategy	3
Yamana Transaction	3
2022 Highlights	4
Environmental, Social, and Governance	6
Operating Performance	7
Project Development Update	19
Overview of 2022 Financial Results	19
Liquidity and Capital Position	28
Closure and Decommissioning Provision	31
Related Party Transactions	31
Alternative Performance (Non-GAAP) Measures	32
Risks and Uncertainties	41
Significant Accounting Policies, Standards and Judgements	49
Subsequent Events	50
Disclosure and Internal Control Procedures	51
Mineral Reserves and Resources	52
Cautionary Note	55

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, 2022 (the "2022 Annual Financial Statements"), and the related notes contained therein. All amounts in this MD&A and the 2022 Annual 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 2022 Annual 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", "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", "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 2022 Annual 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.

YAMANA GOLD INC. TRANSACTION

The Company, Agnico Eagle Mines Limited ("Agnico Eagle") and Yamana Gold Inc. ("Yamana") entered into an arrangement agreement dated November 4, 2022, whereby the Company agreed to acquire all of the issued and outstanding common shares of Yamana following the sale by Yamana of its Canadian assets, including certain subsidiaries and partnerships which hold Yamana's interests in the Canadian Malartic mine, to Agnico Eagle, by way of a plan of arrangement under the Canada Business Corporations Act (the "Transaction"). The Transaction is expected to close in the first quarter of 2023, subject to receipt of approval from the Mexican Federal Economic Competition Commission and satisfaction or waiver of certain other closing conditions. Please refer to the "Subsequent Events" section of the MD&A.

The Transaction would establish Pan American as a major precious metals producer in Latin America. The combined portfolio will consist of 11 operations concentrated in Latin America, a region where Pan American has over 29 years of proven expertise and experience operating mines. With the addition of four operating mines expected to generate strong free cash flow, the Transaction should enhance Pan American's overall financial position and improve its ability to internally fund its growth projects.

2022 HIGHLIGHTS

Operations

Silver production of 18.5 million ounces

Consolidated 2022 silver production of 18.5 million ounces was 0.7 million ounces lower than we produced in 2021. This was primarily due to Morococha being placed on care and maintenance in February 2022, partially offset by an increase in production at La Colorada driven by higher throughput from improved ventilation rates. 2022 silver production was within the November 2022 Revised Operating Outlook range of 18.0 to 18.5 million ounces as provided in the Q3 2022 MD&A dated November 9, 2022.

Gold production of 552.5 thousand ounces

Consolidated 2022 gold production of 552.5 thousand ounces was 26.8 thousand ounces lower than we produced in 2021. This was largely the result of lower gold production at Dolores due to mine sequencing and a reserve grade shortfall in Phase 9B of the open pit. The decrease at Dolores was partially offset by higher production at Shahuindo from higher gold grades due to mine sequencing. 2022 gold production was within our 2022 Original Operating Outlook range of 550.0 to 605.0 thousand ounces.

Base metal production

Consolidated 2022 lead production of 18.7 thousand tonnes was 0.6 thousand tonnes higher than we produced in 2021. Consolidated 2022 zinc production of 38.6 thousand tonnes and copper production of 5.3 thousand tonnes were 10.7 thousand tonnes and 3.4 thousand tonnes lower than we produced in 2021, respectively. The changes in year-over-year base metal production were primarily the result of Morococha being placed on care and maintenance in February 2022, and mining at Huaron sequencing into higher lead grade ore zones.

Zinc production was within the 2022 Original Operating Outlook range of 35.0 to 40.0 thousand tonnes, while lead production was above the 2022 Original Operating Outlook range of 15.0 to 17.0 thousand tonnes, and copper production was below the 2022 Original Operating Outlook range of 5.5 to 6.5 thousand tonnes.

Financial

Revenue in 2022 of $1.5 billion was 8% lower than the $1.6 billion recorded in 2021, reflecting an estimated $111.3 million in lower revenues attributable to lower quantities of metal sold, largely due to Morococha being placed on care and maintenance in February 2022, and $47.6 million attributable to lower silver prices offset partially by higher zinc prices.

Net loss of $340.1 million, or $1.62 basic loss per share, was recorded for 2022, compared with net earnings of $98.6 million, or $0.46 basic earnings per share in 2021. The $438.6 million year-over-year decrease was mainly due to a combination of: the Transaction costs primarily attributable to the Company agreeing to provide Yamana with $150 million toward a termination fee payable to Gold Fields Limited ("Gold Fields"); the $154.5 million Q2 2022 impairment and associated net realizable value ("NRV") charge of the Dolores mine; increased production costs; and lower revenues.

The Dolores Q2 2022 impairment and NRV adjustment was related to the following indicators: (i) The updated mineral resource and production plan for the life of mine which adjusted for the overestimation on Phase 9B of the open pit resource from the original exploration drilling conducted; (ii) inflationary pressures, which have particularly affected this shorter-life asset where most of the mining will be completed in the next two years, including the suspension of underground mining operations; and, (iv) a reduction in the expected duration of economic leaching to the year 2030.

See the "Overview of 2022 Financial Results" section of this MD&A for further information.

Adjusted earnings[(1)] was $17.9 million, or $0.09 adjusted earnings per share, in 2022, compared to adjusted earnings of $161.8 million, or $0.77 basic adjusted earnings per share in 2021. The decrease is related to the revenue and production cost factors described above.

Cash flow, liquidity and working capital position

Cash flow from operations: The Company generated $31.9 million in 2022, which was a $360.2 million decrease compared to the $392.1 million generated in 2021. The decrease was primarily driven by Transaction costs related to the proposed acquisition of Yamana and lower revenues. In addition, inflationary pressures across the asset portfolio offset the lower production costs at Morococha due to the mine being placed on care and maintenance.

See the "Overview of 2022 Financial Results" section of this MD&A for further information.

As at December 31, 2022, the Company had working capital of $423.5 million, inclusive of cash and short-term investments of $142.3 million (excluding long term investments); and $340.0 million available under its revolving Sustainability-Linked Credit Facility ("SL-Credit Facility"). Total debt [(1)] of $226.8 million was related to the SL-Credit Facility, lease liabilities and construction loans in Peru.

In January 2023, the Company sold its long-term investment in Maverix Metals Inc. ("Maverix") for $105.3 million net of transaction costs further improving liquidity. Please refer to the "Subsequent Events" section of the MD&A.

Cash Costs[(1)]

During 2022, all operations were negatively impacted by inflationary pressures, mainly reflecting increased prices for diesel and certain consumables, including cyanide, explosives, and steel products (such as grinding media), as well as facing supply-chain shortages and delayed logistics. We also experienced indirect cost increases in other supplies and services due to the inflationary impact of diesel and consumable prices on third-party suppliers. These challenges are collectively referred to as "Inflationary and Supply Chain Cost Increases" throughout this MD&A.

Silver Segment Cash Costs per ounce in 2022 of $12.72 were $1.21 higher than the $11.51 in 2021. The increase in year-over-year Cash Costs is driven primarily by:

i. a $2.20 per ounce increase from Huaron, where Inflationary and Supply Chain Cost increases were partially offset by higher by-product credits from higher realized zinc prices;

ii. a $1.31 per ounce increase from Manantial Espejo due to a decrease in by-product credits from lower gold production, partially offset by lower production costs per ounce, both due to the completion of mining at COSE in April 2022; and,

iii. an $0.81 per ounce increase from La Colorada due to a decrease in by-product credits from lower base metal grades, partially offset by higher silver grade material sold.

These increases were partially offset by a $1.28 per ounce decrease to Silver Segment Cash Costs attributable to lower direct selling costs from lower treatment and refining charges in 2022.

Silver Segment Cash Costs were above the 2022 Original Operating Outlook range of $10.70 to $12.20 per ounce.

Gold Segment Cash Costs per ounce in 2022 were $1,113, $214 higher than in 2021, reflecting increases at all Gold Segment mines. This was largely driven by the previously described Inflationary and Supply Chain Cost Increases, lower mined grades due to mine sequencing at La Arena, Dolores and Timmins, as well as grade reconciliation shortfalls at Dolores in Phase 9B.

Gold Segment Cash Costs were above the 2022 Original Operating Outlook range of $970 to $1,070 per ounce.

All-In Sustaining Costs ("AISC")[(1)]

Silver Segment AISC for 2022 of $16.48 per ounce were $0.86 higher than 2021. The increase primarily reflects the previously described factors increasing Cash Costs, partially offset by lower exploration expenditures allocated to the Silver Segment mines and lower sustaining capital expenditures at Morococha and Manantial Espejo, which led to a $0.22 and $0.13 per ounce decrease in year-over-year Silver Segment AISC, respectively.

Silver Segment AISC were above the 2022 Original Operating Outlook range of $14.50 to $16.00 per ounce.

Gold Segment AISC for 2022 of $1,649 per ounce were $435 higher than 2021. This largely reflects the previously described factors increasing Cash Costs, an increase in sustaining capital expenditures at Shahuindo and La Arena, and the impact of $98.9 million in NRV adjustments to inventories at Dolores, which led to a $172 per ounce increase in year-over-year Gold Segment AISC.

Gold Segment AISC excluding NRV inventory adjustments for 2022 of $1,459 were within the August 2022 Revised Operating Outlook range of $1,450 to $1,550 per ounce provided in the Q2 2022 MD&A dated August 10, 2022.

(1) Adjusted earnings, Total Debt, 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 2022 Annual Financial Statements.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

Pan American is committed to conducting its business in a responsible and sustainable manner. Our ESG values include: caring for the environment in which we operate; contributing to the long-term development of our host communities; ensuring safe and secure workplaces for our employees; contributing to the welfare of our employees, local communities and governments; and, operating transparently.

In 2022, we met 14 of our 20 ESG goals described in the "Goals and Performance" section of the Company's 2021 Sustainability Report, which is available on the Company's website at www.panamericansilver.com. We are deeply saddened to report that there were three fatal accidents at our operations in 2022. The Company extends our sincere condolences to the families, friends, and colleagues of these individuals. We have conducted full accident investigations with assistance from our local safety committees and relevant authorities and seek to use these accidents as learning tools to prevent recurrences in accordance with our commitment to improving safety performance. We intend to increase emphasis on ensuring that best available controls are in place to manage the most critical risks in our business. On our key environmental metrics, we exceeded our goals, including reduction of greenhouse gas emissions, energy use and water use compared to the 2022 base case. We also met all of our human capital, inclusion and diversity, and governance goals. However, we did not meet our social goal regarding grievances closed, or our environmental audit, biodiversity and recycling targets. Our environmental audit performance did not improve due to individual site performance and changes in audit methodology. We were unable to meet our biodiversity target since a planned revegetation project in La Colorada was placed on hold due to uncertainty over the future Skarn mine layout, and we recycled less than expected partially due to less generation of recyclable waste at our mines in 2022. We will provide complete details on our performance against our 2022 ESG goals in the Company's 2022 Sustainability Report to be published in May 2023.

Pan American Silver was included in the S&P Global Sustainability Yearbook 2023 recognizing our improvement in ESG performance. S&P Global's annual Sustainability Yearbook aims to distinguish individual companies, within their industries, that have demonstrated strengths in corporate sustainability. We placed in the S&P top 10% in the Metals & Mining industry in 2022.

2022 OPERATING PERFORMANCE

Consolidated 2022 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, 2022 and 2021. 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,	
	2022	2021	**2022**	2021	**2022**	2021	**2022**	2021
La Colorada	**1,339**	1,584	**5,927**	5,171	**0.7**	0.8	**3.3**	2.7
Huaron	**1,025**	838	**3,660**	3,513	**0.2**	0.3	**0.9**	1.1
Morococha[1]	**—**	540	**324**	2,175	**—**	0.4	**0.1**	1.1
San Vicente[2]	**703**	641	**2,526**	2,548	**—**	0.1	**0.1**	0.3
Manantial Espejo	**1,010**	1,090	**3,463**	3,236	**8.9**	11.3	**26.6**	33.8
Dolores	**591**	507	**2,242**	2,240	**34.6**	40.1	**136.9**	160.1
Shahuindo	**77**	61	**260**	235	**49.7**	37.0	**151.4**	134.0
La Arena	**14**	11	**38**	40	**36.2**	32.6	**98.5**	112.4
Timmins	**4**	4	**15**	16	**34.0**	34.2	**134.6**	133.8
Total	**4,763**	5,276	**18,455**	**19,174**	**164.4**	**156.7**	**552.5**	**579.3**
Total Payable Production[3]	**4,465**	4,937	**17,297**	**17,858**	**163.8**	**155.9**	**550.4**	**576.4**

(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) Payable production reflects sellable metal after deducting commercial contract metal payable deductions.

Base Metal Production

The following table provides the Company's base metal production for the three and twelve months ended December 31, 2022 and 2021:

	Base Metal Production			
	Three months ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Zinc – kt	**10.5**	11.2	**38.6**	49.4
Lead – kt	**5.0**	4.1	**18.7**	18.1
Copper – kt	**1.3**	2.4	**5.3**	8.7

	Base Metal Payable Production			
	Three months ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Zinc – kt	**8.8**	9.4	**32.3**	41.3
Lead – kt	**4.6**	3.9	**17.4**	17.0
Copper – kt	**1.1**	2.1	**4.5**	7.4

Cash Costs and AISC

The quantification of both Cash Costs and AISC measures is described in detail, and where appropriate reconciled to the 2022 Annual Financial Statements, in the "Alternative (Non-GAAP) Performance 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, 2022, as compared to the same periods in 2021:

	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,	
	2022	2021	**2022**	2021	**2022**	2021	**2022**	2021
La Colorada	15.19	11.64	11.57	10.76	24.24	15.93	16.78	17.51
Huaron	9.20	3.49	6.15	3.95	14.12	9.63	11.04	7.79
Morococha	N/A	4.57	5.68	9.63	N/A	7.98	7.08	13.49
San Vicente	17.11	10.87	15.22	14.98	18.24	14.59	17.99	17.25
Manantial Espejo	16.93	12.50	19.68	18.37	9.50	14.35	20.82	20.67
Silver Segment Consolidated[2]	**14.41**	9.74	**12.72**	11.51	**17.79**	13.57	**16.48**	15.62
Silver Segment Consolidated (Excl. NRV Adjustments)	**14.41**	9.74	**12.72**	11.51	**19.47**	13.75	**16.56**	15.68
Dolores[3]	1,064	931	1,070	749	1,592	1,959	2,065	1,087
Shahuindo	911	832	964	780	1,388	1,091	1,321	1,000
La Arena	997	819	1,038	761	1,393	1,197	1,550	1,182
Timmins	1,417	1,298	1,374	1,319	1,685	1,614	1,639	1,619
Gold Segment Consolidated[2]	**1,077**	963	**1,113**	899	**1,502**	1,461	**1,649**	1,214
Gold Segment Consolidated (Excl. NRV Adjustments)	**1,077**	963	**1,113**	899	**1,422**	1,289	**1,459**	1,196

(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 2022 Annual Financial Statements.

(2) 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.

(3) AISC for Dolores, excluding NRV Adjustments, was $1,248 and $1,363 per ounce for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: $1,305 and $1,025, respectively). NRV adjustments included in AISC increased costs by $344 and $702 for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: increased by $654 and $62, respectively).

2022 Operating Results versus 2022 Operating Outlook

The following table sets out the actual 2022 annual metal production, Cash Costs, AISC and capital expenditures compared to those forecast by management throughout the year. The 2022 original forecast was provided in our Annual 2021 MD&A dated February 23, 2022 (the "2022 Original Operating Outlook"). Management subsequently revised the forecasts in its Q2 2022 MD&A dated August 10, 2022 and Q3 2022 MD&A dated November 9, 2022 (the "August 2022 Revised Operating Outlook" and "November 2022 Revised Operating Outlook", respectively). In the table below "NC" denotes no changes to the previously provided forecast.

	2022 Original Operating Outlook	August 2022 Revised Operating Outlook	November 2022 Revised Operating Outlook	2022 Actual
Silver Production - Moz	19.0 - 20.5	NC	18.0 - 18.5	18.5
Gold Production - koz	550.0 - 605.0	NC	NC	552.5
Zinc Production - kt	35.0 - 40.0	NC	NC	38.6
Lead Production - kt	15.0 - 17.0	NC	NC	18.7
Copper Production - kt	5.5 - 6.5	NC	NC	5.3
Silver Segment Cash Costs ($ per ounce)	10.70 - 12.20	NC	NC	12.72
Gold Segment Cash Costs ($ per ounce)	970 - 1,070	NC	NC	1,113
Silver Segment AISC ($ per ounce)	14.50 - 16.00	NC	NC	16.48
Gold Segment AISC (Excl. NRV) ($ per ounce)[1]	1,240 - 1,365	1,450 - 1,550	NC	1,459
Sustaining Capital ($ millions)	200.0 - 210.0	240.0 - 250.0	NC	223.8
Project Capital ($ millions)	80.0 - 95.0	55.0 - 60.0	NC	66.6

(1) The August 2022 Revised Operating Outlook for Gold Segment AISC excludes NRV adjustments of $98.9 million in 2022 related to heap inventory at Dolores, driven by the updated life of mine plan and reserves, which also resulted in an impairment of the Dolores operation in Q2 2022.

Silver and Gold Production versus the 2022 Original Operating Outlook

	2022 Silver Production (million ounces)		2022 Gold Production (thousand ounces)	
	Forecast[1]	Actual	Forecast[1]	Actual
Silver Segment:				
La Colorada	6.85 - 7.10	5.93	2.8 - 3.0	3.3
Huaron	3.70 - 3.95	3.66	0.5	0.9
Morococha[2]	—	0.32	—	0.1
San Vicente[2]	2.35 - 2.50	2.53	0.2	0.1
Manantial Espejo	3.00 - 3.50	3.46	20.0 - 25.0	26.6
Silver Segment Total	**15.90 - 17.05**	**15.90**	**23.5 - 28.7**	**31.2**
Gold Segment:				
Dolores	2.85 - 3.15	2.24	157.5 - 179.0	136.9
Shahuindo	0.21 - 0.26	0.26	136.0 - 150.8	151.4
La Arena	0.03	0.04	98.0 - 103.5	98.5
Timmins	0.01	0.02	135.0 - 143.0	134.6
Gold Segment Total	**3.10 - 3.45**	**2.56**	**526.5 - 576.3**	**521.3**
Total	**19.0 - 20.5**	**18.45**	**550.0 - 605.0**	**552.5**

(1) Forecast as per the 2022 Original Operating Outlook.
(2) Production figures are only for Pan American's ownership share of Morococha (92.3%), and San Vicente (95.0%).

Silver Production

Consolidated 2022 silver production of 18.5 million ounces was below Management's 2022 Original Operating Outlook due to lower silver production at Dolores related to reserve grade shortfalls in Phase 9B of the open pit and La Colorada where ventilation constraints in 2021 hindered development into higher grade zones and necessitated mine sequencing into lower silver grade stopes in the second half of 2022.

Gold Production

Consolidated 2022 gold production of 552.5 thousand ounces was within Management's 2022 Original Operating Outlook as lower gold production at Dolores, related to reserve grade shortfalls in Phase 9B of the open pit, was offset by higher gold production at Manantial Espejo and Shahuindo, due to higher grades processed in Q4 2022 at both operations.

Base Metal Production versus the 2022 Original Operating Outlook

	2022 Zinc Production (thousand tonnes)		2022 Lead Production (thousand tonnes)		2022 Copper Production (thousand tonnes)	
	Forecast[1]	Actual	Forecast[1]	Actual	Forecast[1]	Actual
Consolidated	**35.0 - 40.0**	**38.6**	**15.0 - 17.0**	**18.7**	**5.5 - 6.5**	**5.3**

(1) Forecast as per the 2022 Original Operating Outlook.

Consolidated 2022 base metal production was generally as expected, with zinc production meeting forecast, and lead production exceeding forecast negatively impacting copper production which was slightly lower than forecast, largely due to mine sequencing at Huaron.

Cash Costs and AISC versus the 2022 Original Operating Outlook

The following table summarizes 2022 Cash Costs and AISC compared to the 2022 Original Operating Outlook on a per ounce basis, net of by-product credits.

	2022 Cash Costs[1] ($ per ounce)		2022 AISC[1] ($ per ounce)	
	Forecast[2]	Actual	Forecast[2]	Actual
Silver Segment:				
La Colorada	8.00 - 9.00	11.57	12.40 - 13.40	16.78
Huaron	1.80 - 4.50	6.15	7.80 - 9.90	11.04
Morococha	—	5.68	—	7.08
San Vicente	15.30 - 16.55	15.22	18.70 - 19.70	17.99
Manantial Espejo	21.00 - 24.00	19.68	22.00 - 24.80	20.82
Total	**10.70 - 12.20**	**12.72**	**14.50 - 16.00**	**16.48**
Gold Segment[3]:				
Dolores	715 - 840	1,070	925 - 1,070	1,363
Shahuindo	910 - 995	964	1,170 - 1,275	1,321
La Arena	990 - 1,070	1,038	1,380 - 1,475	1,550
Timmins	1,340 - 1,415	1,374	1,615 - 1,695	1,639
Total	**970 - 1,070**	**1,113**	**1,240 - 1,365**	**1,459**

(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 2022 Annual Financial Statements. The Cash Costs and AISC forecasts assumed realized prices and exchange rates 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 exchange rates relative to 1 USD of 20.00 for the MXN, 4.10 for the PEN, 122.17 for the ARS, 7.00 for the BOB, and 1.25 for the CAD.
(2) Forecast as per the 2022 Original Operating Outlook.
(3) Full year 2022 Gold Segment AISC excludes NRV adjustments of $98.9 million in 2022 related to heap inventory at Dolores, driven by the updated life of mine plan and reserves, which also resulted in an impairment of the Dolores operation in Q2 2022.

Cash Costs

All operations were affected by higher than expected Inflationary and Supply Chain Cost Increases in 2022.

In addition, Silver Segment Cash Costs of $12.72 per ounce were affected by production shortfalls at La Colorada as previously described, which were partially offset by higher than expected by-product credits from Manantial Espejo due to higher grades processed in Q4 2022.

Gold Segment Cash Costs of $1,113 per ounce were impacted by Inflationary and Supply Chain Cost Increases as well as production shortfalls at Dolores, related to the Phase 9B mineral reserve grade shortfall.

AISC

Silver Segment AISC of $16.48 per silver ounce were affected by the same factors driving Cash Costs.

Gold Segment AISC of $1,649 per gold ounce were affected by the same factors driving Cash Costs, in addition to higher sustaining capital expenditures at Shahuindo and La Arena, as a result of funding mine infrastructure projects at those operations directly rather than through originally planned for construction loans.

Capital Expenditures versus the 2022 Original Operating Outlook

The following table summarizes the 2022 capital expenditures compared to the 2022 Original Operating Outlook.

	2022 Capital Expenditures ($ millions)	
	Forecast[1]	Actual
La Colorada	28.0 - 29.0	29.3
Huaron	16.0 - 19.0	13.9
Morococha	—	0.3
San Vicente	7.0 - 8.0	7.2
Manantial Espejo	2.0 - 3.0	4.3
Dolores	33.0 - 34.0	35.9
Shahuindo	37.0 - 38.0	49.2
La Arena	39.0 - 40.0	48.0
Timmins	38.0 - 39.0	35.7
Sustaining Capital Sub-total	**200.0 - 210.0**	**223.8**
La Colorada Skarn	68.0 - 81.0	62.4
Timmins	12.0 - 14.0	1.9
Other	-	2.2
Project Capital Sub-total	**80.0 - 95.0**	**66.6**
Total Capital	**280.0 - 305.0**	**290.3**

(1) Forecast as per the 2022 Original Operating Outlook.

Sustaining capital expenditures were $13.8 million higher than the top end of the range provided in the 2022 Original Operating Outlook. This was primarily driven by the necessity to directly fund construction of leach pads, waste dumps and other infrastructure at Shahuindo and La Arena, rather than through construction loans that would have amortized the cost over the life of the assets. In 2022, Pan American experienced delays in obtaining the required documentation to secure the financing arrangements for these projects ahead of beginning earthworks.

Project capital in 2022 was below the 2022 Original Operating Outlook range, primarily due to additional time used to optimize the design and construction plans for the paste fill plant at Bell Creek, which is now scheduled to be constructed in 2023 and 2024. Furthermore, initiation of advancing access ramps to our La Colorada skarn deposit was deferred in 2022 to investigate potential bulk mining opportunities and ensure access infrastructure does not interfere with the optimal mine design.

Individual Mine Operation Performance

An analysis of performance at each operation in 2022 compared with 2021 follows. The project capital amounts invested in 2022 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,	
	2022	2021	**2022**	2021
Ore tonnes mined - kt	**171.0**	159.6	**649.2**	566.8
Tonnes milled - kt	**162.8**	159.9	**641.1**	572.5
Average silver grade – grams per tonne	**283**	343	**316**	312
Average zinc grade - %	**1.86**	1.71	**1.85**	2.05
Average lead grade - %	**1.09**	0.95	**1.05**	1.09
Production:				
Silver – koz	**1,339**	1,584	**5,927**	5,171
Gold – koz	**0.74**	0.79	**3.33**	2.71
Zinc – kt	**2.55**	2.26	**10.02**	9.98
Lead – kt	**1.51**	1.22	**5.65**	5.19
Copper - kt	**0.01**	—	**0.01**	—
Payable Production:				
Silver – koz	**1,270**	1,510	**5,625**	4,902
Gold – koz	**0.54**	0.65	**2.68**	2.21
Zinc – kt	**2.16**	1.93	**8.51**	8.49
Lead – kt	**1.39**	1.13	**5.23**	4.83
Copper - kt	**0.01**	—	**0.01**	—
Cash Costs - $ per ounce[1]	**15.19**	11.64	**11.57**	10.76
Sustaining capital - $ thousands[2]	**11,689**	6,410	**29,275**	26,069
AISC - $ per ounce[1]	**24.24**	15.93	**16.78**	17.51
Payable silver sold - koz	**1,306**	1,669	**5,712**	4,321

(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 $12.5 million and $62.4 million investing activity cash outflows for Q4 2022 and full year 2022, respectively (Q4 2021 and full year 2021: $16.5 million and $39.5 million, respectively) related to investment capital incurred on the La Colorada projects, as disclosed in the "Project Development Update" section of this MD&A.

2022 versus 2021

Production:

- Silver: 15% increase primarily driven by higher throughput, which benefited from improved primary ventilation rates that allowed an increase in mining rates.
- By-products: 9% increase in lead production as a result of increased throughput, partially offset by mine sequencing into lower base metal grade areas of the mine.

Cash Costs: were $0.81 higher than in 2021, primarily driven by lower by-product credits per ounce from lower base metal grades, partially offset by higher payable silver ounces sold.

Sustaining Capital: increased spending in 2022 primarily related to secondary ventilation infrastructure and ground control improvements, tailings storage facility expansions and accelerated mine deepening to advance the mine transition towards more mechanized long-hole open stoping mining methods. This was partially offset by reduced investments in mine equipment replacements and raise-bore primary ventilation infrastructure.

AISC: was $0.73 lower than in 2021, as a result of lower sustaining capital per ounce and greenfield exploration expenditures allocated in 2022, partially offset by the factors increasing year-over-year Cash Costs.

Huaron Operation

	Three months ended December 31,		Year ended December 31,	
	2022	2021	**2022**	**2021**
Ore tonnes mined - kt	**231.1**	233.1	**937.2**	939.3
Tonnes milled - kt	**232.6**	233.1	**938.4**	940.3
Average silver grade – grams per tonne	**162**	137	**146**	141
Average zinc grade - %	**2.46**	1.79	**2.25**	2.14
Average lead grade - %	**1.71**	1.02	**1.52**	1.11
Average copper grade - %	**0.68**	0.86	**0.63**	0.82
Production:				
Silver – koz	**1,025**	838	**3,660**	3,513
Gold – koz	**0.24**	0.27	**0.95**	1.09
Zinc – kt	**4.50**	3.06	**16.43**	15.37
Lead – kt	**3.21**	1.63	**11.44**	7.48
Copper – kt	**1.20**	1.55	**4.30**	5.85
Payable Production:				
Silver – koz	**866**	688	**3,068**	2,930
Gold – koz	**0.06**	0.03	**0.28**	0.12
Zinc – kt	**3.71**	2.51	**13.52**	12.63
Lead – kt	**3.02**	1.53	**10.78**	7.02
Copper – kt	**1.06**	1.35	**3.84**	4.94
Cash Costs - $ per ounce[1]	**9.20**	3.49	**6.15**	3.95
Sustaining capital - $ thousands[2]	**3,952**	3,991	**13,940**	10,897
AISC - $ per ounce[1]	**14.12**	9.63	**11.04**	7.79
Payable silver sold – koz	**844**	672	**3,014**	2,976

(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 $1.6 million and $1.6 million investing activity cash outflows for Q4 2022 and full year 2022, respectively (Q4 2021 and full year 2021: $nil and $nil, respectively) related to engineering for a new filtered tailings plant and an exploration program related to zones outside the mine plan; this expenditure is included in Other Projects, as disclosed in the "Project Development Update" section of this MD&A.

2022 versus 2021

Production:

- Silver: 4% higher, primarily from higher grades due to mine sequencing.
- By-products: zinc and lead production increased 7% and 53%, respectively, while copper production was 27% lower, all due to mine sequencing.

Cash Costs: increased $2.20 per ounce, primarily due to Inflationary and Supply Chain Cost Increases, which were partially offset by higher by-product credits per ounce due to higher zinc prices.

Sustaining Capital: higher spending in 2022 was primarily related to equipment replacements and refurbishments, and mine deepening, partially offset by lower investments on tailings storage facility expansions. The balance of 2022 capital spending related to equipment and facility leases, mine ventilation infrastructure and near-mine exploration.

AISC: an increase of $3.25 per ounce due to the same factors affecting year-over-year Cash Costs and higher sustaining capital investments.

Dolores Operation

	Three months ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Ore tonnes mined - kt	**2,591.3**	1,238.9	**7,303.3**	7,668.3
Waste tonnes mined - kt	**6,166.8**	7,043.5	**26,227.2**	24,374.9
Tonnes placed - kt	**2,075.0**	2,057.0	**7,956.6**	7,774.4
Average silver grade – grams per tonne	**20**	14	**18**	16
Average gold grade – grams per tonne	**0.67**	0.66	**0.64**	0.95
Production:				
Silver – koz	**591**	507	**2,242**	2,240
Gold – koz	**34.6**	40.1	**136.9**	160.1
Payable Production:				
Silver – koz	**590**	507	**2,238**	2,236
Gold – koz	**34.5**	40.1	**136.6**	159.8
Cash Costs - $ per ounce(1)	**1,064**	931	**1,070**	749
Sustaining capital - $ thousands	**4,616**	12,097	**35,855**	40,566
AISC - $ per ounce(1)	**1,592**	1,959	**2,065**	1,087
Payable gold sold - koz	**32.62**	34.34	**140.97**	158.07

(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. AISC excluding NRV Adjustments is $1,248 and $1,363 per ounce for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: $1,305 and $1,025, respectively). NRV adjustments included in AISC increased costs by $344 and $702 for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: $654 increase and $62 increase, respectively).

2022 versus 2021

Production:

- Silver: comparable year-over-year due to mine sequencing into higher silver grade ores in the second half of 2022, partially offset by a lower ratio of silver ounces produced to ounces stacked from leach sequencing.
- Gold: the 15% decrease is primarily due to mine sequencing into lower gold grade ores and a negative grade reconciliation related to Phase 9B of the open pit, partially offset by a higher ratio of gold ounces recovered to stacked from leach sequencing.

Cash Costs: increased $321 per ounce, primarily from the lower gold grades due to mine sequencing and the impact of negative grade reconciliation in Phase 9B, Inflationary and Supply Chain Cost Increases and lower silver by-product credits per ounce.

Sustaining Capital: reduced year-over-year, primarily due to lower spending on heap leach pad expansions and plant and facility upgrades, partially offset by greater capitalized spending on waste mining for Phase 10 of the open-pit.

AISC: increased $978 per ounce, primarily due to the impact of NRV inventory adjustments, in addition to the same factors affecting Cash Costs. The NRV inventory adjustments increased costs by $89.2 million, or $640 per ounce, in 2022 relative to 2021.

Shahuindo operation

	Three months ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Ore tonnes mined - kt	**3,083.2**	3,831.1	**13,644.2**	15,114.6
Waste tonnes mined - kt	**3,711.6**	3,641.8	**18,922.9**	16,717.4
Tonnes placed - kt	**2,970.3**	3,617.1	**13,754.8**	13,149.3
Average silver grade – grams per tonne	**10**	6	**6**	6
Average gold grade – grams per tonne	**0.67**	0.43	**0.50**	0.47
Production:				
Silver – koz	**76.51**	60.54	**260.33**	234.69
Gold – koz	**49.70**	36.95	**151.37**	134.04
Payable Production:				
Silver – koz	**75.94**	60.08	**258.38**	232.93
Gold – koz	**49.65**	36.92	**151.24**	133.93
Cash Costs - $ per ounce[1]	**911**	832	**964**	780
Sustaining capital - $ thousands[2]	**21,412**	9,146	**49,246**	28,846
AISC - $ per ounce[1]	**1,388**	1,091	**1,321**	1,000
Payable gold sold - koz	**46.29**	39.53	**145.32**	139.46

(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 $0.1 million and $0.6 million of investing activity cash outflows for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: $0.1 million and $0.5 million, respectively) related to lease payments for the crushing and agglomeration plant, and is included in Other Projects, as disclosed in the "Project Development Update" section of this MD&A.

2022 versus 2021

Production:

- Gold: increased 13%, primarily as a result of higher gold grades from mine sequencing and higher tonnes stacked from improved ore blending availabilities between fine and course ores.

Cash Costs: increased $184 per ounce, primarily as a result of Inflationary and Supply Chain Cost Increases and higher waste-to-ore mining rates.

Sustaining Capital: increased relative to 2021, primarily driven by construction of a mine water treatment plant, waste storage facility preparation, and mine equipment replacements, partially offset by lower expenditures for heap leach pad expansions due to the timing of payments on construction loan facilities.

AISC: increased $321 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,	
	2022	2021	**2022**	2021
Ore tonnes mined - kt	**3,735.7**	4,037.6	**11,423.4**	10,855.2
Waste tonnes mined - kt	**3,904.7**	5,372.8	**22,683.7**	27,007.5
Tonnes placed - kt	**3,746.6**	4,037.6	**11,486.1**	10,855.2
Average silver grade – grams per tonne	**1**	1	**1**	1
Average gold grade – grams per tonne	**0.32**	0.35	**0.33**	0.36
Production:				
Silver – koz	**14.19**	11.11	**37.62**	39.75
Gold – koz	**36.18**	32.59	**98.46**	112.35
Payable Production:				
Silver – koz	**14.14**	11.08	**37.50**	39.63
Gold – koz	**36.15**	32.57	**98.39**	112.27
Cash Costs - $ per ounce[1]	**997**	819	**1,038**	761
Sustaining capital - $ thousands	**11,390**	9,996	**47,970**	45,479
AISC - $ per ounce[1]	**1,393**	1,197	**1,550**	1,182
Payable gold sold - koz	**30.62**	26.87	**99.37**	109.43

(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.

2022 versus 2021

Production:

- Gold: decreased 12% as a result of lower grades due to mine sequencing and a decrease in the ratio of ounces recovered to stacked due to the timing of leach sequencing.

Cash Costs: increased $277 per ounce, primarily due to Inflationary and Supply Chain Cost Increases and lower grade ore mined, partially offset by a lower ratio of waste-to-ore mining.

Sustaining Capital: higher than 2021, largely as a result of higher expenditures on heap leach pad expansions, waste storage facility expansions and mine equipment replacements, offset by lower capitalized deferred stripping.

AISC: increased by $368 per ounce, due to the same factors affecting year-over-year Cash Costs, as well as an increase in sustaining capital and reclamation cost accretion per ounce.

Timmins operation

	Three months ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Ore tonnes mined - kt	**455.3**	392.6	**1,717.9**	1,580.9
Tonnes milled - kt	**447.9**	391.4	**1,694.3**	1,593.1
Average gold grade – grams per tonne	**2.52**	2.83	**2.60**	2.70
Production:				
Silver – koz	**3.64**	4.03	**15.30**	16.16
Gold – koz	**33.96**	34.25	**134.64**	133.85
Payable Production:				
Silver – koz	**3.61**	3.99	**15.01**	16.00
Gold – koz	**33.94**	34.22	**134.53**	133.75
Cash Costs - $ per ounce[1]	**1,417**	1,298	**1,374**	1,319
Sustaining capital - $ thousands[2]	**8,269**	8,415	**35,711**	35,894
AISC - $ per ounce[1]	**1,685**	1,614	**1,639**	1,619
Payable gold sold - koz	**31.00**	30.00	**135.40**	132.00

(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 $1.9 million investing activity cash outflows for Q4 2022 and full year 2022, respectively (Q4 2021 and full year 2021: $0.2 million and $6.4 million, respectively) related to investment capital incurred on the Timmins projects, as disclosed in the "Project Development Update" section of this MD&A.

2022 versus 2021

Production:

- Gold: comparable year-over-year, as higher mining rates were offset by lower grades during the second half of 2022.

Cash Costs: increased $55 per ounce, primarily as a result of the lower grades and higher operating costs from Inflationary and Supply Chain Cost Increases, which were largely offset by improved productivity from additional ground control measures at Bell Creek and the depreciation of the Canadian Dollar.

Sustaining Capital: was comparable year-over-year with expenditures primarily comprised of mine equipment refurbishments and replacements, mine infrastructure upgrades, a tailings storage facility expansion, near-mine exploration, and lease payments for mining equipment.

AISC: increased by $20 per ounce due to the same factors impacting Cash Costs, offset by lower exploration expenditures allocated in 2022.

Other Operations[1]

	Three Months Ended December 31, 2022			Three Months Ended December 31, 2021		
	Morococha	San Vicente	Manantial Espejo	Morococha	San Vicente	Manantial Espejo
Tonnes milled – kt	**—**	**97.4**	**159.9**	158.9	90.1	170.8
Average silver grade – grams per tonne	**—**	**243**	**249**	118	246	230
Average gold grade – grams per tonne	**—**	**—**	**2.05**	—	—	2.25
Average zinc grade - %	**—**	**4.05**	**—**	2.97	2.63	—
Average lead grade - %	**—**	**0.32**	**—**	1.02	0.03	—
Average copper grade - %	**—**	**0.14**	**—**	0.54	0.24	—
Production:						
Silver – koz	**—**	**703**	**1,010**	540	641	1,090
Gold – koz	**—**	**0.03**	**8.95**	0.35	0.06	11.35
Zinc – kt	**—**	**3.43**	**—**	3.93	1.93	—
Lead – kt	**—**	**0.27**	**—**	1.27	0.02	—
Copper – kt	**—**	**0.10**	**—**	0.67	0.18	—
Cash Costs - $ per silver ounce[2]	**N/A**	**17.11**	**16.93**	4.57	10.87	12.50
AISC - $ per silver ounce[2]	**N/A**	**18.24**	**9.50**	7.98	14.59	14.35

	Year ended December 31, 2022			Year ended December 31, 2021		
	Morococha	San Vicente	Manantial Espejo	Morococha	San Vicente	Manantial Espejo
Tonnes milled – kt	**100.5**	**346.0**	**642.6**	617.5	356.3	657.1
Average silver grade – grams per tonne	**112**	**250**	**195**	122	244	177
Average gold grade – grams per tonne	**—**	**—**	**1.47**	—	—	1.75
Average zinc grade - %	**3.12**	**3.29**	**—**	2.98	2.81	—
Average lead grade - %	**0.96**	**0.30**	**—**	1.04	0.10	—
Average copper grade - %	**0.60**	**0.18**	**—**	0.48	0.24	—
Production:						
Silver – koz	**324**	**2,526**	**3,463**	2,175	2,548	3,236
Gold – koz	**0.15**	**0.11**	**26.63**	1.11	0.28	33.76
Zinc – kt	**2.67**	**9.51**	**—**	15.64	8.36	—
Lead – kt	**0.73**	**0.89**	**—**	5.15	0.32	—
Copper – kt	**0.47**	**0.48**	**—**	2.17	0.66	—
Cash Costs - $ per silver ounce[2]	**5.68**	**15.22**	**19.68**	9.63	14.98	18.37
AISC - $ per silver ounce[2]	**7.08**	**17.99**	**20.82**	13.49	17.25	20.67

(1) Production figures reflect Pan American's 92.3% share of Morococha and 95% share of San Vicente, unless otherwise noted. Morococha was placed on care and maintenance in February 2022.
(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.

2022 versus 2021

Morococha: production reflects the mine being placed in care and maintenance in February 2022 to complete the previously agreed closure of the processing plant while the Company evaluates strategic alternatives for the future of the operation.

San Vicente: operating results were generally consistent with the prior year, as higher zinc and lead grades were offset by timing of zinc concentrate shipments. Higher sustaining capital expenditures year-over-year led to marginally higher AISC in 2022.

Manantial Espejo: the year-over-year gold production decrease is due to the lower gold grade ores processed, reflecting the completion of mining operations at COSE in April 2022, whereas the increase in silver production reflects higher grades and ore mining at the Manantial Espejo underground operation and the Joaquin mine in 2022. Mining and processing activities at Manantial Espejo concluded in January 2023.

2023 OPERATING OUTLOOK

Pan American plans to provide its 2023 operating outlook and guidance following the completion of the Transaction, which is expected to occur later in the first quarter of 2023. Management intends to provide a 2023 operating outlook inclusive of the Latin American assets acquired through the Transaction, as well as a consolidated forecast for annual general and administrative, exploration and project development costs.

The 2023 operating outlook will reflect the end-of-mine life at Pan American's Manantial Espejo operation in Argentina, with the asset being placed on care and maintenance at the end of 2022.

PROJECT DEVELOPMENT UPDATE

The following table reflects the amounts spent at each of Pan American's major projects in 2022 as compared to 2021.

Project Development Investment (thousands of USD)	Three months ended December 31,		Year ended December 31,	
	2022	2021	2022	2021
La Colorada projects	**12,462**	16,521	**62,408**	39,462
Timmins projects	**217**	244	**1,941**	6,403
Other	**1,770**	134	**2,238**	611
Total	**14,449**	16,899	**66,587**	46,476

During 2022, the Company invested $66.6 million, largely on exploration and development of the La Colorada Skarn project, including advancing construction of the new concrete-lined shaft and completion of the refrigeration plant that will also provide benefits to the existing operation.

OVERVIEW OF 2022 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 timing of sales, which vary with the timing of shipments and impairment charges.

2022 (In thousands of USD, other than per share amounts)	Quarter Ended Mar 31	Jun 30	Sep 30	Dec 31	Year Ended Dec 31
Revenue	$ 439,888	$ 340,469	$ 338,889	$ 375,472	**$ 1,494,718**
Mine operating earnings (loss)	$ 66,755	$ (31,652)	$ (21,788)	$ 35,047	**$ 48,362**
Earnings (loss) for the period attributable to equity holders	$ 76,517	$ (173,982)	$ (71,527)	$ (172,756)	**$ (341,748)**
Basic (loss) earnings per share	$ 0.36	$ (0.83)	$ (0.34)	$ (0.81)	**$ (1.62)**
Diluted (loss) earnings per share	$ 0.36	$ (0.83)	$ (0.34)	$ (0.81)	**$ (1.62)**
Cash flow from operating activities[1]	$ 68,758	$ 20,835	$ 54,418	$ (112,102)	**$ 31,909**
Cash dividends paid per share	$ 0.12	$ 0.12	$ 0.11	$ 0.10	**$ 0.45**
Other financial information					
Total assets					**$ 3,248,498**
Total long-term financial liabilities[2]					**$ 511,803**
Total attributable shareholders' equity					**$ 2,195,479**

(1) Cash flow from operating activities includes $157.3 million of transaction and integration costs related to the Yamana Transaction.
(2) Total long-term financial liabilities are comprised of non-current liabilities excluding deferred tax liabilities and deferred revenue.

2021	Quarter Ended				Year Ended
(In thousands of USD, other than per share amounts)	Mar 31	Jun 30	Sep 30	Dec 31	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	$ 0.07	$ 0.07	$ 0.10	$ 0.10	**$ 0.34**
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)	Mar 31	Jun 30	Sep 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	$ 0.07	**$ 0.22**
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.

Income Statement: 2022 versus 2021

Net loss of $340.1 million were recorded in 2022 compared to net earnings of $98.6 million in 2021, which corresponds to basic (loss) earnings per share of $(1.62) and $0.46, respectively.

The following table highlights the difference between net earnings in 2022 compared with 2021:

Net earnings, year ended December 31, 2021			**$ 98,562**	**Note**
Decreased revenue:				
Lower quantities of metal sold		$ (111,296)		
Decreased realized metal prices		(47,622)		
Decreased direct selling costs		18,916		
Decreased negative settlement adjustments		1,970		
Total decrease in revenue			**$ (138,032)**	**(1)**
Increased cost of sales:				
Increased production costs	$ (79,929)			
Increased NRV adjustments to inventories	(89,023)			
Decreased royalty charges	486			
Increased production costs and decreased royalty charges		**$ (168,466)**		**(2)**
Increased depreciation and amortization		(13,078)		**(3)**
Total increase in cost of sales			**$ (181,544)**	
Decreased income tax expense			107,311	**(5)**
Decreased investment loss			43,501	**(7)**
Increased gain and income from associates			40,686	**(8)**
Decreased general and administrative expense			5,877	
Increased gains on derivatives			1,943	
Decreased foreign exchange loss			1,660	
Increased transaction and integration costs			(157,334)	**(4)**
Increased impairment charges			(99,064)	**(6)**
Decreased gains on sales of mineral properties, plant and equipment			(34,606)	**(9)**
Increased mine care and maintenance costs			(13,343)	**(10)**
Increased exploration and project development expense			(7,264)	
Increased interest and finance expense			(6,265)	
Increased other expense			(2,151)	
Net loss, year ended December 31, 2022			**$ (340,063)**	

1) **Revenue** for 2022 was $138.0 million lower than in 2021, from decreased quantities of metal sold and lower metal prices. The year-over-year decrease in metal quantities sold was driven primarily by gold, zinc and copper decreases of 5%, 30%, and 39%, respectively.

   The lower quantities sold were mainly driven by lower production from the cessation of mining activities at Morococha in February 2022 and lower gold sales from grade-driven production decreases at Dolores and La Arena. These were partially offset by increased quantities of metal sold at La Colorada due to improved ventilation rates.

   The lower metal prices were due to a 14% decline in silver prices, partially offset by a 16% increase in zinc prices.

The following table reflects yearly realized metal prices and quantities sold:

	Realized Metal Prices [1]		Quantities of Metal Sold [2]	
	Year ended December 31,		Year ended December 31,	
	2022	2021	2022	2021
Silver	**$ 21.59**	$ 25.00	**17,486**	17,470
Gold	**$ 1,792**	$ 1,792	**548.8**	574.9
Zinc	**$ 3,472**	$ 2,997	**29.9**	42.7
Lead	**$ 2,148**	$ 2,206	**17.6**	17.0
Copper	**$ 8,979**	$ 9,297	**4.7**	7.8

(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.
(2) Metal quantities stated as koz for silver and gold and kt for zinc, lead and copper.

2) **Production and royalty costs** in 2022 were $168.5 million, or 18%, higher than in 2021. All operations were affected by Inflationary and Supply Chain Cost Increases. The largest factors that increased year-over-year production costs, which included this inflationary impact, are described below:

   i. $89.0 million from NRV inventory adjustments, which increased costs by $97.7 million in 2022 compared to $8.7 million in 2021. The increase in NRV inventory adjustments largely reflects increased heap inventory write-downs at Dolores, which resulted from the updates to the life of mine plan in Q2 2022, as well as the general inflationary pressures;

   ii. $86.6 million from Gold Segment mines (exclusive of NRV inventory adjustments), also reflecting higher waste-to-ore mining rates at Dolores and Shahuindo;

   iii. $29.7 million from Silver Segment mines (exclusive of Morococha and NRV inventory adjustments), also reflecting higher quantities of metal sold given prior year inventory build-ups ;

   iv. $23.9 million of mine closure severance provisions at Manantial Espejo, Morococha and Dolores; partially offset by,

   v. $59.9 million reduction in costs from Morococha being placed on care and maintenance in February 2022.

3) **D&A expense** was $13.1 million higher than 2021, primarily from Dolores where depreciation is calculated on a per tonne stacked basis and lower grades in 2022 resulted in comparatively higher depreciation, and from Manantial Espejo from accelerated depreciation due to decreasing mine life. Lower depreciation from Morococha being placed on care and maintenance in February 2022 partially offset these amounts.

4) **Transaction and integration costs** of $157.3 million in 2022 were incurred pursuant to the Transaction in which the Company agreed to provide Yamana with $150 million toward a termination fee payable to Gold Fields. The Transaction is discussed in further detail in the "Core Business and Strategy" and "Subsequent Events" sections of this MD&A. No such costs were incurred in 2021.

5) **Income tax expense** of $39.1 million in 2022 was $107.3 million lower than the $146.4 million in 2021, largely as a result of the $319.6 million decrease in mine operating earnings. The 2022 tax expense was further reduced by the appreciation of the Mexico Peso and Peruvian Sol, which increased the foreign denominated deductible tax attributes in those countries (largely comprised of mineral properties, plant and equipment).

6) **Impairment charge of** $99.1 million ($114.8 million net of tax) was recorded on the Dolores mine in Q2 2022, with no such impairments recorded in 2021. The 2022 impairment related to the impairment of the Dolores mine assets disclosed in the Company's Q2 2022 MD&A.

7) **Investment losses** were $16.2 million in 2022, a $43.5 million positive variance relative to 2021 investment losses of $59.7 million, both driven primarily by fair value mark-to-market adjustments on the Company's equity investment in New Pacific Metals Corp.

8) **Gains and income from associates** in 2022 was $45.0 million compared to gains of $4.3 million in 2021. The 2022 gains and income resulted from the March 21, 2022 re-designation of the Company's investment in Maverix from an "Investment in Associate" accounted for using the "equity method" (the Company's ownership proportion of Maverix's estimated earnings was recorded in income) to a "long-term financial asset" recorded at fair value beginning on March 31, 2022. The 2021 gains were attributable to the Company accounting for Maverix using the equity method.

9) **Mineral properties, plant and equipment gains** were $34.6 million less in 2021 because the comparative period included the sale of the Waterloo exploration stage asset.

10) **Care and maintenance expenses** increased in 2022 by $13.3 million, primarily due to Morococha being placed on care and maintenance in February 2022.

Statement of Cash Flows: 2022 versus 2021

Cash flow from operations in 2022 totaled $31.9 million, $360.2 million less than the $392.1 million generated in 2021. The decrease was mostly related to a $138.0 million decline in revenue, as previously described, a $150.0 million termination fee paid pursuant to the Transaction, a $79.9 million increase in production costs excluding NRVs and an $8.6 million increase in income taxes paid. These were partially offset by a $29.0 million decrease in cash used from working capital changes.

Changes in working capital, other than cash, used $42.0 million of cash in 2022 compared to $71.1 million used in 2021. The $29.0 million year-over-year decreased use of cash resulted largely from $32.9 million in lower inventory build-ups, mainly from La Colorada shipping its 2022 concentrate production compared to 2021 when it experienced shipping delays, and $4.5 million provided by increases in accounts payable and provisions. These were partially offset by $8.3 million used from increased trade receivables and prepaid expenses.

Investing activities utilized $255.4 million in 2022, primarily from $274.7 million spent on mineral properties, plant and equipment at the Company’s mines and projects, which was partially offset by $8.7 million in proceeds from the disposition of mineral properties, plant and equipment, which included $7.0 million received from a third-party as partial compensation for the closure and reclamation of the Morococha mine processing facility.

In 2021, investing activities utilized $186.7 million, largely from the $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 disposition of certain royalty assets and the deposits on the Waterloo sale.

Financing activities in 2022 provided $53.0 million compared to $85.9 million used in the comparative year. In 2022, the source of cash largely reflects $167.1 million drawn, primarily from the SL-Credit Facility, to fund the $150 million termination fee pursuant to the Transaction. In 2022, financing activities also included $94.7 million in dividend payments, $14.8 million in lease repayments, and $5.2 million in Peruvian construction loan repayments. In 2021, the Company paid $71.5 million in dividends, $12.4 million in lease repayments, and $1.7 million in Peruvian construction loan repayments.

Adjusted Earnings: 2022 versus 2021

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 2022 Annual Financial Statements.

Adjusted Earnings in 2022 were $17.9 million, representing a basic adjusted earnings per share of $0.09, which was $143.8 million, or $0.68 per share, lower than 2021 adjusted earnings of $161.8 million, and basic adjusted earnings per share of $0.77, respectively.

The following chart illustrates the key factors leading to the change in adjusted earnings from 2021 to 2022:



Income Statement: Q4 2022 vs. Q4 2021

Net loss of $172.1 million, or a basic loss per share of $0.82, was recorded in Q4 2022 compared to net earnings of $14.7 million, or basic earnings per share of $0.07.

The following table highlights the differences between the Q4 2022 net loss and Q4 2021 net earnings:

Net earnings, three months ended December 31, 2021			**$ 14,664**	**Note**
Decreased revenue:				
Decreased realized metal prices		$ (22,498)		
Lower quantities of metal sold		(38,730)		
Decreased negative settlement adjustments		6,387		
Decreased direct selling costs		8,143		
Total decrease in revenue			**$ (46,698)**	**(1)**
Decreased cost of sales:				
Increased production costs	$ (5,048)			
Decreased NRV adjustments to inventories	16,219			
Increased royalty charges	(2,325)			
Decreased production costs and increased royalty charges		**$ 8,846**		**(2)**
Increased depreciation and amortization		(3,140)		
Total decrease in cost of sales			**$ 5,706**	
Increased transaction and integration costs			(157,334)	**(3)**
Increased other expense			(11,697)	**(4)**
Increased exploration and project development expense			(4,484)	
Increased interest and finance expense			(2,918)	
Increased mine care and maintenance costs			(1,212)	
Decreased gains on sales of mineral properties, plant and equipment			(583)	
Decreased gain and income from associates			(289)	
Decreased income tax expense			9,581	**(5)**
Decreased investment loss			7,330	**(6)**
Decreased foreign exchange loss			6,441	
Decreased general and administrative expense			5,253	
Increased gains on derivatives			4,180	
Net earnings, three months ended December 31, 2022			**$ (172,060)**	

1) **Revenue** for Q4 2022 was $46.7 million lower than Q4 2021 from decreased quantities of metal sold and lower metal prices. The quarter-over-quarter decrease in metal quantities sold reflects decreases in silver, zinc and copper sales, which decreased 19%, 45% and 44%, respectively (see table below).

   The lower quantities sold in Q4 2022 reflects the following: (i) lower production from the cessation of mining activities at Morococha; (ii) silver production shortfalls at La Colorada from lower grades in Q4 2022; (iii) an increase in dore inventories at Manantial Espejo; and, (iv) a build-up in zinc inventories at San Vicente due to the timing of shipments. These factors were partially offset by increased quantities sold at Shahuindo and La Arena due to the timing of mine and leach sequencing. These impacts are described in the "2022 Highlights" and the "Operating Performance" sections of this MD&A.

   The lower metal prices were largely due to a 9%, 3%, and 14% decrease in realized metal prices for silver, gold, and zinc, respectively. The decrease in metal prices was partially offset by a $6.4 million improvement in settlement price adjustments on open concentrate shipments and an $8.1 million decrease in net selling costs, primarily due to Morococha being placed on care and maintenance in February 2022.

The following table reflects quarterly realized metal prices and quantities sold:

	Realized Metal Prices[1] Three months ended December 31,		Quantities of Metal Sold[2] Three months ended December 31,	
	2022	2021	**2022**	2021
Silver	**$ 21.17**	$ 23.33	**4,080**	5,067
Gold	**$ 1,736**	$ 1,792	**146.6**	142.6
Zinc	**$ 2,878**	$ 3,352	**5.4**	9.9
Lead	**$ 2,111**	$ 2,333	**4.6**	4.1
Copper	**$ 7,957**	$ 9,545	**1.2**	2.1

(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.
(2) Metal quantities stated as koz for silver and gold and kt for zinc, lead and copper.

2) **Production and royalty costs** were $8.8 million lower than those in Q4 2021 as a result of an $11.2 million or 4% decrease in production costs, marginally offset by a $2.3 million increase in royalty costs. All operations were affected by Inflationary and Supply Chain Cost Increases, as noted in the "Operating Performance" section of this MD&A. The largest factors that decreased quarter-over-quarter production costs are described below:

   i) $18.7 million reduction in Morococha production costs in Q4 2022, with the mine having been placed on care and maintenance in February 2022;

   ii) $16.2 million in reduced NRV inventory adjustments were largely related to the Dolores mine which increased costs by $5.4 million in Q4 2022 compared to an increase of $21.7 million in Q4 2021; and,

   iii) $7.0 million decrease at the Silver Segment mines (exclusive of Morococha and NRV inventory adjustments), largely reflecting decreased sales due to timing and lower costs at Manantial Espejo since the cessation of mining at COSE in April 2022;

   These decreases were only partially offset by the following factors that increased quarter-over-quarter costs:

   i) $26.8 million increase at the Gold Segment mines (exclusive of NRV inventory adjustments), largely from reduced inventory build-ups at Dolores and increased production rates at the remaining Gold Segment mines; and,

   ii) $6.5 million of mine closure severance provisions, largely at Manantial Espejo.

3) **Transaction and integration costs** of $157.3 million in Q4 2022 were incurred pursuant to the Transaction in which the Company agreed to provide Yamana with $150 million toward a termination fee payable to Gold Fields. The Transaction is discussed in further detail in the "Core Business and Strategy" and "Subsequent Events" sections of this MD&A. No such costs were incurred in the same quarter of 2021.

4) **Other expenses** of $9.2 million in Q4 2022 resulted in $11.7 million of increased expense compared to $2.5 million of other income in Q4 2021. In Q4 2022, the Company recorded $4.7 million in other expense for revisions in estimates of its closure and decommissioning obligation and a $4.0 million in increased provisions for value added tax receivables, both related to Manantial Espejo. Q4 2021 other income reflected changes in supplies inventory provisions for our non-operating subsidiaries.

5) **Income tax expense** in Q4 2022 was $18.9 million compared to $28.5 million expense in Q4 2021. The $9.6 million reduction in expense is primarily due to a $41.0 million decrease in mine operating earnings.

6) **Investment gain** of $1.2 million in Q4 2022 compared to a $6.1 million loss in Q4 2021, primarily driven by fair value mark to market adjustments on the Company's equity investment in New Pacific Metals Corp.

Statement of Cash Flows: Q4 2022 versus Q4 2021

Cash flows used in operations in Q4 2022 totaled $112.1 million, a $230.2 million quarter-over-quarter decrease relative to the $118.1 million generated in Q4 2021. The decrease was primarily driven by $157.3 million of transaction and integration costs, a $46.7 million decrease in revenue described above, $19.4 million in additional cash used for working capital, and a $5.0 million increase in production costs excluding NRVs. This was partially offset by a $6.1 million decrease in income tax paid.

Changes in working capital, other than cash, used $29.1 million of cash in Q4 2022 compared to $9.7 million used in Q4 2021. The $19.4 million quarter-over-quarter increased use of cash resulted largely from $22.1 million build-up in trade receivables and a $6.4 million increase in inventory build-ups, partially offset by $9.0 million provided from increases in accounts payable and provisions.

Investing activities utilized $68.2 million of cash in Q4 2022, comprised mostly of $72.4 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 2021, investing activities utilized $66.3 million, largely reflecting spending of $70.1 million on mineral property, plant and equipment at the Company's mines and projects, partially offset by cash inflows from derivative contracts and non-core asset sales.

Financing activities in Q4 2022 generated $137.3 million, largely reflecting the drawdown on the Company's SL-Credit Facility of $160.0 million largely to pay the termination fee pursuant to the Transaction. In Q4 2022, the Company paid $21.0 million in dividends to shareholders and $3.7 million in lease repayments. In Q4 2021, $25.1 million was used in financing activities, which consisted of $21.0 million in dividends to shareholders and $3.4 million in lease repayments.

Adjusted Earnings: Q4 2022 versus Q4 2021

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 2022 Annual Financial Statements.

Adjusted loss in Q4 2022 was $4.8 million, representing a basic adjusted loss per share of $0.02, which was $44.7 million, or $0.21 per share, lower than Q4 2021 adjusted earnings of $39.9 million, and $0.19 of basic adjusted earnings per share.

The following chart illustrates the key factors leading to the change in adjusted earnings from Q4 2021 to Q4 2022:



LIQUIDITY AND CAPITAL POSITION

Liquidity and Capital Measures	December 31, 2022	September 30, 2022	December 31, 2021	Q4 2022 Change	2022 Change
Cash and cash equivalents ("Cash")	**107,005**	153,079	283,550	(46,074)	(176,545)
Short-term Investments	**35,337**	34,091	51,723	1,246	(16,386)
Cash and Short-term investments	**142,342**	187,170	335,273	(44,828)	(192,931)
Working Capital[1]	**423,540**	422,097	613,494	1,443	(189,954)
SL-Credit Facility undrawn amount	**340,000**	500,000	500,000	(160,000)	(160,000)
Shareholders' equity	**2,195,479**	2,357,600	2,631,554	(162,121)	(436,075)
Total debt [1]	**226,836**	68,465	45,861	158,371	180,975
Capital [1]	**2,279,973**	2,238,895	2,342,142	41,078	(62,169)

(1) Total debt is a non-GAAP measure calculated as the total of amounts drawn on the SL-Credit Facility, finance lease liabilities and loans payable. Capital is a non-GAAP measure and consists of shareholders' equity and debt net of cash and cash equivalents and short term investments. Working Capital is a non-GAAP measure calculated as current assets less current liabilities. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the calculations.

Liquidity and Capital Resources

The Company's cash and short-term investments decreased by $44.8 million during Q4 2022. The decrease was largely driven by the $72.4 million in investments in mineral properties, plant and equipment and $21.0 million in dividends paid, as cash flow from operations of $45.3 million before transaction and integration costs was insufficient to cover these in part due to a $29.1 million in build-up of non-cash working capital, primarily inventories.

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, and by diversifying the currencies in which it maintains its cash balances. The Company does not own any asset-backed commercial paper or other similar, known, at-risk investments in its investment portfolio.

Working capital of $423.5 million at December 31, 2022 was $190.0 million lower than working capital of $613.5 million at December 31, 2021. The Company also maintained a long-term investment in Maverix which was sold in January 2023 for $105.3 million net of transaction costs, and is not included in cash and short-term investments. Please refer to the "Subsequent Events" section of the MD&A.

As of December 31, 2022, the Company was in compliance with all financial covenants under the $500 million revolving SL-Credit Facility, which was drawn by $160.0 million in December 2022 to fund the termination fee and other costs related to the Transaction. The borrowing costs under the SL-Credit Facility are based on the Company's leverage ratio subject to pricing adjustments based on the Company's 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 SL-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 to pricing adjustments based on sustainability performance ratings and scores. The SL-Credit Facility matures on August 8, 2025.

The net cash generated from the sales of metal production provides our primary source of cash flows, and we do not currently expect to experience payment delinquencies from our metal sales counterparties.

The Company’s financial position at December 31, 2022, and the operating cash flows that are expected over the next 12 months, lead Management to believe that the Company’s liquid assets and available credit from the revolving SL-Credit Facility are sufficient to satisfy our 2023 working capital requirements, fund currently planned capital expenditures, and to discharge liabilities as they come due. The Company remains well positioned to take advantage of strategic opportunities as they become available. Liquidity risks are discussed further in the “Risks and Uncertainties” section of this MD&A.

In the normal course of business, the Company enters into contracts that give rise to commitments for future minimum payments, details of which are described in Note 8(f)(ii) of the 2022 Annual Financial Statements, and in the "Liquidity and Capital Position" section of this MD&A. Since December 31, 2021, there have been no significant changes to these contractual obligations and commitments.

The impact of inflation on the Company’s financial position, operational performance, or cash flows over the next 12 months cannot be determined with any degree of certainty due to a number of uncertainties, including those related to the COVID-19 pandemic.

Commitments

In the normal course of business, the Company enters into contracts that give rise to commitments which are described in Note 8(f)(ii) of the 2022 Annual Financial Statements, and in the "Liquidity and Capital Position" section of this MD&A. 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 2022				
	Within 1 year	2 - 3 years	4- 5 years	After 5 years	Total
Accounts payable and accrued liabilities other than:	$ 291,436	$ —	$ —	$ —	$ 291,436
Severance liabilities	13,860	1,039	645	4,489	20,033
Payroll liabilities	2,758	—	—	—	2,758
Total accounts payable and accrued liabilities	308,054	1,039	645	4,489	314,227
Income tax payables	25,833	—	—	—	25,833
Derivative liabilities	1,780	—	—	—	1,780
Debt					
Repayment of principal	13,712	173,435	6,575	—	193,722
Interest and standby fees	11,222	17,681	125	—	29,028
Provisions [1][2]	3,448	2,423	—	1,081	6,952
Future payroll liabilities	2,465	8,659	—	—	11,124
Total contractual obligations [2]	**$ 366,514**	**$ 203,237**	**$ 7,345**	**$ 5,570**	**$ 582,666**

(1) Total litigation provision (Note 16 of the 2022 Annual Financial Statements).
(2) Amounts above do not include payments related to closure and decommissioning (current $14.4 million, long-term $281.8 million) discussed in Note 16 of the 2022 Annual Financial Statements, the lease obligations discussed in Note 17 of the 2022 Annual Financial Statements, the $20.8 million deferred credit arising from the Navidad acquisition discussed in Note 20 of the 2022 Annual Financial Statements, and deferred tax liabilities of $140.3 million in Note 30 of the 2022 Annual Financial Statements.

Outstanding Share Amounts

As at December 31, 2022, the Company had approximately 377 thousand stock options outstanding (each exercisable for one common share of the Company), with exercise prices in the range of CAD $21.17 to CAD $39.48 and a weighted average life of 5.3 years. Approximately 156 thousand of the stock options were vested and exercisable at December 31, 2022, with an average weighted exercise price of CAD $21.64 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, 2023
Common shares	210,680,834
Options	376,967
Total	**211,057,801**

As part of the acquisition of Tahoe Resources Inc., 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, 2022, there were 313,883,990 CVRs outstanding, which were convertible into 15,600,034 common shares.

CLOSURE AND DECOMMISSIONING 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 inflated and discounted provision on the statement of financial position as at December 31, 2022, using inflation rates of between 2% and 6% (December 31, 2021 - between 1% and 5%) and discount rates between 3% and 11% (December 31, 2021 - between 1% and 9%), was $296.2 million (December 31, 2021 - $242.9 million). Decommissioning obligations are expected to be paid through 2052, with water quality management costs expected to be paid through 2075, or later if mine life is extended. Revisions made to the reclamation obligations in 2022 were primarily a result of increased inflation rates, increased discount rates from higher government debt yields, increased site disturbance from the ordinary course of operations at the mines, reclamation activities, and revisions to the estimates based on periodic reviews of closure plans and related costs, actual expenditures incurred, and closure activities completed. These obligations will be funded from operating cash flows, reclamation deposits, and cash on hand.

The accretion of the discount charged in Q4 2022 and 2022 earnings as finance expense were $3.7 million and $14.8 million, respectively (Q4 2021 and 2021 - $1.9 million and $7.5 million, respectively). Reclamation expenditures incurred during Q4 2022 and 2022 were $1.7 million and $4.2 million, respectively (Q4 2021 and 2021 - $1.7 million and $6.0 million, respectively).

RELATED PARTY TRANSACTIONS

The Company's related parties include its subsidiaries, associates over which it exercises significant influence and key management personnel. Transactions with the Company's subsidiaries have been eliminated on consolidation. Maverix ceased to be a related party after March 31, 2022 after the Company determined that it no longer held significant influence over Maverix. There were no other related party transactions for the years ended December 31, 2022 and 2021.

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.

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 it includes the cost of replacing silver and gold ounces through exploration, the cost of ongoing capital investments (sustaining capital), as well as other items that affect the Company's consolidated cash flow.

To facilitate a better understanding of these measure as calculated by the Company, the following table provides the detailed reconciliation of these measure to the applicable cost items, as reported in the consolidated financial statements for the respective periods.

Silver Segment and Gold Segment Cash Costs and AISC:

	Silver Segment		Gold Segment	
(In thousands of USD, except as noted)	Three Months Ended December 31, 2022	Three Months Ended December 31, 2021	Three Months Ended December 31, 2022	Three Months Ended December 31, 2021
Production costs[1]	$ 73,707	$ 106,908	$ 172,215	$ 156,533
Purchase Price Allocation Inventory Fair Value Adjustment	—	—	—	(55)
NRV inventory adjustments	5,791	814	(11,223)	(22,466)
On-site direct operating costs	**79,498**	**107,722**	**160,992**	**134,012**
Royalties	4,698	2,204	4,176	4,345
Smelting, refining and direct selling charges[2]	10,465	18,604	39	43
Cash cost of sales before by-product credits	**94,661**	**128,530**	**165,207**	**138,400**
Silver segment by-product credits[2]	(45,035)	(84,497)	—	—
Gold segment by-product credits[2]	—	—	(13,889)	(12,561)
Cash Costs	**$ 49,627**	**$ 44,033**	**$ 151,318**	**$ 125,839**
NRV inventory adjustments	(5,791)	(814)	11,223	22,466
Sustaining capital	16,894	16,627	45,688	39,654
Exploration and project development[3]	—	1,040	—	1,926
Reclamation cost accretion[4]	528	494	2,812	1,129
All-in sustaining costs	**$ 61,258**	**$ 61,381**	**$ 211,040**	**$ 191,014**
Silver segment silver ounces sold (koz)	3,444	4,522	—	—
Gold segment gold ounces sold (koz)	—	—	141	131
Cash Costs per ounce sold	**$ 14.41**	**$ 9.74**	**$ 1,077**	**$ 963**
AISC per ounce sold	**$ 17.79**	**$ 13.57**	**$ 1,502**	**$ 1,461**
AISC per ounce sold (excluding NRV inventory adjustments)	**$ 19.47**	**$ 13.75**	**$ 1,422**	**$ 1,289**

Silver Segment and Gold Segment Cash Costs and AISC:

	Silver Segment		Gold Segment	
(In thousands of USD, except as noted)	Year ended December 31, 2022	Year ended December 31, 2021	Year ended December 31, 2022	Year ended December 31, 2021
Production costs[1]	$ 353,372	$ 384,460	$ 717,454	$ 541,019
Purchase Price Allocation Inventory Fair Value Adjustment	—		—	(604)
NRV inventory adjustments	1,132	992	(98,874)	(9,712)
On-site direct operating costs	**354,505**	**385,452**	**618,580**	**530,704**
Royalties	18,241	17,483	17,648	18,892
Smelting, refining and direct selling charges[2]	51,994	70,921	192	181
Cash cost of sales before by-product credits	**424,740**	**473,857**	**636,420**	**549,776**
Silver segment by-product credits[2]	(235,044)	(302,620)	—	—
Gold segment by-product credits[2]	—	—	(56,350)	(65,135)
Cash Costs	**$ 189,696**	**$ 171,237**	**$ 580,070**	**$ 484,642**
NRV inventory adjustments	(1,132)	(992)	98,874	9,712
Sustaining capital	54,978	56,837	168,782	150,785
Exploration and project development[3]	—	3,329	—	4,681
Reclamation cost accretion[4]	2,234	2,008	11,246	4,516
All-in sustaining costs	**$ 245,776**	**$ 232,418**	**$ 858,972**	**$ 654,336**
Silver segment silver ounces sold (koz)	14,914	14,883	—	—
Gold segment gold ounces sold (koz)	—	—	521	539
Cash Costs per ounce sold	**$ 12.72**	**$ 11.51**	**$ 1,113**	**$ 899**
AISC per ounce sold	**$ 16.48**	**$ 15.62**	**$ 1,649**	**$ 1,214**
AISC per ounce sold (excluding NRV inventory adjustments)	**$ 16.56**	**$ 15.68**	**$ 1,459**	**$ 1,196**

(1) Silver Segment production costs exclude amounts relating to mine operation severance payments and other accruals at Morococha and Manantial Espejo, which increased Production Costs by $5.9 million and $21.4 million for Q4 2022 and full year 2022, respectively. Gold Segment production costs exclude amounts relating to mine operations severance payments and other accruals at Dolores related to the closure of the underground mine, which increased production costs by $0.6 million and $2.8 million in Q4 2022 and full year 2022, respectively.
(2) Included in the revenue line of the consolidated income statements. By-product credits are reflective of realized metal prices for the applicable periods.
(3) Exploration and project development expenditures exclude $8.6 million and $18.3 million for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: $1.1 million and $3.1 million, respectively) of exploration expenditures related to non-operating properties and non-cash project development write-downs.
(4) Reclamation cost accretion excludes $0.4 million and $1.4 million for Q4 2022 and full year 2022, respectively, (Q4 2021 and full year 2021: $0.2 million and $0.9 million, respectively) of accretion related to non-operating properties.

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)	**2022**	2021	**2022**	2021
Payments for mineral properties, plant and equipment[1]	**$ 72,362**	$ 70,146	**$ 274,688**	$ 243,478
Add/(Subtract)				
Lease Payments[1]	**3,703**	3,417	**14,833**	12,396
Repayment of loans[2]	**1,642**	850	**5,239**	1,700
Investment (non-sustaining) capital	**(15,126)**	(18,132)	**(71,000)**	(49,951)
Sustaining Capital	**$ 62,581**	$ 56,280	**$ 223,760**	$ 207,623

(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, 2022					
(In thousands of USD, except as noted)	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Silver Segment
Production Costs	$ 27,880	$ 26,866	$ —	$ 7,220	$ 11,741	$ 73,707
NRV inventory adjustments	—	—	—	—	5,791	5,791
On-site direct operating costs	**27,880**	**26,866**	**—**	**7,220**	**17,532**	**79,498**
Royalties	149	—	—	3,535	1,015	4,698
Smelting, refining & direct selling costs	2,932	4,938	—	774	1,821	10,465
Cash Costs before by-product credits	**30,961**	**31,804**	**—**	**11,529**	**20,368**	**94,661**
Silver segment by-product credits	(11,118)	(24,042)	—	(969)	(8,906)	(45,035)
Cash Costs	**$ 19,843**	**$ 7,761**	**$ —**	**$ 10,560**	**$ 11,462**	**$ 49,627**
NRV inventory adjustments	—	—	—	—	(5,791)	(5,791)
Sustaining capital	11,689	3,952	—	614	639	16,894
Exploration and project development	—	—	—	—	—	—
Reclamation cost accretion	127	199	—	80	122	528
All-in sustaining costs	**$ 31,659**	**$ 11,912**	**$ —**	**$ 11,254**	**$ 6,432**	**$ 61,258**
Silver segment silver ounces sold (koz)	**1,306**	**844**	**—**	**617**	**677**	**3,444**
Cash cost per ounce sold	**$ 15.19**	**$ 9.20**	**N/A**	**$ 17.11**	**$ 16.93**	**$ 14.41**
AISC per ounce sold	**$ 24.24**	**$ 14.12**	**N/A**	**$ 18.24**	**$ 9.50**	**$ 17.79**
AISC per ounce sold (excluding NRV inventory adjustments)	**$ 24.24**	**$ 14.12**	**N/A**	**$ 18.24**	**$ 18.05**	**$ 19.47**

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	Year ended December 31, 2022					
(In thousands of USD, except as noted)	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Silver Segment
Production Costs	$ 98,260	$ 100,511	$ 15,325	$ 45,746	$ 93,530	$ 353,372
NRV inventory adjustments	—	—	—	—	1,132	1,132
On-site direct operating costs	**98,260**	**100,511**	**15,325**	**45,746**	**94,663**	**354,505**
Royalties	733	—	—	13,851	3,658	18,241
Smelting, refining & direct selling costs	12,655	20,988	3,575	7,051	7,725	51,994
Cash Costs before by-product credits	**111,648**	**121,499**	**18,900**	**66,648**	**106,045**	**424,740**
Silver segment by-product credits	(45,578)	(102,962)	(17,005)	(25,689)	(43,810)	(235,044)
Cash Costs	**$ 66,069**	**$ 18,537**	**$ 1,895**	**$ 40,959**	**$ 62,235**	**$ 189,696**
NRV inventory adjustments	—	—	—	—	(1,132)	(1,132)
Sustaining capital	29,275	13,940	345	7,156	4,263	54,978
Exploration and project development						—
Reclamation cost accretion	510	796	122	320	487	2,234
All-in sustaining costs	**$ 95,854**	**$ 33,272**	**$ 2,363**	**$ 48,435**	**$ 65,853**	**$ 245,776**
Silver segment silver ounces sold (koz)	**5,712**	**3,014**	**334**	**2,692**	**3,162**	**14,914**
Cash cost per ounce sold	**$ 11.57**	**$ 6.15**	**$ 5.68**	**$ 15.22**	**$ 19.68**	**$ 12.72**
AISC per ounce sold	**$ 16.78**	**$ 11.04**	**$ 7.08**	**$ 17.99**	**$ 20.82**	**$ 16.48**
AISC per ounce sold (excluding NRV inventory adjustments)	**$ 16.78**	**$ 11.04**	**$ 7.08**	**$ 17.99**	**$ 21.18**	**$ 16.56**

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**

Gold Segment Cash Costs and AISC by mine:

GOLD SEGMENT	Three Months Ended December 31, 2022				
(In thousands of USD, except as noted)	Dolores	Shahuindo	La Arena	Timmins	Consolidated Gold Segment
Production Costs	$ 55,099	$ 44,100	$ 30,685	$ 42,332	$ 172,215
Purchase Price Allocation Inventory Fair Value Adjustment	—	—	—	—	—
NRV inventory adjustments	(11,223)	—	—	—	(11,223)
On-site direct operating costs	**43,875**	**44,100**	**30,685**	**42,332**	**160,992**
Royalties	2,421	—	—	1,755	4,176
Smelting, refining & direct selling costs	9	—	—	31	39
Cash Costs before by-product credits	**46,305**	**44,100**	**30,685**	**44,118**	**165,207**
Gold segment by-product credits	(11,593)	(1,931)	(162)	(204)	(13,889)
Cash Costs of Sales	**$ 34,712**	**$ 42,169**	**$ 30,523**	**$ 43,914**	**$ 151,318**
NRV inventory adjustments	11,223	—	—	—	11,223
Sustaining capital	4,616	21,412	11,390	8,269	45,688
Exploration and project development	—	—	—	—	—
Reclamation cost accretion	1,382	645	741	43	2,812
All-in sustaining costs	**$ 51,934**	**$ 64,227**	**$ 42,654**	**$ 52,226**	**$ 211,040**
Gold segment gold ounces sold	**32,615**	**46,287**	**30,623**	**31,000**	**140,525**
Cash cost per ounce sold	**$ 1,064**	**$ 911**	**$ 997**	**$ 1,417**	**$ 1,077**
AISC per ounce sold	**$ 1,592**	**$ 1,388**	**$ 1,393**	**$ 1,685**	**$ 1,502**
AISC per ounce sold (excluding NRV inventory adjustments)	**$ 1,248**	**$ 1,388**	**$ 1,393**	**$ 1,685**	**$ 1,422**

GOLD SEGMENT	Three Months Ended December 31, 2021				
(In thousands of USD, except as noted)	Dolores	Shahuindo	La Arena	Timmins	Consolidated Gold Segment
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 of Sales	**$ 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	Year ended December 31, 2022				
(In thousands of USD, except as noted)	Dolores	Shahuindo	La Arena	Timmins	Consolidated Gold Segment
Production Costs	$ 288,039	$ 146,179	$ 103,869	$ 179,368	$ 717,454
Purchase Price Allocation Inventory Fair Value Adjustment	—	—	—	—	—
NRV inventory adjustments	(98,874)	—	—	—	(98,874)
On-site direct operating costs	**189,165**	**146,179**	**103,869**	**179,368**	**618,580**
Royalties	10,751	—	—	6,898	17,648
Smelting, refining & direct selling costs	31	—	—	161	192
Cash Costs before by-product credits	**199,947**	**146,179**	**103,869**	**186,426**	**636,420**
Gold segment by-product credits	(49,147)	(6,079)	(773)	(350)	(56,350)
Cash Costs of Sales	**$ 150,799**	**$ 140,100**	**$ 103,095**	**$ 186,076**	**$ 580,070**
NRV inventory adjustments	98,874	—	—	—	98,874
Sustaining capital	35,855	49,246	47,970	35,711	168,782
Exploration and project development					—
Reclamation cost accretion	5,529	2,581	2,963	173	11,246
All-in sustaining costs	**$ 291,057**	**$ 191,926**	**$ 154,029**	**$ 221,960**	**$ 858,972**
Gold segment gold ounces sold	**140,973**	**145,320**	**99,367**	**135,400**	**521,061**
Cash cost per ounce sold	**$ 1,070**	**$ 964**	**$ 1,038**	**$ 1,374**	**$ 1,113**
AISC per ounce sold	**$ 2,065**	**$ 1,321**	**$ 1,550**	**$ 1,639**	**$ 1,649**
AISC per ounce sold (excluding NRV inventory adjustments)	**$ 1,363**	**$ 1,321**	**$ 1,550**	**$ 1,639**	**$ 1,459**

GOLD SEGMENT	Year ended December 31, 2021				
(In thousands of USD, except as noted)	Dolores	Shahuindo	La Arena	Timmins	Consolidated Gold Segment
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 of Sales	**$ 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**

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 year ended December 31, 2022 and 2021, to the net earnings for each period.

	Three Months Ended December 31,		Year ended December 31,	
(In thousands of USD, except as noted)	**2022**	2021[1]	**2022**	2021[1]
Net (loss) earnings for the period	**$ (172,060)**	$ 14,664	**$ (340,063)**	$ 98,562
Adjust for:				
Impairment charges	**—**	—	**99,064**	—
Exploration and project development impairment charges	**5,432**	—	**5,432**	—
Unrealized foreign exchange losses	**3,162**	1,643	**12,840**	6,703
Net realizable value heap inventory expense	**29,541**	20,421	**137,771**	11,831
Derivative unrealized (gains) losses	**(2,201)**	662	**2,541**	3,764
Gains and income from associates	**—**	(289)	**(45,033)**	(4,347)
Severance provisions	**6,478**	—	**23,884**	—
Mineral property, plant and equipment losses (gains) on sale	**1,134**	551	**2,439**	(32,167)
Transaction and integration costs	**157,334**	—	**157,334**	—
Investment (income) loss	**(1,245)**	6,083	**16,221**	59,722
Closure and decommissioning liability adjustment	**4,662**	—	**4,662**	—
Effect of taxes on adjusting items	**(17,886)**	(7,353)	**(37,615)**	3,377
Effect of foreign exchange on taxes	**(19,149)**	3,561	**(21,541)**	14,337
Total adjustments	**$ 167,262**	$ 25,279	**$ 357,999**	$ 63,220
Adjusted (loss) earnings	**$ (4,798)**	$ 39,943	**$ 17,936**	$ 161,782
Adjusted (loss) earnings per share attributable to common shareholders				
Adjusted (loss) earnings per share	**$ (0.02)**	$ 0.19	**$ 0.09**	$ 0.77
Weighted average shares outstanding (in 000's) Basic	**210,573**	210,348	**210,521**	210,298

(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 SL-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.

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; risks related to the Transaction; 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, and additional risks and uncertainties, are described below, and are more fully described in Pan American's Annual Information Form dated February 22, 2023 (available on SEDAR at www.sedar.com) and Form 40-F filed with the SEC, and in the Financial Instruments section of the 2022 Annual 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 and Related Risks

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 2022 Annual 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. There were no significant changes to those risks or to the Company's management of exposure to those risks during the year ended December 31, 2022.

The following provides a description of the risks related to financial instruments and how management manages these risks:

Price Risk

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, excluding Yamana operations, for 2023, expressed in percentage terms. This analysis assumes that quantities of silver and gold produced and sold remain constant under all price scenarios presented.

2023 Revenue Metal Price Sensitivity

		Gold Price						
		$1,450	$1,550	$1,650	$1,750	$1,850	$1,950	$2,050
Silver Price	$16.50	83%	87%	91%	95%	99%	102%	106%
	$18.00	85%	89%	93%	97%	100%	104%	108%
	$19.50	87%	91%	94%	98%	102%	106%	110%
	$21.00	89%	92%	96%	**100%**	104%	108%	111%
	$22.50	90%	94%	98%	102%	106%	109%	113%
	$24.00	92%	96%	100%	103%	107%	111%	115%
	$25.50	94%	98%	101%	105%	109%	113%	117%

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 2023 Silver Segment AISC per silver ounce, excluding Yamana operations, against various price assumptions for the Silver Segment's two main by-product credits, zinc and gold, and plotting the expected 2023 Gold Segment AISC per gold ounce, excluding Yamana operations, against various price assumptions for the Gold Segment's main by-product credit, Silver, expressed in percentage terms:

2023 Silver Segment AISC Metal Price Sensitivity

		Lead Price						
		$1,700	$1,800	$1,900	$2,000	$2,100	$2,200	$2,300
Zinc Price	$2,400	111%	110%	109%	108%	107%	107%	106%
	$2,600	108%	107%	106%	105%	105%	104%	103%
	$2,800	105%	104%	103%	103%	102%	101%	100%
	$3,000	103%	102%	101%	**100%**	99%	99%	98%
	$3,200	100%	100%	99%	98%	97%	96%	96%
	$3,400	98%	98%	97%	96%	95%	94%	94%
	$3,600	96%	95%	95%	94%	93%	92%	92%

2023 Gold Segment AISC Metal Price Sensitivity

		Silver Price						
Gold Price		$16.50	$18.00	$19.50	$21.00	$22.50	$24.00	$25.50
	$1,750	102%	101%	101%	**100%**	99%	99%	98%

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, 2022, the Company entered into collars made up of put and call contracts and forward swap contracts for its exposure to zinc. The Company did not enter into zinc contracts during the comparable periods in 2021, and had no contracts outstanding as at December 31, 2022.

During the year ended December 31, 2021, the Company entered into collars made up of put and call contracts for its exposure to copper. The Company did not enter into copper contracts during the comparable periods in 2022, and had no contracts outstanding as at December 31, 2022.

During 2020, the Company entered into diesel swap contracts designed to fix or limit the Company's exposure to higher fuel prices. At December 31, 2022, the Company had no outstanding positions on its diesel exposure.

The Company recorded the following derivative gains and losses on commodities for the three and twelve months ended December 31, 2022 and 2021:

	Three Months Ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Zinc (losses) gains	**(59)**	137	**1,701**	137
Copper losses	**—**	(243)	**—**	(1,139)
Diesel gains	**285**	271	**4,499**	9,397
Other	**$ 231**	$ 94	**$ (898)**	$ 94
	$ 457	$ 259	**$ 5,302**	$ 8,489

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.

Credit Risk

The zinc, lead, copper, and silver 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, 2022, we had receivable balances associated with buyers of our concentrates of $50.3 million (2021 - $40.0 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 seven 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 pursued a claim to collect damages. As at December 31, 2022, we had approximately $37.0 million (2021 - $52.3 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. The refineries bear the risk of loss after metal inventories have been delivered to them.

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, 2022, we had made $8.9 million of supplier advances (2021 - $11.2 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.

Currency and Interest 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 $40.9 million in CAD, $3.1 million in MXN, $3.2 million in PEN, $9.3 million in ARS, $4.8 million in BOB, and $0.1 million in Guatemalan quetzales as at December 31, 2022.

At December 31, 2022, Pan American had outstanding positions on $18.0 million in foreign currency exposure of MXN purchases. The MXN positions had weighted average USD put and call exchange rates of $21.00 and $24.35, respectively, expiring between January 2023 and December 2023.

At December 31, 2022, Pan American had outstanding positions on $45.6 million in foreign currency exposure of PEN purchases. The PEN positions had a weighted average USD fixed exchange rate of $4.02, expiring between January 2023 and December 2023.

At December 31, 2022, Pan American had outstanding positions on $108.0 million in foreign currency exposure of CAD purchases. The CAD collar positions ($84.0 million of CAD purchases) had weighted average USD put and call exchange rates of $1.30 and 1.34, respectively, expiring between January 2023 and December 2023. The CAD forward contracts ($24.0 million of CAD purchases) had a weighted average USD fixed exchange rate of $1.33, expiring between January 2023 and December 2023.

The Company recorded the following derivative gains and losses on currencies for the three and twelve months ended December 31, 2022 and 2021:

	Three Months Ended December 31,		Year ended December 31,	
	2022	2021	**2022**	2021
Mexican peso gains (losses)	**$ 757**	$ 372	**$ 1,507**	$ (202)
Peruvian sol gains (losses)	**2,510**	255	**3,471**	(3,744)
Canadian dollar gains (losses)	**2,094**	753	**(2,944)**	851
	$ 5,361	$ 1,380	**$ 2,034**	$ (3,095)

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 2023, excluding Yamana operations, expressed in percentage terms:

2023 Cost of Sales Exchange Rate Sensitivity

		CAD/USD						
		$1.09	$1.16	$1.23	$1.30	$1.37	$1.44	$1.51
PEN/USD	$3.30	107%	105%	104%	103%	102%	101%	100%
	$3.50	106%	104%	103%	102%	101%	100%	99%
	$3.70	105%	103%	102%	101%	100%	99%	98%
	$3.90	104%	102%	101%	**100%**	99%	98%	97%
	$4.10	103%	102%	100%	99%	98%	97%	96%
	$4.30	102%	101%	100%	98%	97%	97%	96%
	$4.50	102%	100%	99%	98%	97%	96%	95%

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.

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. As previously discussed in the “Liquidity and Capital Resource” section of this

MD&A , the borrowing costs under the SL-Credit Facility are based on the Company's leverage ratio subject to pricing adjustments based on the Company's sustainability performance scores at various interest rates.

The following table illustrates the effect of changes in interest rate against our outstanding SL-Credit Facility debt:

2023 Interest Rate Sensitivity

		Interest Rate						
		1%	2%	3%	4%	5%	6%	7%
Outstanding SL-Credit Facility Debt	$100,000	$1,000	$2,000	$3,000	$4,000	$5,000	$6,000	$7,000
	$200,000	$2,000	$4,000	$6,000	$8,000	$10,000	$12,000	$14,000
	$300,000	$3,000	$6,000	$9,000	$12,000	$15,000	$18,000	$21,000

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.

While we have paid dividends to our shareholders for many years, the payment of dividends is impacted by our cash flows and liquidity situation. The payment of any future dividends is at the discretion of our Board of Directors after taking into account many factors, including availability of and sources of cash, future anticipated funding needs, our debt position, general and regional economic conditions, and expectations with respect to operational matters such as anticipated metals production and metals prices. There can be no assurance that dividends will continue to be paid in the future or on the same terms as are currently paid by Pan American.

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 31 to the Company's 2022 Annual 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, 2022.

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. In some cases, we may also be subject to collective settlement obligations with our employees and contractors relating to closures of our operations, and such obligations may be significant.

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, and while a successful resolution of these lawsuits is anticipated, the outcomes are not determinable at this time.

In early May 2021, PAS Guatemala and the Guatemala Ministry of Energy and Mines 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. The claim against the Guatemala Ministry of Energy and Mines has subsequently been denied and the claims against PAS Guatemala is pending determination by the Constitutional Court. While we believe that the claims against PAS Guatemala are procedurally and substantively flawed and without merit, the outcome of this proceeding cannot be determined at this time.

As reported in our Annual Information Form dated February 22, 2023, 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.

We may also be subject to proceedings in our commercial relationships. While we would, where available and appropriate to do so, defend against any such allegations, if we are unsuccessful in our defense of these claims, we may be subject to significant losses.

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 could have a material adverse effect on our financial or operating position, cash flow and results of operations.

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 in response we reduced throughput at our operations in order to enhance physical distancing and protect our personnel and the community. The spread of COVID-19 impacted our employees and contractors, not only as it related 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 were also impacted.

While COVID-19 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 imposition of future 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.

Moreover, the continued presence of, or spread, of COVID-19, and any future emergence and spread of COVID-19 mutations or other pathogens, globally may have material adverse effects on the economies and financial markets of many countries, including those we operate in, resulting in an economic downturn that could have significant impacts on commodity prices, demand for metals, investor confidence, and general financial market liquidity, all of which may adversely affect our business and the market price of our Common Shares. In addition, such a pandemic could also impact our ability to raise capital, cause continued interest rate volatility 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 or other pathogens becoming subject to quarantine or shut down. 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. Inflationary pressures relating to COVID-19 global financial support measures and current supply chain challenges continue to have 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.

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 ACCOUNTING POLICIES, STANDARDS AND JUDGEMENTS

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 2022 Annual Financial Statements, respectively.

Readers should also refer to Note 3 of the 2022 Annual 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, clarifies 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 amendment issued in October 2022 also clarifies how conditions with which an entity must comply within twelve months after the reporting period affect the classification of a liability. The amendments are effective for annual reporting periods beginning on or after January 1, 2024. 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.

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.

SUBSEQUENT EVENTS

Acquisition of Yamana

The Company has agreed to acquire of all of the issued and outstanding common shares of Yamana ("Yamana Shares") following the sale by Yamana of its Canadian assets, including certain subsidiaries and partnerships which hold Yamana's interests in the Canadian Malartic mine, to Agnico Eagle. Please refer to the "Yamana Gold Inc. Transaction" section of the MD&A.

Pursuant to the Transaction, shareholders of Yamana will receive for each Yamana Share held: (i) 0.1598 of a common share of the Company; (ii) 0.0376 of a common share of Agnico Eagle; and (iii) $1.0406 in cash to be paid by Agnico Eagle. The aggregate consideration payable to Yamana shareholders consists of up to approximately 156.9 million common shares of the Company; approximately 36.6 million common shares of Agnico Eagle; and $1.0 billion in cash contributed by Agnico Eagle. The aggregate consideration represents a value of $4.8 billion or $5.02 per Yamana Share, based on the closing price of Pan American's and Agnico Eagle's shares on November 3, 2022, the day prior to the announcement of the proposed Transaction.

Under the terms of the Transaction, the Company funded $150 million in cash to Yamana to pay a portion of a termination fee payable to Gold Fields Limited ("Gold Fields") in connection with the now terminated arrangement agreement between Yamana and Gold Fields. To fund this payment and other transaction and integration costs during the fourth quarter of 2022, the Company drew proceeds of $160 million from its SL-Credit Facility.

The Transaction received shareholder approval from the Company's shareholders and Yamana's shareholders on January 31, 2023. In addition, on February 6, 2023 the Company received the required court order with respect to the Transaction from the Ontario Superior Court of Justice. The Transaction remains subject to approval from the Mexican Federal Economic Competition Commission and satisfaction or waiver of certain other closing conditions. The Transaction is expected to close in the first quarter of 2023.

The Transaction would, if completed, contribute low-cost production growth and long-life mineral reserves, and result in the Company increasing its portfolio of assets to 11 operating mines. The Transaction would be estimated to meaningfully increase silver and gold production and would be expected to enhance the Company's overall financial position and improve its ability to internally fund its growth projects.

Pan American would assume Yamana's obligations with respect to its August 2021 senior notes with an outstanding balance of $500 million and interest rate of 2.63% due in August 2031 and the December 2017 senior notes with an outstanding balance of $282.9 million and interest rate of 4.625% due in December 2027 (the "Notes"). The Notes contain certain change of control provisions, the triggering of which would result in a mandatory repurchase of the Notes in accordance with their terms. The Company does not currently expect that the change of control provisions would be triggered. However, to support the Company's potential financial requirements and provide financial flexibility and liquidity in connection with the Transaction, the Company has, nonetheless, obtained a commitment from a Canadian chartered bank to provide, on a fully underwritten basis, an increase to the total committed credit available to the Company from $500.0 million to $1,250.0 million.

There can be no assurance as to the completion of the Transaction.

Disposal of Maverix

On January 19, 2023, Triple Flag Precious Metals Corp. ("Triple Flag") and Maverix completed a plan of arrangement in which Triple Flag issued a total of 45.1 million common shares and $86.7 million in cash to former Maverix shareholders. As a result, the Company received $58.8 million in cash and 3,954,471 Triple Flag shares in exchange for its interest in Maverix comprised of 25,974,571 common shares. On January 26, 2023, the Company sold its entire interest in Triple Flag for net proceeds of $46.5 million after $1.3 million in commission fees.

DISCLOSURE AND INTERNAL CONTROL PROCEDURES

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

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 Securities and Exchange Commission ("SEC")).

As of December 31, 2022, 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, 2022 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, 2022. 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, 2022 has been audited by Deloitte LLP, Independent Registered Public Accounting Firm as stated in their report immediately preceding the Company's 2022 Annual Financial Statements.

Changes in ICFR

There has been no change in the Company's ICFR during the three and twelve month periods ended December 31, 2022 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 MINERAL RESOURCES

Pan American Silver Corporation Mineral Reserves as of June 30, 2022[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	7.0	169	38.1			0.54	1.51	2.97
		Probable	3.9	167	21.1			0.30	1.63	2.97
Morococha (92.3%)[3]	Peru	Proven	3.3	156	16.6			0.44	1.31	3.95
		Probable	3.3	158	16.6			0.32	1.43	3.78
La Colorada	Mexico	Proven	3.8	340	41.5	0.23	27.5		1.13	2.02
		Probable	6.2	303	59.9	0.18	36.0		1.12	1.97
Manantial Espejo	Argentina	Proven	0.3	250	2.4	2.35	22.8			
		Probable	0.1	246	0.9	3.06	10.8			
San Vicente (95%)[3]	Bolivia	Proven	1.1	314	10.8			0.25	0.29	3.55
		Probable	0.6	289	5.2			0.25	0.32	2.98
Joaquin	Argentina	Proven	0.1	401	1.6	0.24	1.0			
		Probable	—	575	0.6	0.31	0.3			
Escobal	Guatemala	Proven	2.5	486	39.5	0.42	34.2		1.02	1.75
		Probable	22.1	316	225.0	0.34	243.8		0.77	1.25
Total Silver Segment[4]			**54.3**	**275**	**479.7**	**0.33**	**376.3**	**0.41**	**1.06**	**2.14**
Gold Segment										
La Arena	Peru	Proven	20.5			0.38	251.4			
		Probable	21.8			0.27	191.8			
Dolores	Mexico	Proven	12.9	21	8.6	0.57	235.4			
		Probable	4.1	18	2.4	0.6	77.7			
Shahuindo[5]	Peru	Proven	58.9	8	15.3	0.51	971.3			
		Probable	45.3	6	8.8	0.41	604.2			
Timmins	Canada	Proven	5.3			2.89	491.0			
		Probable	4.9			2.74	432.5			
Total Gold Segment[4]			**173.6**	**9**	**35.1**	**0.58**	**3,255.2**			
Total Gold and Silver Segments[4]		**Proven + Probable**	**228.0**	**91**	**514.9**	**0.54**	**3,631.5**	**0.41**	**1.06**	**2.14**

(1) See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2022".
(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.
(5) Effective date for the Shahuindo mineral reserve estimate is November 30, 2022.

Pan American Silver Corporation Measured and Indicated Mineral Resources as of June 30, 2022[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	2.1	163	10.9			0.42	1.58	3.05
		Indicated	2.4	166	12.7			0.40	1.71	2.92
Morococha (92.3%)[3]	Peru	Measured	0.6	130	2.7			0.64	0.79	2.59
		Indicated	0.7	124	3.0			0.61	0.74	2.37
La Colorada	Mexico	Measured	1.9	216	13.0	0.14	8.2		0.76	1.30
		Indicated	3.4	191	20.8	0.17	18.0		0.95	1.65
La Colorada Skarn[4]	Mexico	Indicated	95.9	31	94.4				1.28	2.77
Manantial Espejo	Argentina	Measured	0.2	158	1.1	1.79	11.9			
		Indicated	0.7	264	5.8	2.94	63.9			
COSE	Argentina	Indicated	0.1	349	1.3	0.29	1.0			
Joaquin	Argentina	Indicated	0.4	329	4.2	0.26	3.3			
San Vicente (95%)[3]	Bolivia	Measured	0.9	191	5.7			0.20	0.22	2.35
		Indicated	0.3	188	2.1			0.20	0.21	2.60
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	16.7		0.31	0.59
		Indicated	14.2	201	91.6	0.20	93.0		0.38	0.66
Total Silver Segment[5]			**281.3**	**102**	**920.1**	**0.29**	**216.2**	**0.06**	**0.98**	**2.44**
Gold Segment										
Dolores	Mexico	Measured	2.1	30	2.1	0.53	36.5			
		Indicated	0.8	57	1.5	1.13	29.7			
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	0.8			0.16	4			
		Indicated	2.1			0.17	11.9			
Shahuindo[6]	Peru	Measured	8.3	5	1.3	0.29	76.7			
		Indicated	13.2	4	1.8	0.23	98.1			
Timmins	Canada	Measured	3.4			3.32	357.6			
		Indicated	4.5			3.08	449.6			
La Arena II	Peru	Measured	148.9			0.25	1209.7	0.39		
		Indicated	547.5			0.23	4070	0.37		
Whitney (82.84%)[3]	Canada	Measured	0.8			7.02	180.7			
		Indicated	1.9			6.77	406.3			
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[5]			**769.7**	**9**	**12.9**	**0.32**	**7,922.2**	**0.38**		
Total Gold and Silver Segments[5]		**Measured + Indicated**	**1,051.1**	**89**	**933.0**	**0.32**	**8,138.4**	**0.32**	**0.98**	**2.44**

(1) See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2022".
(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) Effective date for the La Colorada Skarn mineral resource estimate is September 13, 2022.

(5) Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.
(6) Effective date for the Shahuindo mineral reserve estimate is November 30, 2022.

Pan American Silver Corporation Inferred Mineral Resources as of June 30, 2022[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	7.2	155	36.1			0.26	1.47	2.73
Morococha (92.3%)[3]	Peru	Inferred	5.2	143	24.0			0.35	1.28	3.74
La Colorada	Mexico	Inferred	14.9	195	93.9	0.20	98.4		1.05	1.89
La Colorada Skarn[4]	Mexico	Inferred	147.8	28	132.9				1.04	2.29
Manantial Espejo	Argentina	Inferred	0.5	180	3.1	1.71	29.4			
San Vicente (95%)[3]	Bolivia	Inferred	2.9	249	23.3			0.21	0.29	2.65
Navidad	Argentina	Inferred	45.9	81	119.4			0.02	0.57	
Joaquin	Argentina	Inferred	0.2	282	1.6	0.23	1.3			
Escobal	Guatemala	Inferred	1.9	180	10.7	0.90	53.7		0.22	0.42
Total Silver Segment[5]			**226.6**	**61**	**445.1**	**0.32**	**182.7**	**0.09**	**0.95**	**2.31**
Gold Segment										
Dolores	Mexico	Inferred	2.5	29	2.4	0.92	74.4			
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	6.0			0.22	42.3			
Shahuindo[6]	Peru	Inferred	14.6	8	3.7	0.41	194.5			
Timmins	Canada	Inferred	4.4			3.11	436.5			
La Arena II	Peru	Inferred	54.7			0.23	413.2	0.29		
Whitney (82.84%)	Canada	Inferred	0.8			5.34	141.4			
Gold River	Canada	Inferred	5.3			6.06	1027.4			
Vogel	Canada	Inferred	1.5			3.60	168.8			
Total Gold Segment[5]			**127.4**	**10**	**9.5**	**0.77**	**3,168.9**	**0.29**		
Total Gold and Silver Segments[5]		**Inferred**	**354.0**	**55**	**454.5**	**0.72**	**3,351.6**	**0.18**	**0.95**	**2.31**

(1) See table below entitled “Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2022”.
(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) Effective date for the La Colorada Skarn mineral resource estimate is September 13, 2022.
(5) Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.
(6) Effective date for the Shahuindo mineral reserve estimate is November 30, 2022.

Metal Price Assumptions Used to Estimate Mineral Reserves and Mineral Resources as of June 30, 2022

Property	Category	Ag US$/oz	Au US$/oz	Cu US$/t	Pb US$/t	Zn US$/t
Huaron	All categories	19.00	1,300	7,000	2,000	2,600
Morococha	All categories	19.00	1,300	7,000	2,000	2,600
La Colorada	All categories	19.00	1,300	7,000	2,000	2,600
La Colorada Skarn	All categories	22.00		7,000	2,200	2,800
Dolores	Reserves	19.00	1,600			
	Resources	22.00	1,700			
La Bolsa	All categories	14.00	825			
Manantial Espejo	Reserves	19.00	1,500			
	Resources	22.00	1,700			
San Vicente	All categories	19.00	1,300	7,000	2,000	2,600
Navidad	All categories	12.52			1,100	
Pico Machay	All categories		700			
Joaquin	Reserves	19.00	1,500			
	Resources	22.00	1,700			
Escobal	All categories	20.00	1,300		2,204	2,424
Shahuindo	Reserves	19.00	1,500			
	Resources	22.00	1,700			
La Arena	Reserves	19.00	1,500			
	Resources	22.00	1,700			
La Arena II	All categories		1,500	8,816		
Timmins	All categories		1,500			
Whitney	All categories		1,200			
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 22, 2023, 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 22, 2023, 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; the expected timing for release of forecasts for 2023, including our estimated production of silver, gold and other metals forecasted, and for 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; the impacts of inflation on Pan American and its operations; the closing of the Yamana Transaction in the first quarter of 2023; whether Pan American is able to maintain a strong financial condition and have sufficient capital, or have access to capital through the SL-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 anticipated completion of the Transaction, the timing for the same, and any expected benefit there from; the acquisition of additional assets upon completion of the Transaction; 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, 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; the costs associated with the Company's decommissioning obligations; the Company’s plans and expectations for its properties and operations; and expectations with respect to the future anticipated impact of COVID-19 on our 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: our ability to receive all required regulatory approvals and then close the Transaction; 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; 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; 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: 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, including in connection with the Transaction, 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; 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; 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 US Investors Regarding References to Mineral Reserves and Mineral Resources

Unless otherwise indicated, all reserve and resource estimates included in this MD&A 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 (the "CIM") — CIM Definition Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as amended (the "CIM Standards"). NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and 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 MD&A use the terms "measured resources," "indicated resources" and "inferred resources" as defined in accordance with NI 43-101 and the CIM Standards.

Further to recent amendments, mineral property disclosure requirements in the United States (the "U.S. Rules") are governed by subpart 1300 of Regulation S-K of the U.S. Securities Act of 1933, as amended (the "U.S. Securities Act") which differ from the CIM Standards. As a foreign private issuer that is eligible to file reports with the SEC pursuant to the multi-jurisdictional disclosure system (the "MJDS"), the Company is not required to provide disclosure on its mineral properties under the U.S. Rules and will continue to provide disclosure under NI 43-101 and the CIM Standards. If the Company 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 Company will be subject to the U.S. Rules, which differ from the requirements of NI 43-101 and the CIM Standards.

Pursuant to the new U.S. Rules, the SEC recognizes estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources." In addition, the definitions of "proven mineral reserves" and "probable mineral reserves" under the U.S. Rules are now "substantially similar" to the corresponding standards under NI 43-101. 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 Company 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. 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 under the U.S. Rules are "substantially similar" to the standards under NI 43-101 and CIM Standards, there are differences in the definitions under the U.S. Rules and CIM Standards. Accordingly, there is no assurance any mineral reserves or mineral resources that the Company 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 Company prepared the reserve or resource estimates under the standards adopted under the U.S. Rules.



PAN AMERICAN SILVER

Consolidated Financial Statements and Notes

FOR THE YEARS ENDED DECEMBER 31, 2022 AND DECEMBER 31, 2021

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"
Ignacio Couturier
Chief Financial Officer

February 22, 2023

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, 2022, 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, 2022, 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, 2022, 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, 2022.

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, 2022 and 2021, 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, 2022, 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, 2022 and 2021, and its financial performance and its cash flows for each of the two years in the period ended December 31, 2022, 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, 2022, 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 22, 2023, 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 Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Impairment - Assessment of Whether Indicators of Impairment or Impairment Reversal Exist within the Mineral Properties, Plant and Equipment - Refer to Note 3 o), 5 e), and 12 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 (“CGU”) 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 gold and silver), 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 gold and silver), 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 (gold and silver) 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.

Impairment —Dolores Mine CGU – Refer to Notes 3 o) and 12 to the financial statements

Critical Audit Matter Description

The Company identified an indicator of impairment for the Dolores Mine CGU as a result of gold and silver production being less than expected and inflationary pressures which have affected this shorter-life mine. The Company determined that the recoverable amount of the CGU corresponded to its fair value less costs to sell. It was determined that the recoverable amount of the Dolores Mine CGU was lower than its carrying value, causing the Company to recognize an impairment loss.

While there are several assumptions that go into determining the recoverable amount of the Dolores Mine CGU, the judgments with the highest degree of subjectivity are future metal prices (for both gold and silver). Auditing these estimates 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 future metal prices (for both gold and silver) used to determine the recoverable amount of the Dolores Mine CGU included the following, among others:

- Evaluated the effectiveness of the controls surrounding the future metal prices (for both gold and silver), and
- With the assistance of fair value specialists, evaluated the future metal prices (for both gold and silver) by comparing management forecasts to third party forecasts.

/s/ Deloitte LLP
Chartered Professional Accountants
Vancouver, Canada
February 22, 2023
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, 2022, 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, 2022, 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, 2022, of the Company and our report dated February 22, 2023, 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 22, 2023

	December 31, 2022	December 31, 2021
Assets		
Current assets		
Cash and cash equivalents (Note 27)	**$ 107,005**	$ 283,550
Short-term investments (Note 9)	**35,337**	51,723
Trade and other receivables	**136,614**	128,150
Income tax receivables	**40,020**	20,282
Inventories (Note 10)	**471,630**	500,462
Derivative assets (Note 8)	**2,883**	3,995
Prepaid expenses and other current assets	**10,891**	13,007
	804,380	1,001,169
Non-current assets		
Mineral properties, plant and equipment (Note 11)	**2,226,354**	2,344,551
Long-term inventories (Note 10)	**26,300**	25,644
Long-term tax receivables	**8,476**	8,711
Deferred tax assets (Note 30)	**55,879**	55,953
Long-term investment and associate (Note 13)	**121,200**	77,410
Goodwill and other assets (Note 14)	**5,909**	5,146
Total assets	**$ 3,248,498**	$ 3,518,584
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities (Note 15)	**$ 308,054**	$ 306,087
Derivative liabilities (Note 8)	**1,780**	351
Provisions (Note 16)	**17,853**	8,041
Lease obligations (Note 17)	**13,608**	10,663
Debt (Note 18)	**13,712**	3,400
Income tax payables	**25,833**	59,133
	380,840	387,675
Non-current liabilities		
Long-term provisions (Note 16)	**285,327**	240,111
Deferred tax liabilities (Note 30)	**140,337**	184,785
Long-term lease obligations (Note 17)	**19,506**	19,898
Long-term debt (Note 18)	**180,010**	11,900
Deferred revenue (Note 19)	**13,900**	12,516
Other long-term liabilities (Note 20)	**26,960**	25,691
Total liabilities	**1,046,880**	882,576
Equity (Note 21)		
Issued capital	**3,139,994**	3,136,214
Share option reserve	**93,273**	93,375
Investment revaluation reserve	**(3,008)**	—
Deficit	**(1,034,780)**	(598,035)
Total equity attributable to Company shareholders	**2,195,479**	2,631,554
Non-controlling interests	**6,139**	4,454
Total equity	**2,201,618**	2,636,008
Total liabilities and equity	**$ 3,248,498**	$ 3,518,584

Commitments and contingencies (Notes 8, 31); subsequent events (Notes 13, 33)
See accompanying notes to the consolidated financial statements
APPROVED BY THE BOARD ON FEBRUARY 22, 2023

"signed" Gillian Winckler, Director *"signed" Michael Steinmann, Director*

		2022		2021
Revenue (Note 28)	$	**1,494,718**	$	1,632,750
Cost of sales				
Production costs (Note 22)		**(1,094,431)**		(925,479)
Depreciation and amortization (Note 11)		**(316,036)**		(302,958)
Royalties		**(35,889)**		(36,375)
		(1,446,356)		(1,264,812)
Mine operating earnings (Note 28)		**48,362**		367,938
General and administrative		**(28,975)**		(34,852)
Exploration and project development		**(18,335)**		(11,071)
Mine care and maintenance (Note 23)		**(45,123)**		(31,780)
Foreign exchange losses		**(9,607)**		(11,267)
Impairment charges (Note 12)		**(99,064)**		—
Derivative gains (Note 8(d))		**7,336**		5,393
Mineral properties, plant and equipment (losses) gains (Note 11)		**(2,439)**		32,167
Gains and income from associates (Note 13)		**45,033**		4,347
Transaction and integration costs (Note 24)		**(157,334)**		—
Other (expense) income (Note 29)		**(2,115)**		36
(Loss) earnings from operations		**(262,261)**		320,911
Investment loss (Note 8(b))		**(16,221)**		(59,722)
Interest and finance expense (Note 25)		**(22,463)**		(16,198)
(Loss) earnings before income taxes		**(300,945)**		244,991
Income tax expense (Note 30)		**(39,118)**		(146,429)
Net (loss) earnings	$	**(340,063)**	$	98,562
Net (loss) earnings attributable to:				
Equity holders of the Company		**(341,748)**		97,428
Non-controlling interests		**1,685**		1,134
	$	**(340,063)**	$	98,562
Other comprehensive (loss) earnings, net of taxes				
Items that will not be reclassified to net (loss) earnings:				
Unrealized loss on long-term investment (Note 8(c))		**(3,477)**		—
Income tax recovery related to long-term investments (Note 30)		**469**		—
Total other comprehensive loss	$	**(3,008)**	$	—
Total comprehensive (loss) earnings	$	**(343,071)**	$	98,562
Total comprehensive (loss) earnings attributable to:				
Equity holders of the Company		**(344,756)**		97,428
Non-controlling interests		**1,685**		1,134
	$	**(343,071)**	$	98,562
(Loss) earnings per share attributable to common shareholders (Note 26)				
Basic (loss) earnings per share	$	**(1.62)**	$	0.46
Diluted (loss) earnings per share	$	**(1.62)**	$	0.46
Weighted average shares outstanding (in 000's) Basic		**210,521**		210,298
Weighted average shares outstanding (in 000's) Diluted		**210,521**		210,435

See accompanying notes to the consolidated financial statements.

	2022	2021
Operating activities		
Net (loss) earnings for the year	**$ (340,063)**	$ 98,562
Income tax expense (Note 30)	**39,118**	146,429
Depreciation and amortization (Note 11)	**316,036**	302,958
Impairment charges (Note 12)	**99,064**	—
Net realizable value inventory charge (Note 22)	**97,742**	8,719
Gains and income from associates (Note 13)	**(45,033)**	(4,347)
Accretion on closure and decommissioning provision (Note 16)	**14,841**	7,470
Investment loss	**16,221**	59,722
Interest paid	**(6,584)**	(5,234)
Interest received	**3,176**	172
Income taxes paid	**(137,762)**	(129,205)
Other operating activities (Note 27)	**17,190**	(22,069)
Net change in non-cash working capital items (Note 27)	**(42,037)**	(71,069)
	$ 31,909	$ 392,108
Investing activities		
Payments for mineral properties, plant and equipment	**$ (274,688)**	$ (243,478)
Proceeds from disposition of mineral properties, plant and equipment	**8,713**	45,798
Proceeds from short-term investments	**694**	1,861
Proceeds from derivatives	**9,877**	9,157
	$ (255,404)	$ (186,662)
Financing activities		
Proceeds from common shares issued	**$ 940**	$ 619
Distributions to non-controlling interests	**(269)**	(933)
Dividends paid	**(94,728)**	(71,500)
Proceeds from debt (Note 18)	**167,100**	—
Repayment of debt (Note 18)	**(5,239)**	(1,700)
Payment of equipment leases	**(14,833)**	(12,396)
	$ 52,971	$ (85,910)
Effects of exchange rate changes on cash and cash equivalents	**(6,021)**	(3,099)
(Decrease) increase in cash and cash equivalents	**(176,545)**	116,437
Cash and cash equivalents at the beginning of the year	**283,550**	167,113
Cash and cash equivalents at the end of the year	**$ 107,005**	$ 283,550

Supplemental cash flow information (Note 27).
See accompanying notes to the consolidated financial statements.

	Attributable to equity holders of the Company							
	Issued shares	Issued capital	Share option reserve	Investment revaluation reserve	Deficit	Total	Non-controlling interests	Total equity
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	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**
Total comprehensive loss								
Net loss for the year	—	—	—	—	(341,748)	(341,748)	1,685	(340,063)
Other comprehensive loss	—	—	—	(3,008)	—	(3,008)	—	(3,008)
	—	—	—	(3,008)	(341,748)	(344,756)	1,685	(343,071)
Shares issued on the exercise of stock options	79,542	1,283	(343)	—	—	940	—	940
Shares issued as compensation	143,768	2,497	—	—	—	2,497	—	2,497
Share-based compensation on option grants	—	—	241	—	—	241	—	241
Distributions by subsidiaries to non-controlling interests	—	—	—	—	(269)	(269)	—	(269)
Dividends paid	—	—	—	—	(94,728)	(94,728)	—	(94,728)
Balance, December 31, 2022	**210,680,834**	**$ 3,139,994**	**$ 93,273**	**$ (3,008)**	**$ (1,034,780)**	**$ 2,195,479**	**$ 6,139**	**$ 2,201,618**

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, 2022, 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.

The Company, Agnico Eagle Mines Limited (“Agnico Eagle”) and Yamana Gold Inc. (“Yamana”) entered into an arrangement agreement dated November 4, 2022 (the "Arrangement Agreement"), whereby the Company agreed to acquire all of the issued and outstanding common shares of Yamana following the sale by Yamana of its Canadian assets, including certain subsidiaries and partnerships which hold Yamana’s interests in the Canadian Malartic mine, to Agnico Eagle, by way of a plan of arrangement under the *Canada Business Corporations Act* (the “Transaction”). The Transaction is expected to close in the first quarter of 2023, subject to certain regulatory approvals and other closing conditions. As a result, the Company expects to add to its portfolio the Jacobina mine in Brazil; the El Penon and Minera Florida mines in Chile; and the Cerro Morro mine in Argentina as well as two development projects in Argentina. Please refer to Note 33 for further details.

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, 2022.

These consolidated financial statements were approved for issuance by the Board of Directors on February 22, 2023.

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, 2022 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, together "Timmins mine"
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 statement of earnings. 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 statement of earnings 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

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.

i) Financial assets

On initial recognition, a financial asset is classified as measured at: amortized cost, fair value through other comprehensive income ("FVTOCI"), or FVTPL. Financial assets at FVTPL are initially measured at fair value and those at amortized cost or FVTOCI are initially measured at fair value plus transaction costs.

Subsequent measurement of financial assets and liabilities depends on the classifications of such assets and liabilities.

Amortized cost:

Financial assets that meet the following conditions are measured subsequently at amortized cost:

- The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows, and
- 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 in the consolidated statement of earnings.

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)).

FVTOCI:

Financial assets that meet the following conditions are measured at FVTOCI:

- The financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, and
- 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; or
- The Company may make an irrevocable election at initial recognition for particular investments in equity instruments that would otherwise be measured at FVTPL to present subsequent changes in fair value in other comprehensive income.

At initial recognition, the Company's made an irrevocable election to measure its Long-term investment at FVTOCI (Note 8(c)).

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(e)(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.

ii) 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 foreign currency and commodity 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 for our operations. Quantities are assessed primarily through surveys and assays.

The costs incurred in the construction of heap leach pads are capitalized to mineral properties, plant and equipment. 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 ("CGU") 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 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 statement of earnings. 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.

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. 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.

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 MPPE, 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 statement of earnings. In the case of closed sites, changes to estimated costs are recognized immediately in the statement of earnings. 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 statement of earnings 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 statement of earnings 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 statement of earnings. 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 Right-of-use ("ROU") Assets and Lease Obligations

At lease commencement, the Company recognizes a ROU assets and a lease obligation. The ROU assets 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 assets 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 assets 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 assets .

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 statement of earnings.

t) Income taxes

Taxation on the earnings or loss for the year comprises current and deferred tax. Taxation is recognized in the statement of earnings 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 statement of earnings. 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 statement of earnings.

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, clarifies 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 amendment issued in October 2022 also clarifies how conditions with which an entity must comply within twelve months after the reporting period affect the classification of a liability. Covenants to be compiled with after the reporting date do not affect the classification of debt as current or non-current at the reporting date. The amendments are effective for annual reporting periods beginning on or after January 1, 2024. 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.

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.

On March 31, 2022, the Company determined that it no longer held significant influence over its investment in Maverix after declining to nominate a representative to serve as a director on the Maverix board of directors and given an ownership interest of less than 20%. As a result, the Company redesignated its investment in Maverix into a long-term financial asset recorded at FVTOCI (Note 13).

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, 2022, the carrying amount of Dolores and La Arena capitalized stripping costs was $20.0 million and $42.2 million, respectively (2021 - $23.5 million and $41.0 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. In the year ended December 31, 2022, the Company identified an indicator of impairment at the Dolores Mine (Note 12) and recorded an impairment expense of $99.1 million (2021 - $nil).

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 23), 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, 2022 and 2021, 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, 2022 and 2021.

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 29, 2019 ", prepared by the Canadian Institute of Mining, Metallurgy and Petroleum Mineral Resource and Mineral Reserve Committee. 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 statement of earnings, 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 MPPE 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 statement

of earnings 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 16 for details on decommissioning and restoration costs.

- *Income taxes and recoverability of deferred tax assets:* In assessing the probability of realizing income tax assets recognized, the Company makes estimates related to expectations of future taxable income, applicable tax planning opportunities, expected timing of reversals of existing temporary differences and the likelihood that tax positions taken will be sustained upon examination by applicable tax authorities. In making its assessments, the Company gives additional weight to positive and negative evidence that can be objectively verified. Estimates of future taxable income are based on forecasted cash flows from operations and the application of existing tax laws in each jurisdiction. The Company considers relevant tax planning opportunities that are within the Company's control, are feasible and within management's ability to implement. Examination by applicable tax authorities is supported based on individual facts and circumstances of the relevant tax position examined in light of all available evidence. Where applicable tax laws and regulations are either unclear or subject to ongoing varying interpretations, it is reasonably possible that changes in these estimates can occur that materially affect the amounts of income tax assets recognized. Also, future changes in tax laws could limit the Company from realizing the tax benefits from the deferred tax assets. The Company reassesses unrecognized income tax assets at each reporting period. Refer to Note 30 for further discussion on income taxes.

- *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 31 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 $2.2 billion as at December 31, 2022 (2021 - $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, 2021.

8. FINANCIAL INSTRUMENTS

a) Financial assets and liabilities by categories:

December 31, 2022	Amortized cost	FVTPL	FVTOCI	Total
Financial Assets:				
Cash and cash equivalents	$ 107,005	$ —	$ —	$ 107,005
Trade receivables from provisional concentrates sales [1]	—	50,258	—	50,258
Receivable not arising from sale of metal concentrates [1]	77,442		—	77,442
Short-term investments	—	35,337	—	35,337
Long-term investment [2]	—	—	121,200	121,200
Derivative assets	—	2,883	—	2,883
	$ 184,447	$ 88,478	$ 121,200	$ 394,125
Financial Liabilities:				
Derivative liabilities	$ —	$ 1,780	$ —	$ 1,780
Debt	$ 193,722	$ —	$ —	$ 193,722

(1) Included in Trade and other receivables.
(2) The Company's investment in Maverix (Note 13).

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.

b) Short-term investments recorded at FVTPL

The losses from short-term investments recorded at FVTPL for the year ended December 31, 2022 and 2021 were as follows:

	2022	2021
Unrealized losses on short-term investments	**$ (16,615)**	$ (60,355)
Realized gains on short-term investments	**394**	633
	$ (16,221)	$ (59,722)

c) Long-term investment recorded at FVTOCI

The losses from the Company's long-term investment (Note 13) recorded at FVTOCI for the year ended December 31, 2022 and 2021 were as follows:

	2022	2021
Unrealized loss on long-term investment	**$ (3,477)**	$ —

d) Derivatives

The Company's derivatives are comprised of foreign currency and commodity contracts. The gains (losses) on derivatives for the year ended December 31, 2022 and 2021 were comprised of the following:

	2022	2021
Realized gains on derivatives	**$ 9,877**	$ 9,156
Unrealized losses on derivatives	**(2,541)**	(3,763)
	$ 7,336	$ 5,393

e) 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, 2022		At December 31, 2021	
	Level 1	Level 2	Level 1	Level 2
Assets and Liabilities:				
Short-term investments	**$ 35,337**	**$ —**	$ 51,723	$ —
Long-term investment	**121,200**	**—**	—	—
Trade receivables from provisional concentrate sales	**—**	**50,258**	—	40,020
Derivative assets	**—**	**2,883**	—	3,995
Derivative liabilities	**—**	**(1,780)**	—	(351)
	$ 156,537	**$ 51,361**	$ 51,723	$ 43,664

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 remain unchanged from that at December 31, 2021.

ii) Valuation Techniques

Short-term and long-term investments

The Company's short-term and long-term 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 equity securities is calculated using 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.

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.

f) 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, 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, 2022, the Company had receivable balances associated with buyers of its concentrates of $50.3 million (2021 - $40.0 million). The vast majority of the Company's concentrate is sold to a limited number of concentrate buyers.

Doré production from La Colorada, Dolores, Manantial Espejo, Shahuindo, La Arena, and Timmins is refined under long-term agreements with fixed refining terms at seven 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, 2022, the Company had approximately $37.0 million (2021 - $52.3 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. The refineries bear the risk of loss after metal inventories have been delivered to them.

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, 2022, we had made $8.9 million of supplier advances (2021 - $11.2 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, supplier advances, 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, 2022	December 31, 2021
Cash and cash equivalents	**$ 107,005**	$ 283,550
Trade accounts receivable [1]	**50,258**	40,020
Supplier advances [1]	**8,914**	11,228
Employee loans [1]	**338**	667

(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.

There was no material change to the Company's exposure to liquidity risk for the year ended December 31, 2022 and 2021.

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 2022				
	Within 1 year	2 - 3 years	4- 5 years	After 5 years	Total
Accounts payable and accrued liabilities other than:	$ 291,436	$ —	$ —	$ —	$ 291,436
Severance liabilities	13,860	1,039	645	4,489	20,033
Payroll liabilities	2,758	—	—	—	2,758
Total accounts payable and accrued liabilities	308,054	1,039	645	4,489	314,227
Income tax payables	25,833	—	—	—	25,833
Derivative liabilities	1,780	—	—	—	1,780
Debt					
Repayment of principal	13,712	173,435	6,575	—	193,722
Interest and standby fees	11,222	17,681	125	—	29,028
Provisions [1][2]	3,448	2,423	—	1,081	6,952
Future payroll liabilities	2,465	8,659	—	—	11,124
Total contractual obligations [2]	**$ 366,514**	**$ 203,237**	**$ 7,345**	**$ 5,570**	**$ 582,666**

(1) Total litigation provision (Note 16).

(2) Amounts above do not include payments related to closure and decommissioning (current $14.4 million, long-term $281.8 million) discussed in Note 16, lease obligations discussed in Note 17, the $20.8 million deferred credit arising from the Navidad acquisition discussed in Note 20, and deferred tax liabilities of $140.3 million in Note 30.

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 liabilities	26,695	404	33	4,450	31,582
Payroll liabilities	3,763	—	—	—	3,763
Total accounts payable and accrued liabilities	306,087	404	33	4,450	310,974
Income tax payables	59,133	—	—	—	59,133
Derivative liabilities	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 payroll liabilities	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 16).
(2) Amounts above do not include payments related to closure and decommissioning (current $5.3 million, long-term $237.6 million) discussed in Note 16, lease obligations discussed in Note 17, the $20.8 million deferred credit arising from the Navidad acquisition discussed in Note 20, and deferred tax liabilities of $184.8 million in Note 30.

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.

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 tax assets and 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, 2022 non-USD net monetary liabilities were denominated would result in an income before taxes change of about $10.7 million (2021 - $19.3 million).

The Company is exposed to currency risk through the following financial assets and liabilities, and deferred tax assets and liabilities denominated in foreign currencies:

At December 31, 2022	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	**$ 40,904**	**$ 2,602**	**$ —**	**$ (42,345)**	**$ 24,048**
Mexican Peso	**3,082**	**32,587**	**12,649**	**(42,992)**	**(16,295)**
Argentine Peso	**9,348**	**9,339**	**856**	**(33,479)**	**—**
Bolivian Boliviano	**4,849**	**6,645**	**(5,154)**	**(8,655)**	**(4,492)**
European Euro	**40**	**—**	**—**	**—**	**—**
Peruvian Sol	**3,183**	**20,233**	**(523)**	**(28,873)**	**(87,719)**
Guatemala quetzal	**59**	**105**	**(63)**	**(7,265)**	**—**
	$ 61,465	**$ 71,511**	**$ 7,765**	**$ (163,609)**	**$ (84,458)**

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[1]
Canadian Dollar	$ 60,507	$ 3,389	$ —	$ (27,448)	$ 36,799
Mexican Peso	1,159	7,681	(14,633)	(25,985)	(64,297)
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	(22,234)	(54,953)	(94,367)
Guatemala quetzal	169	539	(91)	(9,919)	—
	$ 91,354	$ 49,761	$ (43,399)	$ (161,744)	$ (128,832)

At December 31, 2022, 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 the following derivative gains and losses on currencies for the year ended December 31, 2022 and 2021:

	2022	2021
Mexican peso gains (losses)	**$ 1,507**	$ (202)
Peruvian sol gains (losses)	**3,471**	(3,744)
Canadian dollar (losses) gains	**(2,944)**	851
	$ 2,034	$ (3,095)

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, 2022 on its cash and short-term investments was 1.4% (2021 - 0.7%). A 10% increase or decrease in the interest earned from financial institutions on cash and short-term investments would not result in a material change in the Company's earnings before income taxes (2021 – nil).

On August 10, 2021 the Company entered into a $500 million Sustainability-Linked Credit Facility ("SL-Credit Facility"), with a maturity date of August 8, 2025 (Note 18). The SL-Credit Facility incurred a weighted average interest rate of 5.7% during the year ended December 31, 2022 on amounts drawn. There were no amounts drawn on the SL-Credit Facility during the year ended December 31, 2021.

At December 31, 2022, the Company had $33.1 million in lease obligations (2021 - $30.6 million), that are subject to an annualized interest rate of 9.7% (2021 - 10.6%).

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 metals.

A 10% increase in all metal prices as at December 31, 2022, would result in an increase of approximately $149.9 million (2021 – $165.1 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 $151.6 million (2021 - $166.4 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, 2022 would result in an increase of approximately $4.9 million (2021 - $7.2 million) in the Company's before tax earnings, which would be reflected in 2022 results. A 10% decrease in metal prices for the same period would result in a decrease of approximately $4.9 million (2021 - $7.2 million) in the Company's before tax earnings.

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

At December 31, 2022, the Company had outstanding derivative positions on its exposure to zinc and diesel.The Company recorded the following derivative gains and losses on commodities for the year ended December 31, 2022 and 2021:

	2022	2021
Zinc gains	**$ 1,701**	$ 137
Copper losses	**—**	(1,139)
Diesel gains	**4,499**	9,397
Other	**(898)**	94
	$ 5,302	$ 8,489

9. SHORT-TERM INVESTMENTS

	December 31, 2022			December 31, 2021		
	Fair Value	**Cost**	**Accumulated unrealized holding gains**	Fair Value	Cost	Accumulated unrealized holding gains
Short-term investments	**$ 35,337**	**$ 20,781**	**$ 14,556**	$ 51,723	$ 20,419	$ 31,304

10. INVENTORIES

Inventories consist of:

	December 31, 2022	December 31, 2021
Concentrate	**$ 31,380**	$ 30,647
Stockpile	**31,309**	43,216
Heap leach and in process	**258,750**	286,266
Doré and finished	**86,776**	81,448
Materials and supplies	**89,715**	84,529
Total inventories	**$ 497,930**	$ 526,106
Less: current inventories	**$ (471,630)**	$ (500,462)
Non-current inventories[1]	**$ 26,300**	$ 25,644

(1) Inventories at Escobal mine, which include $19.0 million (2021 - $18.3 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 $135.8 million at December 31, 2022 (December 31, 2021 – $203.7 million). The Company recorded write-downs of $97.7 million for the year ended December 31, 2022 (2021 – write-downs of $8.7 million) which were related primarily to heap leach inventories and were included in cost of sales (Note 22).

A portion of the stockpile ore amounting to $0.9 million (2021 - $4.4 million) and a portion of the heap leach inventory amounting to $53.9 million (2021 - $92.1 million) are expected to be recovered or settled after more than twelve months.

11. MINERAL PROPERTIES, PLANT AND EQUIPMENT

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, 2022					
Net of accumulated depreciation	$ 1,115,905	$ 327,424	$ 426,495	$ 474,727	$ 2,344,551
Additions	237,339	42,808	—	20,470	300,617
Disposals	(11,339)	—	—	(5,785)	(17,124)
Depreciation and amortization[1]	(201,277)	(6,494)	—	(113,383)	(321,154)
Depreciation charge captured in inventory	(19,470)	—	—	—	(19,470)
Impairment charge	(73,723)	(478)	—	(24,863)	(99,064)
Transfers	(122,720)	78,860	2,043	41,817	—
Closure and decommissioning – changes in estimate (Note 16)	37,998	—	—	—	37,998
As at December 31, 2022	**$ 962,713**	**$ 442,120**	**$ 428,538**	**$ 392,983**	**$ 2,226,354**
Cost as at December 31, 2022	$ 3,123,604	$ 617,364	$ 841,344	$ 1,281,366	$ 5,863,678
Accumulated depreciation and impairments	**(2,160,891)**	**(175,244)**	**(412,806)**	**(888,383)**	**(3,637,324)**
Carrying value – December 31, 2022	**$ 962,713**	**$ 442,120**	**$ 428,538**	**$ 392,983**	**$ 2,226,354**

(1) Includes $5.1 million of depreciation and amortization included in mine care and maintenance for the year ended December 31, 2022.

	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	(1,435)	—	(12,315)	(4,542)	(18,292)
Depreciation and amortization [1]	(166,116)	(2,105)	—	(136,072)	(304,293)
Depreciation charge captured in inventory	(21,249)	—	—	—	(21,249)
Transfers	90,571	(9,522)	(93)	(80,956)	—
Closure and decommissioning – changes in estimate (Note 16)	6,905	—	—	—	6,905
As at December 31, 2021	**$ 1,115,905**	**$ 327,424**	**$ 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	**(2,024,689)**	**(16,281)**	**(412,932)**	**(813,665)**	**(3,267,567)**
Carrying value – December 31, 2021	**$ 1,115,905**	**$ 327,424**	**$ 426,495**	**$ 474,727**	**$ 2,344,551**

(1) Includes $1.3 million of depreciation and amortization included in mine care and maintenance for the year ended December 31, 2021.

	December 31, 2022			December 31, 2021		
	Cost	Accumulated Depreciation [4]	Carrying Value	Cost	Accumulated Depreciation [4]	Carrying Value
Producing properties:						
Huaron, Peru	**$ 231,282**	**$ (143,171)**	**$ 88,111**	$ 224,700	$ (141,902)	$ 82,798
Morococha, Peru [1]	**—**	**—**	**—**	277,105	(188,821)	88,284
Shahuindo, Peru	**636,466**	**(179,389)**	**457,077**	590,096	(132,727)	457,369
La Arena, Peru	**286,235**	**(142,979)**	**143,256**	208,306	(105,006)	103,300
La Colorada, Mexico	**403,698**	**(205,054)**	**198,644**	355,471	(185,684)	169,787
Dolores, Mexico [1]	**1,783,711**	**(1,586,424)**	**197,287**	1,738,040	(1,350,908)	387,132
Manantial Espejo, Argentina [1] [3]	**518,374**	**(518,374)**	**—**	518,931	(500,244)	18,687
San Vicente, Bolivia	**156,260**	**(119,336)**	**36,924**	151,045	(110,829)	40,216
Timmins, Canada	**359,414**	**(133,120)**	**226,294**	335,488	(103,903)	231,585
Other	**29,530**	**(21,427)**	**8,103**	29,804	(18,330)	11,474
	$ 4,404,970	**$ (3,049,274)**	**$ 1,355,696**	$ 4,428,986	$ (2,838,354)	$ 1,590,632
Non-Producing Properties:						
Land	**$ 6,879**	**$ (1,011)**	**$ 5,868**	$ 6,373	$ (871)	$ 5,502
Navidad, Argentina [1]	**566,577**	**(376,141)**	**190,436**	566,577	(376,101)	190,476
Escobal, Guatemala	**260,390**	**(3,078)**	**257,312**	257,390	(1,842)	255,548
Timmins, Canada	**63,043**	**—**	**63,043**	63,018	—	63,018
Shahuindo, Peru	**1,376**	**—**	**1,376**	3,549	—	3,549
La Arena, Peru	**117,000**	**—**	**117,000**	117,005	—	117,005
Minefinders, Mexico [1]	**77,210**	**(37,453)**	**39,757**	78,443	(36,975)	41,468
La Colorada, Mexico	**94,672**	**—**	**94,672**	55,370	—	55,370
Morococha, Peru [2]	**238,827**	**(158,101)**	**80,726**	2,981	—	2,981
Other	**32,734**	**(12,266)**	**20,468**	32,426	(13,424)	19,002
	$ 1,458,708	**$ (588,050)**	**$ 870,658**	$ 1,183,132	$ (429,213)	$ 753,919
Total	**$ 5,863,678**	**$ (3,637,324)**	**$ 2,226,354**	$ 5,612,118	$ (3,267,567)	$ 2,344,551

(1) Includes previously recorded impairment charges at December 31, 2022 of $635.5 million (2021 - $536.4 million) at Dolores, $173.4 million (2021 - $173.4 million) at Manantial Espejo, $386.1 million (2021 - $386.1 million) at Navidad, and $37.0 million (2021 - $37.0 million) at Minefinders.
(2) Morococha was placed on care and maintenance in February 2022.
(3) Manantial Espejo ceased production subsequent to year end.
(4) Includes impairments.

Dispositions

On March 29, 2022, the Company received a $7.0 million payment from an arm's length party to be applied to certain costs associated with the closure and reclamation of the Morococha mine processing facility. This payment was included in proceeds from disposition of mineral properties, plant and equipment.

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 13). 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. IMPAIRMENT

As at December 31, 2022, the Company reviewed its CGUs, represented by its principal producing mining properties and significant development projects, for indicators of impairment or impairment reversal. The CGU carrying amount for purposes of this assessment includes the carrying value of the mineral properties plant and equipment and goodwill less deferred tax liabilities and closure and decommissioning liabilities related to each CGU. The Company did not identify any indicators of impairment or impairment reversal at any of its CGUs.

The Company's impairment expense in respect of the following CGUs for the year ended December 31, 2022 were as follows:

	2022	2021
Dolores impairment expense	**$ 99,064**	$ —

Dolores

On June 30, 2022 the Company identified an impairment indicator in the Dolores Mine CGU due to the year-to-date 2022 silver and gold production being less than that expected by management, driven by an ore reconciliation shortfall experienced in a recent higher grade phase of the Dolores open pit mined in 2022, which was expected to affect production for the remainder of the year combined with the impact of inflationary pressures on this asset which has a shorter remaining mine life. Accordingly, management completed a recoverable value assessment of the Dolores Mine CGU, with, the Company recognizing an impairment expense of $99.1 million, against the carrying value of the Dolores Mine CGU at June 30, 2022, and recorded an NRV adjustment of $55.4 million (Note 10) (Collectively, the "Dolores Impairment").

The recoverable amount was determined applying a fair value less cost to sell methodology based on future after-tax cash flows expected to be derived from Dolores Mine discounted with a 6% weighted average cost of capital, a Level 3 fair value measurement. The projected cash flows used in impairment testing are significantly affected by changes in assumptions for metal prices, changes in the amount of recoverable reserves, production costs estimates and capital expenditures estimates. For the year ended December 31, 2022, the Company's impairment testing incorporated the following key assumptions:

a) Pricing Assumptions

Metal pricing included in the cash flow projections is based on consensus analyst pricing. The metal price assumptions used in the impairment assessment were the following:

	At June 30, 2022	
	2022-2025 Average	2026 and long-term
Gold (per ounce)	$ 1,802	$ 1,651
Silver (per ounce)	23.56	21.77

b) Additional Dolores-specific assumptions affecting the recoverable amount assessment

In 2022, the recoverable amount of the Dolores Mine CGU was negatively impacted by the following:

i) the updated mineral resource and remaining life of mine plan indicates a reduction in the assumed grades for a phase to be mined in 2022, following 2022 year-to-date silver and gold production being less than expected due to lower than expected grades encountered in this section of the open pit;

ii) inflationary pressures, which have particularly affected this shorter-life asset where most of the mining will be completed in the next two years;

iii) the suspension of underground mining operations in the first half of 2022 due to inflationary cost pressures, and the subsequent reclassification of underground mineral reserves to mineral resources; and,

iv) a reduction in the expected duration of leaching to the year 2030.

13. LONG-TERM INVESTMENT

The following table shows a continuity of the Company's investment in Maverix which was initially classified as an equity investee and subsequently as a long-term investment recorded at FVTOCI:

	Long-term investment	Investment in Associate	
At December 31, 2020	**$ —**	**$ 71,560**	**$ 71,560**
Acquisition of shares in associate	—	2,616	2,616
Equity pick-up from equity investees	—	4,510	4,510
Dilution losses	—	(34)	(34)
Adjustment for change in ownership interest	—	(22)	(22)
Dividends received	—	(1,220)	(1,220)
At December 31, 2021	**$ —**	**$ 77,410**	**$ 77,410**
Equity pick-up from equity investees	—	413	413
Dividends received	—	(325)	(325)
Loss of significant influence	124,677	(77,498)	47,179
Investment revaluation reserve fair value adjustment	(3,477)	—	(3,477)
At December 31, 2022	**$ 121,200**	**$ —**	**$ 121,200**

On January 19, 2023, Triple Flag Precious Metals Corp. ("Triple Flag") and Maverix completed a plan of arrangement in which Triple Flag issued a total of 45.1 million common shares and $86.7 million in cash to former Maverix shareholders (the "Maverix Sale"). As a result, the Company received $58.8 million in cash and 3,954,471 Triple Flag shares in exchange for its interest in Maverix comprised of 25,974,571 common shares. On January 26, 2023, the Company sold its entire interest in Triple Flag for net proceeds of $46.5 million after $1.3 million in commission fees.

On March 31, 2022, the Company determined that it no longer held significant influence over Maverix due to declining to exercise its right to nominate a representative to serve as a director on Maverix's Board of Directors and accordingly the Company no longer has the power to participate in the financial and operating policy decisions of Maverix. As a result, the Company recorded a $44.6 million gain concurrent with the redesignation of its investment in Maverix from Investment in Associate, accounted using the "equity method" whereby the Company recorded in income its ownership proportion of Maverix estimated earnings, into a long-term financial asset recorded at FVTOCI.

The Company's share of Maverix income or loss was recorded based on its17% interest up until March 31, 2022, representing the Company's fully diluted ownership.

14. GOODWILL AND OTHER ASSETS

Other assets consist of:

	December 31, 2022	December 31, 2021
Goodwill	$ 2,775	$ 2,775
Equity investments	2,059	1,247
Other assets	1,075	1,124
	$ 5,909	$ 5,146

15. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of:

	December 31, 2022	December 31, 2021
Trade accounts payable[1]	$ 88,808	$ 77,461
Royalty payables	20,886	24,113
Other accounts payable and accrued liabilities	111,282	107,207
Payroll and severance liabilities	66,608	64,968
Value added tax liabilities	8,508	12,006
Other tax payables	11,962	20,332
	$ 308,054	$ 306,087

(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.

16. PROVISIONS

	2022	2021
Closure and decommissioning, opening balance	$ 242,861	$ 235,110
Revisions in estimates and obligations incurred	42,754	6,278
Reclamation expenditures	(4,228)	(5,997)
Accretion expense (Note 25)	14,841	7,470
Closure and decommissioning, closing balance	$ 296,228	$ 242,861
Litigation	6,952	5,291
Total provisions	**$ 303,180**	**$ 248,152**

Provision classification:	December 31, 2022	December 31, 2021
Current	$ 17,853	$ 8,041
Non-current	285,327	240,111
	$ 303,180	$ 248,152

Closure and Decommissioning Cost Provision

The inflated and discounted provisions on the statement of financial position as at December 31, 2022, using inflation rates of between 2% and 6% (2021 – between 1% and 5%) and discount rates of between 3% and 11% (2021 - between 1% and 9%), was $296.2 million (2021 - $242.9 million). Revisions made to the reclamation obligations in 2022 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 2022 earnings as finance expense was $14.8 million (2021 - $7.5 million). Reclamation expenditures paid during the current year were $4.2 million (2021 - $6.0 million).

Litigation Provision

The litigation provision, as at December 31, 2022 and 2021, consists primarily of amounts accrued for labour claims at several of the Company's mine operations. The balance of $7.0 million at December 31, 2022 (2021 - $5.3 million) represents the Company's best estimate for all known and anticipated future obligations related to the above claims. The amount and timing of any expected payments are uncertain as their determination is outside the control of the Company.

17. LEASES

a. ROU assets

The following table summarizes changes in ROU assets for the year ended December 31, 2022, which have been recorded in mineral properties, plant and equipment on the consolidated statements of financial position:

	December 31, 2022	December 31, 2021
Opening net book value	**$ 29,496**	$ 33,543
Additions	**18,977**	9,924
Depreciation	**(14,961)**	(12,444)
Other	**(3,249)**	(1,527)
Closing net book value	**$ 30,263**	$ 29,496

b. Lease obligations

The following table presents a reconciliation of the Company's undiscounted cash flows at December 31, 2022 and December 31, 2021 to their present value for the Company's lease obligations:

	December 31, 2022	December 31, 2021
Within one year	**$ 14,139**	$ 11,690
Between one and five years	**17,592**	16,676
Beyond five years	**14,412**	16,934
Total undiscounted lease obligations	**46,143**	45,300
Less future interest charges	**(13,029)**	(14,739)
Total discounted lease obligations	**33,114**	30,561
Less: current portion of lease obligations	**(13,608)**	(10,663)
Non-current portion of lease obligations	**$ 19,506**	$ 19,898

18. DEBT

	December 31, 2021	Proceeds	Repayments	December 31, 2022
SL-Credit Facility	$ —	$ 160,000	$ —	**$ 160,000**
Other	15,300	23,661	5,239	**33,722**
Less: current portion	$ (3,400)	$ —	$ —	**$ (13,712)**
Non-current	$ 11,900	$ 183,661	$ 5,239	**$ 180,010**

	December 31, 2020	Proceeds	Repayments	December 31, 2021
SL-Credit Facility	$ —	$ —	$ —	**$ —**
Other	—	17,000	1,700	**15,300**
Less: current portion	$ —	$ —	$ —	**$ (3,400)**
Non-current	$ —	$ 17,000	$ 1,700	**$ 11,900**

SL-Credit Facility

In November 2022, as agreed under the terms of the Transaction (Note 1), the Company provided Yamana $150 million towards a termination fee payable to Gold Fields Limited ("Gold Fields) in connection with the now terminated acquisition proposal of Yamana by Gold Fields (Note 24). To fund this payment and other transaction and integration costs during the fourth quarter of 2022, the Company drew proceeds of $160 million from its SL-Credit Facility. Please refer to Note 33 for further details.

On August 10, 2021, Pan American entered into an amendment agreement to amend and extend its $500 million Credit Facility, with a maturity date of February 1, 2023, into a $500 million SL-Credit Facility that matures on August 8, 2025. The SL-Credit Facility features a mechanism that allows for pricing adjustments on drawn and undrawn balances based on the Company's sustainability performance ratings and scores published by MSCI and S&P Global. In addition, the financial covenants 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 Company was in compliance with all covenants required by the SL-Credit Facility.

The SL-Credit Facility can be drawn down at any time to finance the Company's working capital requirements, acquisitions, investments and for general corporate purposes. The borrowing costs under the Company's SL-Credit Facility are based on the Company's leverage ratio subject to pricing adjustments based on the Company's 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 SL-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 to pricing adjustments based on sustainability performance ratings and scores.

Other loans

From May 2022 to December 2022, the Company entered into Peruvian USD denominated promissory notes with a local financial institution in Peru, maturing in under 30 days, to provide short-term funding for the purpose of certain construction activities in advance of entering into term loans. In June 2021 and May 2022, the Company entered into Peruvian USD denominated five-year Loans with that same local financial institution for construction financing. The promissory notes bear a 5.6% interest rate per annum and the June 2021 loan bears a3.6% interest rate per annum and requires quarterly repayments while the May 2022 loan bears 2.2% interest per annum and requires monthly repayments.

19. DEFERRED REVENUE

On July 11, 2016, the Company recognized a deferred revenue liability from its sale of precious metal streams to Maverix 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, respectively (the "Streams"). The obligation for the Streams was not impacted by the Maverix Sale (Note 13).

The deferred revenue related to the Streams will be recognized as revenue by Pan American as the gold ounces are delivered to Maverix and increased by $2.5 million during the three months ended March 31, 2022 to record the deferred revenue previously not recognized while using the equity method of accounting after concluding that it no longer held significant influence of Maverix. The deferred revenue liability was $13.9 million at December 31, 2022 (December 31, 2021 - $12.5 million).

20. OTHER LONG-TERM LIABILITIES

Other long term liabilities consist of:

	December 31, 2022	December 31, 2021
Deferred credit[1]	**$ 20,788**	$ 20,788
Other tax payables	**—**	16
Severance liabilities	**6,172**	4,887
	$ 26,960	$ 25,691

(1) Represents the obligation to deliver future silver production of Navidad pursuant to a silver stream contract.

21. SHARE CAPITAL AND EMPLOYEE COMPENSATION PLANS

a. Stock options and compensation shares

For the year ended December 31, 2022, the total share-based compensation expense relating to stock options and compensation shares was $3.9 million (2021 - $5.1 million) and is presented as a component of general and administrative expense.

- *Stock options*

  During the year ended December 31, 2022, the Company granted 191,649 (2021 – 53,115) stock options.

  During the year ended December 31, 2022, the Company issued 79,542 (2021 – 65,780) common shares in connection with the exercise of stock options.

- *Compensation shares*

  During the year ended December 31, 2022, the Company issued 14,745 (2021 - 9,646) common shares to the Board of Directors in lieu of Directors' fees of $0.3 million (2021 - $0.3 million).

The following table summarizes changes in stock options for the years ended December 31,:

	Stock Options Outstanding	
	Shares	Weighted Average Exercise Price CAD$
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**
Granted	191,649	22.95
Exercised	(79,542)	15.12
Expired	(4,324)	41.62
Forfeited	(9,819)	31.32
As at December 31, 2022	**376,967**	**$ 23.01**

The following table summarizes information about the Company's stock options outstanding at December 31, 2022:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices CAD$	Number Outstanding as at December 31, 2022	Weighted Average Remaining Contractual Life (years)	Weighted Average Exercise Price CAD$	Number Outstanding as at December 31, 2022	Weighted Average Exercise Price CAD$
$17.53 - $23.03	**290,657**	5.6	$ 21.17	**99,008**	$ 17.72
$23.04 - $28.54	**35,409**	2.7	$ 25.35	**35,409**	$ 25.35
$28.55 - $34.04	**43,993**	5.9	$ 30.70	**14,668**	$ 30.70
$34.05 - $39.48	**6,908**	4.9	$ 39.48	**6,908**	$ 39.48
	376,967	5.3	$ 23.01	**155,993**	$ 21.64

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,:

	2022	2021
Expected life (years)	**4.5**	4.0
Expected volatility	**44.3 %**	44.0 %
Expected dividend yield	**2.7 %**	2.4 %
Risk-free interest rate	**3.4 %**	1.9 %
Weighted average exercise price (CAD$)	**$ 22.95**	$ 30.70
Weighted average fair value (CAD$)	**$ 7.69**	$ 9.39

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 150,469 PSUs for 2022 with a share price of CAD $21.16 (2021 - 79,417 PSUs approved at a share price of CAD $32.72). The Company recorded a $nil and $1.9 million expense, respectively, in general and administrative expense for PSUs for the years ended December 31, 2022 and 2021.

The following table summarizes changes in PSUs for the years ended December 31, 2022 and 2021:

PSU	Number Outstanding	Fair Value
As at December 31, 2020	**255,559**	**$ 8,870**
Granted	79,417	2,049
Paid out	(117,328)	(4,539)
Change in value	—	(901)
As at December 31, 2021	**217,648**	**$ 5,479**
Granted	150,469	2,456
Paid out	(80,159)	(828)
Change in value	—	(2,319)
As at December 31, 2022	**287,958**	**$ 4,788**

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.

The Company recorded a $1.5 million and $1.8 million expense, respectively, in general and administrative expense for RSUs for the years ended December 31, 2022 and 2021.

The following table summarizes changes in RSUs for the years ended December 31, 2022 and 2021:

RSU	Number Outstanding	Fair Value
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**
Granted	341,060	5,567
Paid out	(198,344)	(3,402)
Forfeited	(17,324)	(283)
Change in value	—	(3,453)
As at December 31, 2022	**551,792**	**$ 9,120**

d. Authorized 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, 2022 and 2021:

Declaration date	Record date	Dividend per common share
February 22, 2023 [1]	March 6, 2023	$ 0.10
November 9, 2022	November 21, 2022	$ 0.10
August 10, 2022	August 22, 2022	$ 0.11
May 11, 2022	May 24, 2022	$ 0.12
February 23, 2022	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

(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, 2022 and 2021, there were 313,883,990 CVRs outstanding which are convertible into 15,600,034 common shares.

22. PRODUCTION COSTS

Production costs are comprised of the following:

	2022	2021
Materials and consumables	**$ 414,302**	$ 381,446
Salaries and employee benefits [1]	**310,715**	317,081
Contractors	**232,096**	226,095
Utilities	**56,204**	48,675
Other expenses	**30,843**	34,165
Changes in inventories [2]	**50,271**	(81,983)
	$ 1,094,431	$ 925,479

(1) Salaries and employee benefits is comprised of:

	2022	2021
Wages, salaries and bonuses	**$ 328,384**	$ 352,736
Severances [3]	**23,884**	—
Share-based compensation	**3,936**	5,128
Total employee compensation and benefit expenses	**356,204**	357,864
Less: Expensed within General and Administrative expenses	**(26,179)**	(31,230)
Less: Expensed within Care and Maintenance expenses	**(11,721)**	(4,310)
Less: Expensed within Exploration expenses	**(7,589)**	(5,243)
Employee compensation and benefits expenses included in production costs	**$ 310,715**	$ 317,081

(2) Includes NRV adjustments to inventory to increase production costs by $97.7 million for the year ended December 31, 2022 (2021 - increase by $8.7 million).

(3) Includes $15.5 million, $5.6 million and $2.8 million of severances at Manantial Espejo, Morococha and Dolores respectively for the year ended December 31, 2022 (2021 - $nil).

23. MINE CARE AND MAINTENANCE

	2022	2021
Escobal	$ 24,594	$ 24,357
Morococha[1]	15,533	—
Navidad	4,996	7,423
	$ 45,123	$ 31,780

(1) Morococha was placed on care and maintenance in February 2022.

24. TRANSACTION AND INTEGRATION COSTS

Pursuant to the Transaction (Note 1), during the fourth quarter of 2022, the Company provided $150.0 million to Yamana towards a termination fee payable to Gold Fields Limited ("Gold Fields"). Please refer to Note 33 for further details.

	2022	2021
Termination fee	$ 150,000	$ —
Legal and advisory fees	6,814	—
Other	520	—
	$ 157,334	$ —

25. INTEREST AND FINANCE EXPENSE

	2022	2021
Interest expense	$ 5,311	$ 3,660
Finance fees	2,311	5,068
Accretion expense (Note 16)	14,841	7,470
	$ 22,463	$ 16,198

26. EARNINGS PER SHARE ("EPS")

For the year ended December 31,	2022			2021		
	Earnings[1]	Shares (000's)	EPS	Earnings	Shares (000's)	EPS
Net (loss) earnings	$ (341,748)			$ 97,428		
Basic (loss) earnings per share	$ (341,748)	210,521	$ (1.62)	$ 97,428	210,298	$ 0.46
Effect of dilutive securities:						
Stock options	—	—		—	137	
Diluted (loss) earnings per share	$ (341,748)	210,521	$ (1.62)	$ 97,428	210,435	$ 0.46

(1) Net earnings attributable to equity holders of the Company.

The following securities were excluded in the computation of diluted earnings per share because they were anti-dilutive but they have the potential to dilute basic earnings per share in the future:

	2022	2021
Potential dilutive securities:		
Share options	376,967	65,044
Potential shares from CVR conversion[1]	15,600,034	15,600,034
	15,977,001	15,665,078

(1) There were 313,883,990 CVRs outstanding at December 31, 2022 (2021 -313,883,990)

27. SUPPLEMENTAL CASH FLOW INFORMATION

The following tables summarize other adjustments for non-cash statement of earnings items, changes in operating working capital items and significant non-cash items:

Other operating activities	2022	2021
Adjustments for non-cash statement of earnings items:		
Unrealized foreign exchange losses	$ 12,840	$ 6,703
Interest expense (Note 25)	5,311	3,660
Gains on derivatives (Note 8(d))	(7,336)	(5,393)
Share-based compensation expense	3,936	5,128
Losses (gains) on disposition of mineral properties, plant and equipment (Note 11)	2,439	(32,167)
	$ 17,190	$ (22,069)

The following tables summarize other adjustments for non-cash statement of earnings items, changes in operating working capital items and significant non-cash items:

Changes in non-cash operating working capital items:	2022	2021
Trade and other receivables	$ (12,692)	$ (2,874)
Inventories	(50,035)	(82,885)
Prepaid expenses	2,546	1,049
Accounts payable and accrued liabilities	20,711	18,086
Provisions	(2,567)	(4,445)
	$ (42,037)	$ (71,069)

Cash and Cash Equivalents	December 31, 2022	December 31, 2021
Cash in banks	$ 107,005	$ 283,550

28. 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, 2022

Segment/Country	Mine	Revenue	Production costs and royalties	Depreciation	Mine operating earnings	Capital expenditures[1]
Silver Segment:						
Mexico	La Colorada	**$ 155,039**	**$ 98,695**	**$ 20,249**	**$ 36,095**	**$ 91,682**
Peru	Huaron	**145,730**	**100,511**	**11,836**	**33,383**	**15,574**
	Morococha [2]	**22,059**	**20,642**	**2,332**	**(915)**	**1,252**
Bolivia	San Vicente	**76,935**	**59,596**	**8,744**	**8,595**	**7,156**
Argentina	Manantial Espejo [3]	**105,073**	**112,670**	**23,050**	**(30,647)**	**4,263**
Guatemala	Escobal	**—**	**—**	**—**	**—**	**1,606**
Total Silver Segment		**504,836**	**392,114**	**66,211**	**46,511**	**121,533**
Gold Segment:						
Mexico	Dolores	**303,934**	**301,892**	**129,803**	**(127,761)**	**35,855**
Peru	Shahuindo	**266,375**	**146,179**	**44,503**	**75,693**	**44,604**
	La Arena	**175,865**	**103,869**	**34,674**	**37,322**	**47,970**
Canada	Timmins	**243,708**	**186,266**	**38,640**	**18,802**	**37,652**
Total Gold Segment		**989,882**	**738,206**	**247,620**	**4,056**	**166,081**
Other segment:						
Canada	Pas Corp	**—**	**—**	**439**	**(439)**	**348**
Argentina	Navidad	**—**	**—**	**—**	**—**	**50**
Other	Other	**—**	**—**	**1,766**	**(1,766)**	**1,509**
Total		**$ 1,494,718**	**$ 1,130,320**	**$ 316,036**	**$ 48,362**	**$ 289,521**

(1) Includes payments for mineral properties, plant and equipment and payment of equipment leases.
(2) Morococha was placed on care and maintenance in February 2022.
(3) Manantial Espejo ceased production subsequent to year end.

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	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.

At December 31, 2022				
Segment/Country	**Mine**	**Assets**	**Liabilities**	**Net assets**
Silver Segment:				
Mexico	La Colorada	**$ 375,381**	**$ 52,018**	**$ 323,363**
Peru	Huaron	**122,535**	**51,486**	**71,049**
	Morococha [1]	**102,193**	**31,240**	**70,953**
Bolivia	San Vicente	**82,509**	**47,380**	**35,129**
Argentina	Manantial Espejo [2]	**47,772**	**40,477**	**7,295**
Guatemala	Escobal	**291,118**	**19,374**	**271,744**
Total Silver Segment		**1,021,508**	**241,975**	**779,533**
Gold Segment:				
Mexico	Dolores	**415,143**	**155,772**	**259,371**
Peru	Shahuindo	**602,443**	**199,560**	**402,883**
	La Arena	**368,277**	**155,120**	**213,157**
Canada	Timmins	**382,043**	**67,971**	**314,072**
Total Gold Segment		**1,767,906**	**578,423**	**1,189,483**
Other segment:				
Canada	Pas Corp	**178,986**	**182,920**	**(3,934)**
Argentina	Navidad	**193,923**	**2,600**	**191,323**
	Other	**86,175**	**40,962**	**45,213**
Total		**$ 3,248,498**	**$ 1,046,880**	**$ 2,201,618**

(1) Morococha was placed on care and maintenance in February 2022.
(2) Manantial Espejo ceased production subsequent to year end.

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	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
		$ 3,518,584	$ 882,576	$ 2,636,008

Product Revenue	2022	2021
Refined silver and gold	**$ 1,106,793**	$ 1,177,388
Zinc concentrate	**98,341**	119,059
Lead concentrate	**167,673**	145,524
Copper concentrate	**65,096**	133,025
Silver concentrate	**56,815**	57,754
Total	**$ 1,494,718**	$ 1,632,750

The Company has 26 customers that account for 100% of the concentrate and silver and gold sales revenue. The Company has 3 customers that accounted for 28%, 14% and 12% of total sales in 2022, and 4 customers that accounted for 21%, 13%, 12%, and 11% 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 the Company's financial performance, financial position, and cash flows.

29. OTHER EXPENSE (INCOME)

	2022	2021
Change in closure and decommissioning estimates[1]	$ 4,694	$ 246
Change in provisions	5,011	1,323
Investment income	(5,371)	(484)
Other income	(2,219)	(1,121)
Total	$ 2,115	$ (36)

(1) Relates to changes in estimates after the completion of mining activities.

30. INCOME TAXES

Components of Income Tax Expense

	2022	2021
Current tax expense (recovery)		
Recognized in profit or loss in current year	$ 85,325	$ 134,947
Adjustments recognized in the current year with respect to prior years	(2,308)	147
	83,017	135,094
Deferred tax expense (recovery)		
Deferred tax expense (recovery) recognized in the current year	(34,184)	14,194
Adjustments recognized in the current year with respect to prior years	366	56
Derecognition of previously unrecognized deferred tax assets	9,065	—
Benefit from previously unrecognized losses, and other temporary differences	—	508
Impact of impairments on deferred tax assets and liabilities	(3,825)	—
Decrease in deferred tax liabilities due to tax impact of NRV charge to inventory	(15,321)	(3,423)
	(43,899)	11,335
Income tax expense	$ 39,118	$ 146,429

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, 2022 and the comparable period of 2021 were changes in the recognition of certain deferred tax assets primarily due to the Dolores impairment, foreign exchange fluctuations, mining taxes paid, and withholding taxes on payments from foreign subsidiaries.

In the year ended December 31, 2022, as a result of terminating its arrangement agreement with Gold Fields Limited, Yamana was required to pay Gold Fields Limited a termination fee of $300 million. One-half of this amount was funded by the Company. The Company has treated this as a capital cost of acquiring Yamana Gold Inc., pursuant to the applicable Canadian income tax legislation. Since the Company controls the timing of the reversal of this deductible temporary difference, no deferred tax benefit could be recorded for this amount. The tax impact caused by this treatment effectively increased tax expense by $39.8 million in the current quarter.

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

	2022	2021
Earnings (loss) before taxes and non-controlling interest	$ (300,945)	$ 244,991
Statutory Canadian income tax rate	27.00 %	27.00 %
Income tax expense (recovery) based on above rates	$ (81,255)	$ 66,148
Increase (decrease) due to:		
Non-deductible expenditures	7,465	6,192
Foreign tax rate differences	(11,717)	15,969
Change in net deferred tax assets not recognized [1]	22,296	20,574
Derecognition of deferred tax assets previously recognized [2]	50,356	—
Effect of other taxes paid (mining and withholding)	15,658	25,846
Effect of foreign exchange on tax expense	(21,541)	14,337
Non-taxable impact of foreign exchange	6,310	(1,203)
Change in non-deductible portion of reclamation liabilities	12,157	2,380
Unrecognized tax benefit on termination fee related to the Yamana acquisition	39,750	—
Other	(361)	(3,814)
Income tax expense	$ 39,118	$ 146,429
Effective income tax rate	(13.00)%	59.77 %

(1) Includes deferred taxes related to amounts recorded in other comprehensive income for the year-end December 31, 2022 of $0.5 million with no amounts recognized in the comparative period.
(2) Attributable to the loss of attributes resulting from the Dolores impairment in Q2 2022 (Note 12).

Deferred tax assets and liabilities

The following is the analysis of the deferred tax assets (liabilities) presented in the consolidated financial statements:

	2022	2021
Net deferred tax liabilities, beginning of year	$ (128,832)	$ (117,461)
Recognized in net earnings in the year	43,899	(11,335)
Recognized in other comprehensive income (loss) in year [1]	469	—
Other	6	(36)
Net deferred liabilities, end of year	(84,458)	(128,832)
Deferred tax assets	55,879	55,953
Deferred tax liabilities	(140,337)	(184,785)
Net deferred tax liabilities	$ (84,458)	$ (128,832)

(1) Deferred tax impact related to unrealized loss on long-term investment (see Note 13).

Components of deferred tax assets and liabilities

The deferred tax assets (liabilities) are comprised of the various temporary differences, as detailed below:

	2022	2021
Deferred tax assets (liabilities) arising from:		
Closure and decommissioning costs	$ 23,482	$ 27,742
Tax losses, resource pools and mining tax credits	83,819	92,928
Deductible Mexican mining taxes	3,974	4,682
Accounts payable and accrued liabilities	26,920	22,119
Trade and other receivables	17,634	29,163
Provision for doubtful debts and inventory adjustments	3,136	(28,153)
Short-term investments	(11,665)	(7,941)
Mineral properties, plant, and equipment	(217,255)	(245,126)
Estimated sales provisions	(19,263)	(30,466)
Other temporary differences and provisions	4,760	6,220
Net deferred tax liabilities	$ (84,458)	$ (128,832)

At December 31, 2022, the net deferred tax liability above included the deferred tax asset of $83.8 million, which includes the benefits from tax losses ($28.1 million) and resource pools ($55.7 million). The decrease of $9.1 million in this deferred tax asset is mainly due to the slower than expected utilization of tax attributes against income from Timmins West and Bell Creek, which resulted in the de-recognition of the benefits associated with resource pools for these mines. The losses will begin to expire after the 2024 year end, if unused.

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 in this deferred tax asset is mainly due to the unrealized losses on short-term investments. In prior years, the accumulated unrealized gains on short-term investments necessitated the recognition of this offsetting deferred tax asset. The current year's decrease in accumulated unrealized gains has resulted in a consequential reduction to this offsetting deferred tax asset. Since the accumulated unrealized gains decreased during 2021, the benefit associated with the offsetting losses was de-recognized. 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:

	2022	2021
Operating tax loss	**$ 383,231**	$ 366,351
Net capital tax loss	**36,817**	35,801
Resource pools and other tax credits[1]	**87,012**	49,230
Financing fees	**1,368**	1,050
Mineral properties, plant, and equipment	**207,182**	127,945
Closure and decommissioning costs	**207,261**	143,080
Exploration and other expenses not currently deductible	**26,300**	33,837
Intercompany debt	**23,449**	17,956
Doubtful debt and inventory	**18,631**	24,624
Payroll and vacation accruals	**35,799**	6,168
Other temporary differences	**14,057**	6,154
	$ 1,041,107	$ 812,196

(1) Includes tax credits which will begin to expire after 2027 year end, if unused.

Included in the above amounts are operating tax losses, which if not utilized will expire as follows:

At December 31, 2022

	Canada	US	Peru	Mexico	Barbados	Argentina	Total
2023	$ —	$ 360	$ —	$ 289	$ 70	$ 4	$ 723
2024	—	419	275	312	30	10	1,046
2025 – and after	342,244	10,980	271	2,320	318	25,329	381,462
Total tax losses	**$ 342,244**	**$ 11,759**	**$ 546**	**$ 2,921**	**$ 418**	**$ 25,343**	**383,231**

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**

Taxable temporary differences associated with investment in subsidiaries

As at December 31, 2022, taxable temporary differences of $286.0 million (2021 – $282.0 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.

31. CONTINGENCIES

The following is a summary of the contingent matters and obligations relating to the Company as at December 31, 2022.

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, 2022, $296.2 million (2021 - $242.9 million) was accrued for reclamation costs relating to mineral properties (Note 16).

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 would, where available and appropriate to do so, defend against any 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 subject to claims or other legal processes, which may be direct or indirect, by individuals, local communities, Indigenous peoples, private land owners or non-governmental organizations relating to land and mineral rights and tenure, or alleged environmental or social damage. Such claimants may seek sizeable monetary damages against us and/or the return or relinquishment of surface or mineral rights or revocation of permits and licenses that are valuable to us.

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 could have a material adverse effect on our financial or operating 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, 2022, the Company incurred approximately $7.5 million in COMIBOL royalties (2021 - incurred $7.7 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.

During 2022, the ILO 169 consultation process for the Escobal mine in Guatemala advanced with the conclusion of Phase 1 of the process in July 2022. 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. Additionally, two meetings were held in October 2022 to provide information related to the project. Jointly with the representatives of the Xinka Indigenous community, MEM submitted an update to the Guatemalan Supreme Court of Justice in December 2022.

Operations at the Escobal mine have been 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 Indigenous people residing in the area of influence.

The process, timing, and outcome of the ILO 169 consultation remains uncertain.

32. RELATED PARTY TRANSACTIONS

The Company’s related parties include its subsidiaries, associates over which it exercises significant influence, and key management personnel. Transactions with the Company's subsidiaries have been eliminated on consolidation. Maverix ceased to be a related party after March 31, 2022 when the Company determined that it no longer held significant influence (Note 13). There were no other related party transactions for the years ended December 31, 2022 and 2021.

Compensation of key management personnel

Key management personnel compensation is comprised of:

	2022	2021
Short-term employee benefits [1]	**$ 11,702**	$ 18,592
Post-employment benefits [2]	**1,020**	1,130
Share-based payments [3]	**2,286**	2,281
	$ 15,008	**$ 22,003**

(1) Includes annual salary and short-term incentives, RSUs, and PSUs paid by the Company.
(2) Includes annual contributions to retirement savings plans made by the Company.
(3) Includes annual stock option, and common share grants.

33. SUBSEQUENT EVENTS

Acquisition of Yamana

The Company has agreed to acquire of all of the issued and outstanding common shares of Yamana ("Yamana Shares") following the sale by Yamana of its Canadian assets, including certain subsidiaries and partnerships which hold Yamana's interests in the Canadian Malartic mine, to Agnico Eagle (Note 1).

Pursuant to the Transaction, shareholders of Yamana will receive for each Yamana Share held: (i) 0.1598 of a common share of the Company; (ii) 0.0376 of a common share of Agnico Eagle; and (iii) $1.0406 in cash to be paid by Agnico Eagle. The aggregate consideration payable to Yamana shareholders consists of up to approximately 156.9 million common shares of the Company; approximately 36.6 million common shares of Agnico Eagle; and $1.0 billion in cash contributed by Agnico Eagle. The aggregate consideration represents a value of $4.8 billion or $5.02 per Yamana Share, based on the closing price of Pan American's and Agnico Eagle's shares on November 3, 2022, the day prior to the announcement of the proposed Transaction.

Under the terms of the Transaction, the Company funded $150 million in cash to Yamana to pay a portion of a termination fee payable to Gold Fields in connection with the now terminated arrangement agreement between Yamana and Gold Fields. To fund this payment and other transaction and integration costs during the fourth quarter of 2022, the Company drew proceeds of $160 million from its SL-Credit Facility (Note 24).

The Transaction received shareholder approval from the Company's shareholders and Yamana's shareholders on January 31, 2023. In addition, on February 6, 2023 the Company received the required court order with respect to the Transaction from the Ontario Superior Court of Justice. The Transaction remains subject to approval from the Mexican Federal Economic Competition Commission and satisfaction or waiver of certain other closing conditions. The Transaction is expected to close in the first quarter of 2023. There can be no assurance as to the completion of the Transaction.

Pan American would assume Yamana's obligations with respect to its August 2021 senior notes with an outstanding balance of $500 million and interest rate of 2.63% due in August 2031 and the December 2017 senior notes with an outstanding balance of $282.9 million and interest rate of 4.625% due in December 2027 (the "Notes"). The Notes contain certain change of control provisions, the triggering of which would result in a mandatory repurchase of the Notes in accordance with their terms. The Company does not currently expect that the change of control provisions would be triggered. However, to support the Company's potential financial requirements and provide financial flexibility and liquidity in connection with the Transaction, the Company has, nonetheless, obtained a commitment from a Canadian chartered bank to provide, on a fully underwritten basis, an increase to the total committed credit available to the Company from $500.0 million to $1,250.0 million.

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 22, 2023, relating to the financial statements of Pan American Silver Corp. (the "Company") and the effectiveness of the Company's internal control over financial reporting appearing in this Annual Report on Form 40-F for the year ended December 31, 2022.

/s/ Deloitte LLP

Chartered Professional Accountants

Vancouver, Canada

February 22, 2023

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 June 30, 2022 relating to the Dolores property;
3. "Technical Report for the Huaron Property, Pasco, Peru" dated effective October 30, 2022 relating to the Huaron property; and
4. "Technical Report for the Shahuindo Property, Cajabamba, Peru" dated effective November 30, 2022 relating to the Shahuindo 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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 22nd day of February, 2023.

/s/ "*Martin Wafforn*"
Martin Wafforn, 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;
2. "Technical Report for the Dolores Property, Chihuahua, Mexico" dated effective June 30, 2022 relating to the Dolores property;
3. "Technical Report for the Huaron Property, Pasco, Peru" dated effective October 30, 2022 relating to the Huaron property; and
4. "Technical Report for the Shahuindo Property, Cajabamba, Peru" dated effective November 30, 2022 relating to the Shahuindo 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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 22nd day of February, 2023.

/s/ "Christopher Emerson"
Christopher Emerson, FAusIMM

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 June 30, 2022 relating to the Dolores property;
3. "Technical Report for the Huaron Property, Pasco, Peru" dated effective October 30, 2022 relating to the Huaron property; and
4. "Technical Report for the Shahuindo Property, Cajabamba, Peru" dated effective November 30, 2022 relating to the Shahuindo 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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 22nd day of February, 2023.

/s/ "Americo Delgado"
Americo Delgado, P. Eng.

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 Alain 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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 22nd day of February, 2023.

/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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 22nd day of February, 2023.

/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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 22nd day of February, 2023.

/s/ "Dave Felsher"
Dave Felsher, P. Eng.

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 22, 2023 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2023 (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 M3 Engineering & Technology Corporation 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 performed in connection with the Technical Report or the Technical Information.

Dated this 22nd day of February, 2023.

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.;

2. 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 22, 2023

/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, Ignacio Couturier, 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 22, 2023

/s/ "Ignacio Couturier"
By: Ignacio Couturier
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 on Form 40-F for the year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Michael Steinmann, as Chief Executive Officer of the Registrant, and Ignacio Couturier, 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 22, 2023

/s/ "Ignacio Couturier"
By: Ignacio Couturier
Title: Chief Financial Officer
February 22, 2023

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.