



**PAN AMERICAN**  
— SILVER —

# Q2 2022 EARNINGS REVIEW

CONFERENCE CALL // AUGUST 11, 2022

— NASDAQ: PAAS | TSX: PAAS —

# CAUTIONARY NOTE

### Non-GAAP Measures

This presentation of Pan American Silver Corp. and its subsidiaries (collectively, "Pan American", "Pan American Silver", the "Company", "we" or "our") refers to various non-GAAP measures, such as "AISC", "cash costs per ounce sold", "adjusted earnings" and "basic adjusted earnings per share", "total debt", "capital", "operating margin", "free cash flow" and "working capital". These measures do not have a standardized meaning prescribed by IFRS as an indicator of performance, and may differ from methods used by other companies. Silver segment Cash Costs and AISC are calculated net of credits for realized revenues from all metals other than silver, and are calculated per ounce of silver sold. Gold segment Cash Costs and AISC are calculated net of credits for realized silver revenues, and are calculated per ounce of gold sold. Consolidated Cash Costs and AISC are based on total silver ounces sold and are net of by-product credits from all metals other than silver.

Readers should refer to the "Alternative Performance (Non-GAAP) Measures" section of the Company's Management's Discussion and Analysis ("MD&A") for the period ended December 31, 2021 and in our most recently filed MD&A for the period ended June 30, 2022, each of which are available at [www.sedar.com](http://www.sedar.com) and on our website at [www.panamericansilver.com](http://www.panamericansilver.com).

### Reporting Currency and Financial Information

Unless we have specified otherwise, all references to dollar amounts or \$ are to United States dollars.

### Cautionary Note Regarding Forward Looking Statements and Information

Certain of the statements and information in this presentation constitute "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and "forward-looking information" within the meaning of applicable Canadian provincial securities laws. All statements, other than statements of historical fact, are forward-looking statements or information. Forward-looking statements or information in this presentation relate to, among other things: future financial or operational

performance, including our estimated production of silver, gold and other metals forecasted for 2022, our estimated Cash Costs and AISC, and our sustaining and project capital expenditures in 2022; the anticipated timing for metals production and sales, including the expectation with respect to production being weighted to the latter half of 2022 and the timing and amount of any future sales of inventory; estimated recoverable amounts of cash generating units; estimated mineral reserves and mineral resources; expectations with respect to mineral grades and the impact of any variations relative to actual grades experienced; future anticipated prices for gold, silver and other metals and assumed foreign exchange rates; the extent of, and success related to any future exploration or development programs, including with respect to the La Colorada skarn; expectations with respect to the future anticipated impact of COVID-19 on our operations and the assumptions that the impact of COVID-19, including the Omicron variant, will be such that we will be able to maintain our workforce at near normal levels throughout 2022; whether Pan American is able to maintain a strong financial condition and have sufficient capital, or have access to capital through our corporate sustainability-linked credit facility or otherwise, to sustain our business and operations; and 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; expectations that metallurgical, environmental, permitting, legal, title, taxation, socio-economic, political, marketing or other issues will not materially affect estimates of mineral reserves and mineral resources; that Pan American will be successful with its cash flow priorities; and Pan American's plans and expectations for its properties and operations.

These forward-looking statements and information reflect Pan American's current views with respect to future events and are necessarily based upon a number of assumptions that, while considered reasonable by Pan American, are inherently subject to significant operational, business, economic and regulatory uncertainties and contingencies. These assumptions include: the impact of inflationary pressures on our operations and business, particularly for diesel and certain consumables, as well as the impacts related to disruptions in the supply chain; the world-wide economic and social impact of COVID-19 and the duration and extent of the COVID-19 pandemic and related restrictions, and the presence and impact of COVID-19 and COVID-19 related restrictions on our workforce, suppliers and other essential resources and what effect those impacts, if they change, would have on our business; the effect that the COVID-19 pandemic may have on our financial and operational results; the assumptions that the impact of COVID-19, including the Omicron variant, will be such that we will be able to maintain our workforce at near normal levels throughout 2022; the ability of Pan American to continue with its

operations, or to successfully maintain our operations on care and maintenance, should the situation related to COVID-19 not be as anticipated; that the COVID-19 pandemic, or other pandemics, do not materially impact underlying assumptions used in estimating mineral reserves and mineral resources, such as prices, the costs and availability of necessary labour, energy, supplies, materials and services, and exchange rates, among other things; tonnage of ore to be mined and processed; future anticipated prices for gold, silver and other metals and assumed foreign exchange rates; the timing and impact of planned capital expenditure projects, including anticipated sustaining, project, and exploration expenditures; the ongoing impact and timing of the court-mandated ILO 169 consultation process in Guatemala; ore grades and recoveries; 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; all necessary permits, licenses and regulatory approvals for our operations are received in a timely manner; our ability to secure and maintain title and ownership to mineral properties and the surface rights necessary for our operations; and our ability to comply with environmental, health and safety laws. The foregoing list of assumptions is not exhaustive.

Pan American 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 presentation and Pan American has made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation: the duration and effect of local and world-wide inflationary pressures and the potential for economic recessions; the duration and effects of COVID-19, and any other pandemics on our operations and workforce, and the effects on global economies and society; fluctuations in silver, gold and base metal prices; fluctuations in prices for energy inputs, labour, materials, supplies and services (including transportation); fluctuations in currency markets (such as the PEN, MXN, ARS, BOB, GTQ and CAD versus the USD);

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C O N T I N U E D

operational risks and hazards inherent with the business of mining (including environmental accidents and hazards, industrial accidents, equipment breakdown, unusual or unexpected geological or structural formations, cave-ins, flooding and severe weather); risks relating to the credit worthiness or financial condition of suppliers, refiners and other parties with whom Pan American Silver does business; inadequate insurance, or inability to obtain insurance, to cover these risks and hazards; employee relations; relationships with, and claims by, local communities and indigenous populations; our ability to obtain all necessary permits, licenses and regulatory approvals in a timely manner; changes in laws, regulations and government practices in the jurisdictions where we operate, including environmental, export and import laws and regulations; 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 Pan American Silver may carry on business, including risks relating to expropriation and risks relating to the constitutional court-mandated ILO 169 consultation process in Guatemala; diminishing quantities or grades of mineral reserves as properties are mined; increased competition in the mining industry for equipment and qualified personnel; and those factors identified under the caption "Risks Related to Pan American's Business" in Pan American Silver'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 Pan American has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated, described or intended. Investors are cautioned against undue reliance on forward-looking statements or information. Forward-looking statements and information are designed to help readers understand management's current views of our near and longer term prospects and may not be appropriate for other purposes. Pan American does not intend, nor does it assume any obligation to update or revise forward-looking statements or information, whether as a result of new information, changes in assumptions, future events or otherwise, except to the extent required by applicable law.

**Technical Information**

Scientific and technical information contained in this presentation with respect

to Pan American Silver Corp. has been reviewed and approved by Martin Wafforn, P.Eng., SVP Technical Services and Process Optimization, and Chris Emerson, FAusIMM, VP Business Development and Geology, who are Pan American's qualified persons for the purposes of Canadian National Instrument 43-101 ("NI 43-101"). Mineral reserves in this presentation were prepared under the supervision of, or were reviewed by, Martin Wafforn and Chris Emerson.

See Pan American's Annual Information Form dated February 23, 2022, available at [www.sedar.com](http://www.sedar.com) for further information on Pan American's material mineral properties as at December 31, 2021, including information concerning associated QA/QC and data verification matters, the key assumptions, parameters and methods used by the Pan American to estimate mineral reserves and mineral resources, and for a detailed description of known legal, political, environmental, and other risks that could materially affect Pan American's business and the potential development of Pan American's mineral reserves and resources.

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

This presentation has been prepared in accordance with the requirements of Canadian securities laws, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all mineral reserve and mineral resource estimates included in this presentation have been prepared and disclosed in accordance with Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and the Canadian Institute of Mining, Metallurgy and Petroleum classification system. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects.

Canadian public disclosure standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and information concerning mineralization, deposits, mineral reserve and mineral resource information contained or referred to herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, this presentation uses the terms "measured mineral resources", "indicated

mineral resources", "inferred mineral resource estimate". U.S. investors are advised that, while such terms are recognized and required by Canadian securities laws, the SEC has not recognized them. The requirements of NI 43-101 for identification of "reserves" are not the same as those of the SEC, and mineral reserves reported by Pan American in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that any part of a "measured resource" or "indicated resource" will ever be converted into a "reserve". U.S. investors should also understand that "inferred resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of "inferred resources" exist, are economically or legally mineable or will ever be upgraded to a higher category. Under Canadian securities laws, estimated "inferred resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. Disclosure of "contained ounces" in a mineral resource is permitted disclosure under Canadian securities laws. However, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade, without reference to unit measures. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.



# Q2 2022 MAIN TAKEAWAYS

NASDAQ: PAAS // TSX: PAAS

- ✓ Strong production at La Colorada
- ✓ Consolidated production remains backend loaded in 2022
- ✓ Recorded a net loss largely due to an impairment charge at Dolores and heap inventory write-downs
- ✓ Replaced 11Moz Ag and 96.1 koz Au of mineral reserves mined in 2022
- ✓ Strong financial position and dividend of \$0.11 per common share
- ✓ Guidance maintained except for gold segment AISC and capital spending

# CONSOLIDATED FINANCIAL RESULTS

unaudited in millions of US\$, except per share amounts

	Q2 2022	H1 2022
Revenue	340.5	780.4
Mine operating earnings	(31.7)	35.1
Net (loss) earnings	(173.6)	(96.8)
Basic (loss) earnings per share <sup>(1)</sup>	(0.83)	(0.46)
Adjusted (loss) earnings <sup>(2)</sup>	(6.5)	25.5
Basic adjusted (loss) earnings per share <sup>(1)(2)</sup>	(0.03)	0.12
Net cash generated from operating activities	20.8	89.6

1. Per share amounts are based on basic weighted average common shares.

2. Adjusted earnings and basic adjusted earnings per share are non-GAAP financial measures. Please refer to the section "Alternative Performance (Non-GAAP) Measures" of the Q2 2022 MD&A for a detailed description of these measures and where appropriate a reconciliation of the measure to the Q2 2022 Financial Statements.



# PRODUCTION

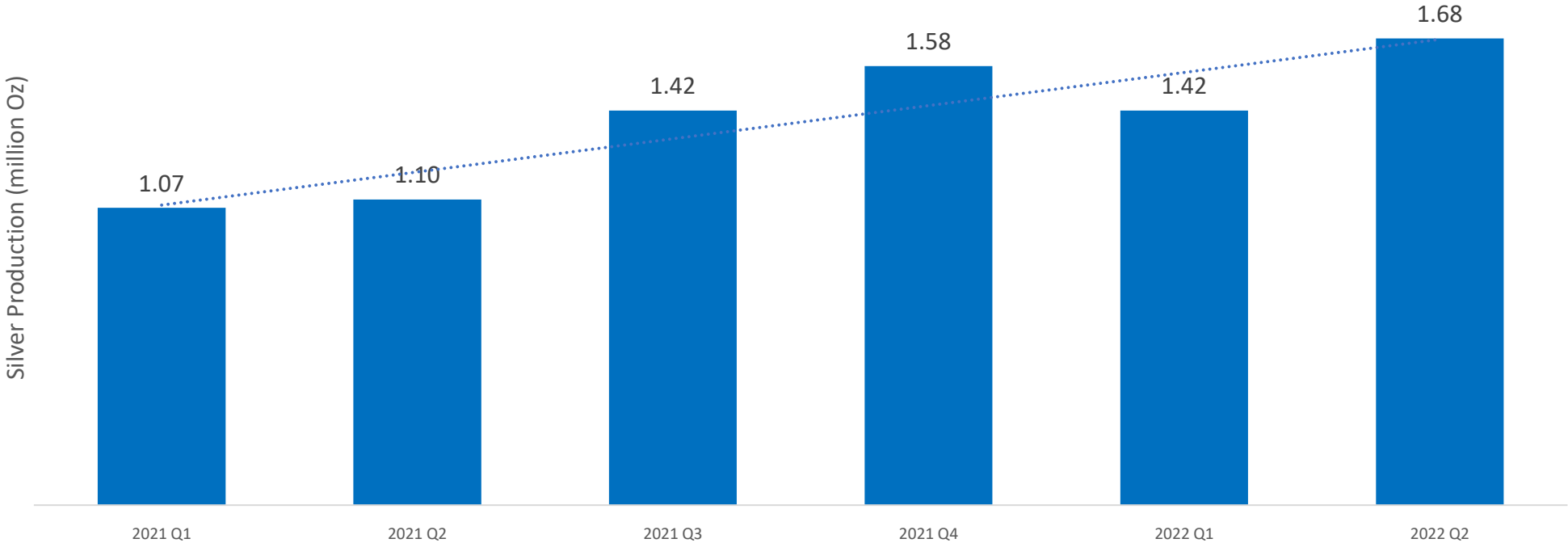
	Silver Production (ounces '000s)		Gold Production (ounces '000s)	
	Q2 2022	H1 2022	Q2 2022	H1 2022
La Colorada	1,675	3,095	1.0	1.6
Huaron	882	1,780	0.2	0.4
Morococha <sup>(1)</sup>	—	324	—	0.1
San Vicente <sup>(2)</sup>	646	1,122	—	0.1
Manantial Espejo	693	1,595	5.2	11.3
Dolores	572	1,090	35.2	69.7
Shahuindo	59	125	31.6	65.8
La Arena	5	16	17.4	40.8
Timmins	4	8	37.8	69.5
<b>Total</b>	<b>4,537</b>	<b>9,156</b>	<b>128.3</b>	<b>259.4</b>

1. Morococha data represents Pan American's 92.3% interest in the mine's production. Morococha was placed on care and maintenance in February 2022.
2. San Vicente data represents Pan American's 95.0% interest in the mine's production.



# LA COLORADA PRODUCTION RAMP UP

// Improvements in mine ventilation have resulted in rising production, briefly interrupted by Omicron surge in Q1 2022



# CASH COST AND AISC

	Cash Costs <sup>(1)</sup> (\$ per ounce)		AISC <sup>(1)</sup> (\$ per ounce)	
	Q2 2022	H1 2022	Q2 2022	H1 2022
La Colorada	9.40	9.58	13.33	12.72
Huaron	4.73	1.71	9.53	6.43
Morococha	N/A	5.68	N/A	7.08
San Vicente	11.97	15.47	16.66	20.09
Manantial Espejo	22.57	18.95	30.61	24.41
<b>Silver Segment Consolidated<sup>(2)</sup></b>	<b>12.10</b>	<b>11.10</b>	<b>17.30</b>	<b>15.21</b>
<b>Silver Segment Consolidated (Excl. NRV Adjustments)</b>	<b>12.10</b>	<b>11.10</b>	<b>15.90</b>	<b>14.39</b>
Dolores <sup>(3)</sup>	1,066	1,017	3,138	2,344
Shahuindo	1,032	970	1,333	1,237
La Arena	1,123	1,014	2,178	1,665
Timmins	1,288	1,352	1,556	1,626
<b>Gold Segment Consolidated<sup>(2)</sup></b>	<b>1,132</b>	<b>1,097</b>	<b>2,051</b>	<b>1,747</b>
<b>Gold Segment Consolidated (Excl. NRV Adjustments)</b>	<b>1,132</b>	<b>1,097</b>	<b>1,540</b>	<b>1,467</b>

1. Cash Costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of the MD&A for the period ended June 30, 2022 for a detailed description of these measures and where appropriate a reconciliation of the measure to the Q2 2022 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 excluding NRV Adjustments is \$1,446 and \$1,400 per ounce for Q2 2022 and H1 2022, respectively, (Q2 2021 and H1 2021: \$821 and \$910, respectively). NRV adjustments included in AISC increased costs by \$1,692 and \$944 for Q2 2022 and H1 2022, respectively, (Q2 2021 and H1 2021: \$105 and \$191, respectively, decrease in costs).





# METAL PRICES & SALES

	Realized Metal Prices <sup>(1)</sup>		Quantities of Metal Sold <sup>(2)</sup>	
	Q2 2022	H1 2022	Q2 2022	H1 2022
Silver	\$22.03	\$23.10	4,252	9,142
Gold	\$1,850	\$1,867	119.3	267.4
Zinc	\$3,811	\$3,802	8.0	16.0
Lead	\$2,162	\$2,261	4.0	8.9
Copper	\$9,731	\$9,753	1.1	2.8

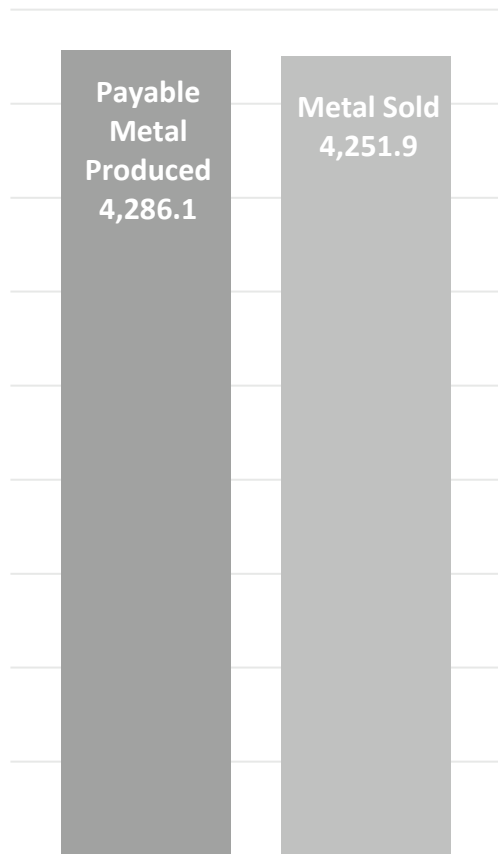
1. Metal price stated as dollars per ounce for silver and gold, and dollars per tonne for zinc, lead and copper, inclusive of final settlement adjustments on concentrate sales.
2. Metal quantities stated as koz for silver and gold and kt for zinc, lead and copper.



# Q2 2022 INVENTORY BALANCE

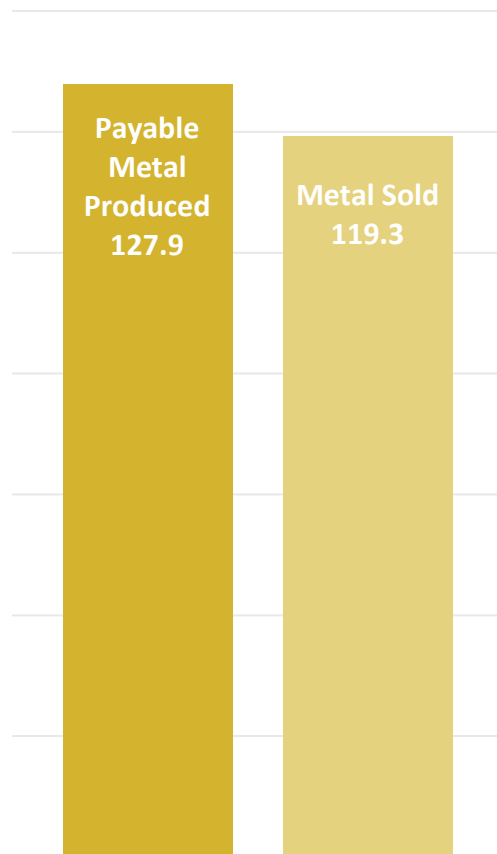
## Silver

34.2 thousand ounces build



## Gold

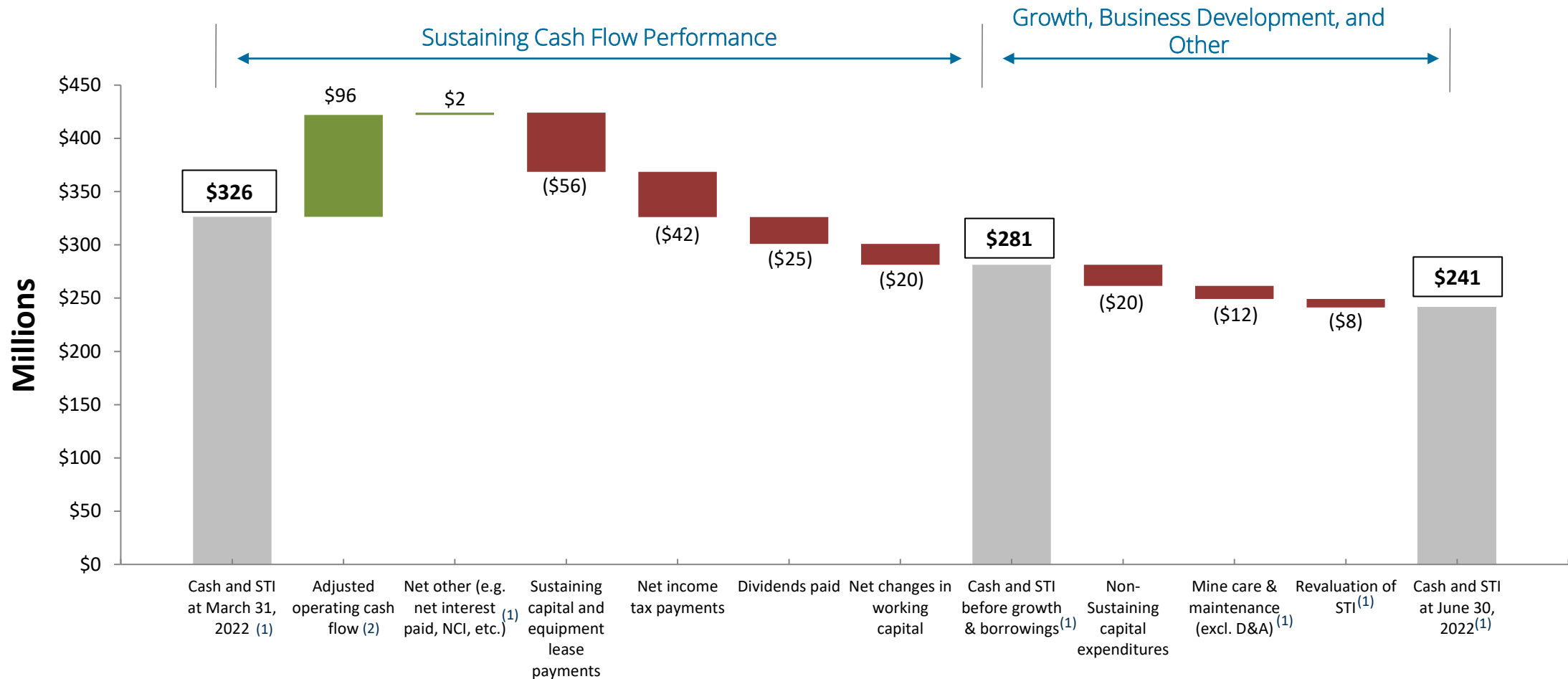
8.5 thousand ounces build



Mine/Product	Payable Metal Produced <sup>(1,2)</sup>	Quantities of Metal Sold	Inventory build/(draw) <sup>(3)</sup>
<b>Silver (thousand ounces)</b>			
La Colorada	1,585.2	1,374.1	211.1
Huaron	745.2	683.9	61.3
San Vicente	625.1	737.0	(111.8)
Manantial Espejo	691.2	843.7	(152.4)
Dolores	571.0	537.0	34.0
Other Properties	68.3	76.3	(8.0)
<b>Consolidated<sup>(3)</sup></b>	<b>4,286.1</b>	<b>4,251.9</b>	<b>34.2</b>
<b>Gold (thousand ounces)</b>			
Manantial Espejo	5.2	5.6	(0.4)
Dolores	35.1	34.1	1.0
Shahuindo	31.5	30.1	1.4
La Arena	17.4	14.0	3.5
Timmins	37.7	34.8	3.0
Other Properties	0.9	0.8	0.1
<b>Consolidated<sup>(3)</sup></b>	<b>127.9</b>	<b>119.3</b>	<b>8.5</b>

1. Payable production reported at 100% interest for San Vicente to conform to reporting of quantities of metal sold and revenue.
2. Payable production reflects sellable metal after deducting commercial contract metal payabilities.
3. Numbers may not add up due to rounding.

# Q2 2022 CONSOLIDATED CASH FLOWS

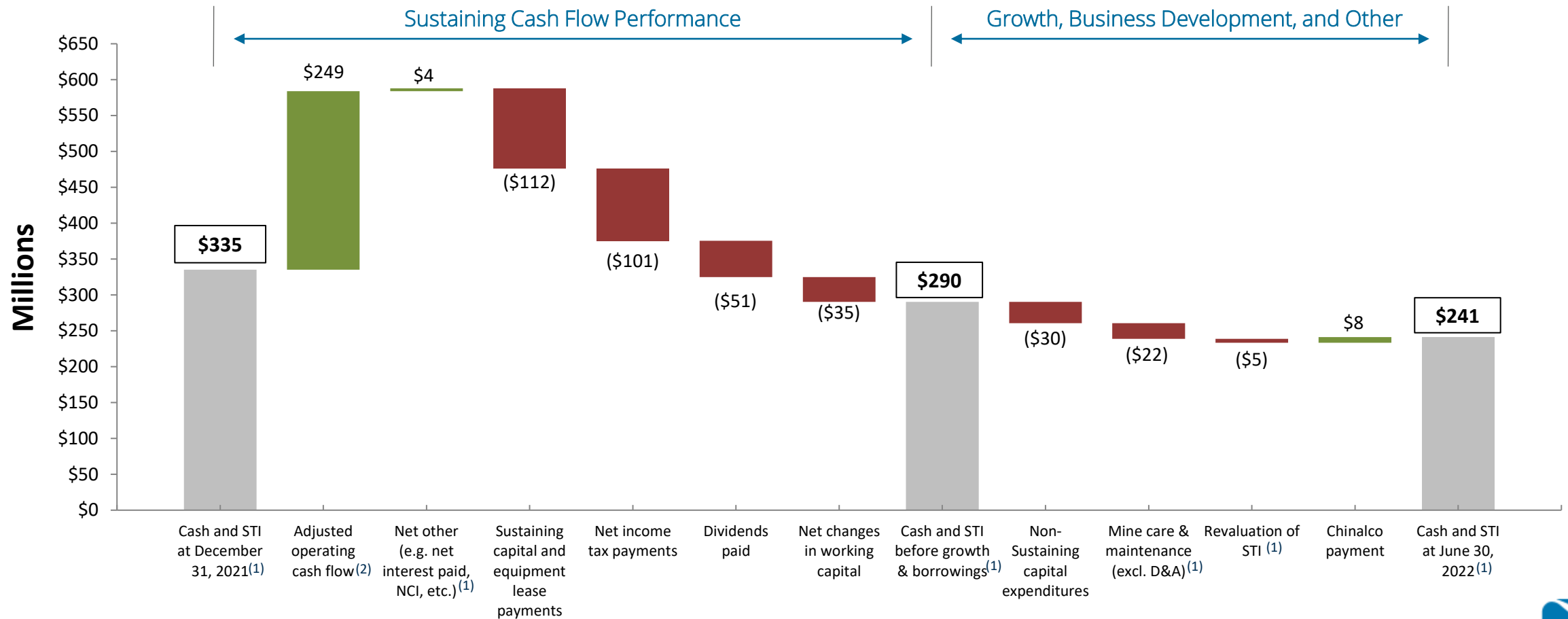


(1) "STI" means short-term investments, "NCI" means non-controlling interests, and "D&A" means depreciation and amortization.

(2) "Adjusted operating cash flow" is a non-GAAP financial measures calculated as: net cash generated from operating activities before changes in working capital, interest and income taxes paid, and mine care and maintenance.



# H1 2022 CONSOLIDATED CASH FLOWS



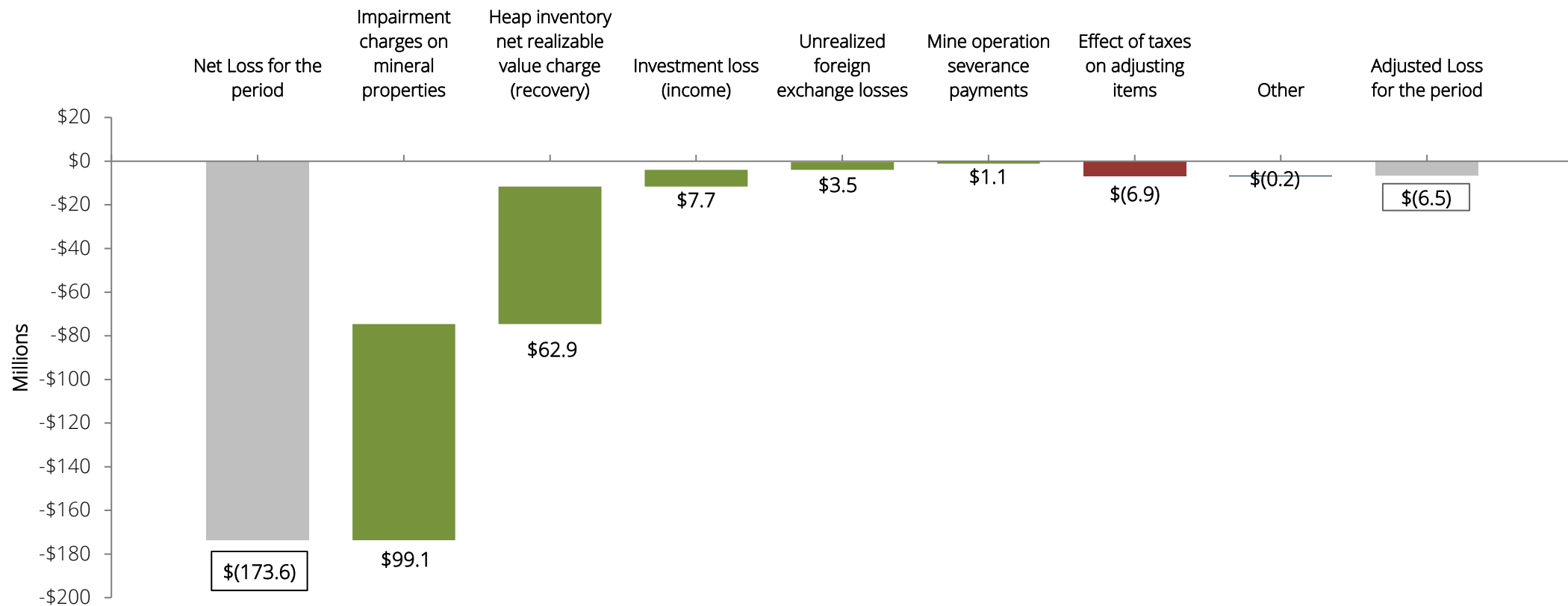
(1) "STI" means short-term investments, "NCI" means non-controlling interests, and "D&A" means depreciation and amortization.

(2) "Adjusted operating cash flow" is a non-GAAP financial measure calculated as: net cash generated from operating activities before changes in working capital, interest and income taxes paid, and mine care and maintenance.



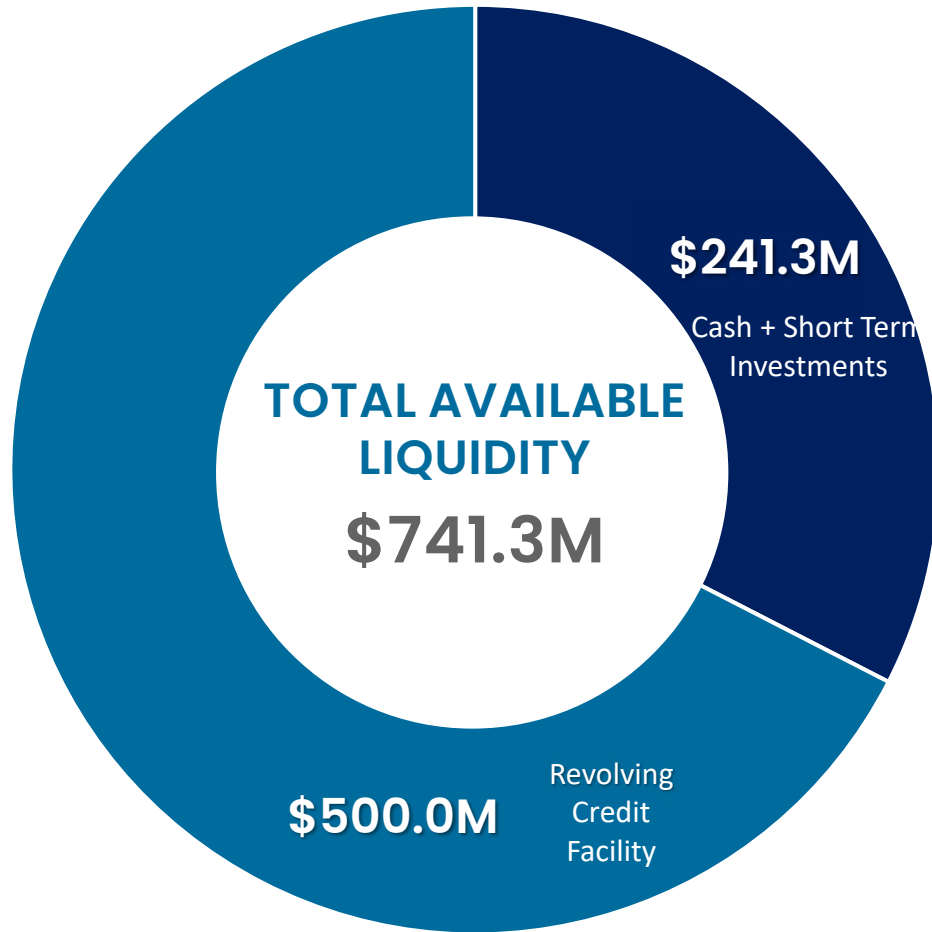
# Q1 2022 RECONCILIATION OF ADJUSTED EARNINGS TO GAAP NET EARNINGS

## Q2 2022 Basic Adjusted Net Loss \$0.03/share<sup>(1)</sup>



<sup>(1)</sup> Adjusted loss and basic adjusted loss per share are non-GAAP financial measures. Please refer to the section "Alternative Performance (Non-GAAP) Measures" of the Q2 2022 MD&A for a detailed description of these measures and where appropriate a reconciliation of the measure to the Q2 2022 Financial Statements.





## STRONG FINANCIAL POSITION<sup>(1)</sup>

// Prudent balance sheet management reduces risk, improves long-term shareholder returns

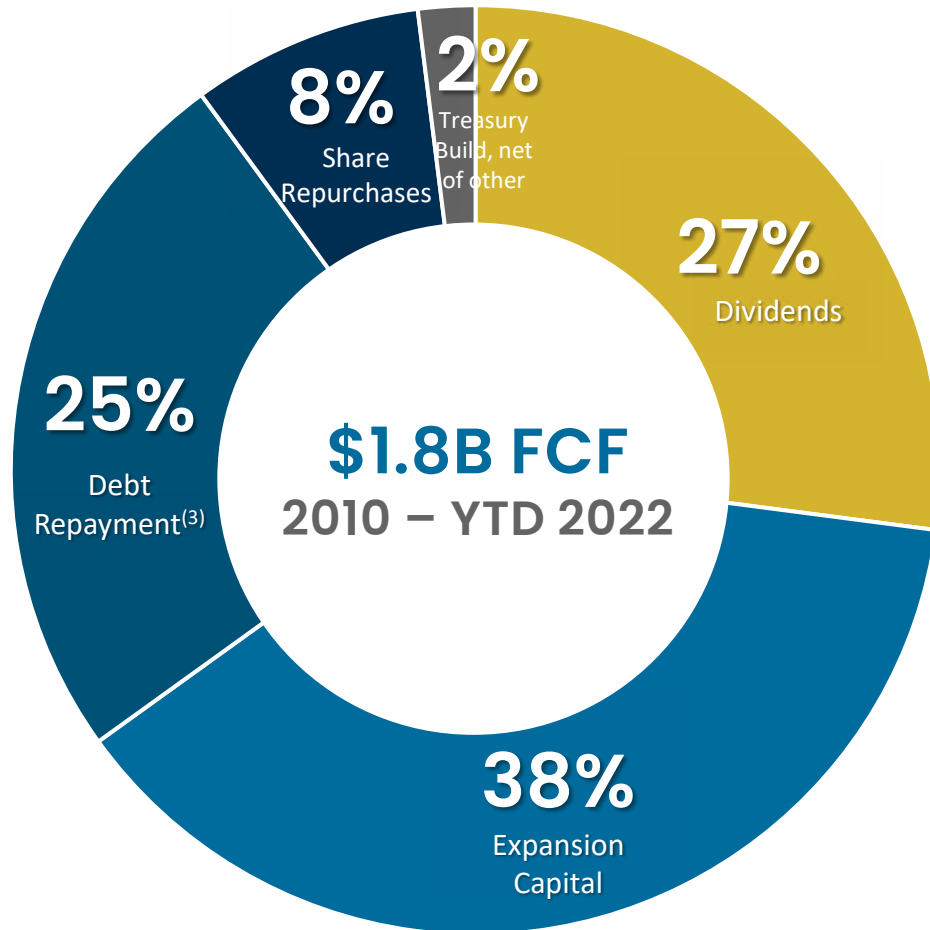
### Balance sheet management

- ✓ **Total debt<sup>(2)</sup> of \$63.2M** related to equipment leases and construction loans
- ✓ **Sustainability-Linked Revolving Credit Facility** aligns Pan American's ESG performance to its cost of capital
- ✓ **Avoid equity dilution** – no public offering since 2009

1. As at June 30, 2022.

2. Total debt is a non-GAAP measure calculated as the total of amounts drawn on the Sustainability-Linked Credit Facility, finance lease liabilities and loans payable. See the "Non-GAAP Measures" section of our Cautionary Note on page 2 of this presentation.





## FREE CASH FLOW ALLOCATION<sup>(1)</sup>

// \$1.8B in FCF generated since 2010, returning \$621M to shareholders<sup>(2)</sup> and investing \$672M in expansions

### Cash Flow Priorities

- 1 Maintain balance sheet flexibility, with low to zero debt
- 2 Invest in high-return projects
- 3 Return to shareholders through dividends

1. As at June 30, 2022. Free Cash Flow is a non-GAAP measure calculated as net increase (decrease) in cash and cash equivalents before dividend payments, share repurchases, expansion capital, M&A transactions (inclusive of associated share issuances), short term investment payments and proceeds, and debt repayments and proceeds. See the “Non-GAAP Measures” section of our Cautionary Note on page 2 of this presentation.

2. Return to shareholders is comprised of dividends and share buy-backs

3. Debt repayment is related to debt drawn for mergers and acquisitions.



# UPDATED 2022 GUIDANCE

**Production guidance expected to be at the low end of the ranges.**

**Gold Segment AISC and Capital Expenditures revised.**

	2022 Operating Outlook	August 2022 Revised Operating Outlook
<b>Annual Production</b>		
Silver - Moz	19.0 - 20.5	No change
Gold - koz	550.0 - 605.0	No change
Zinc - kt	35.0 - 40.0	No change
Lead - kt	15.0 - 17.0	No change
Copper - kt	5.5 - 6.5	No change
<b>Cash Costs (\$ per ounce)<sup>(1) (2)</sup></b>		
Silver Segment Cash Costs	10.70 - 12.20	No change
Silver Segment AISC	14.50 - 16.00	No change
Gold Segment Cash Costs	970 - 1,070	No change
Gold Segment AISC	1,240 - 1,365	1,450 - 1,550
<b>Capital Expenditures (in millions of USD)</b>		
Sustaining Capital	200.0 - 210.0	240.0 - 250.0
Project Capital	80.0 - 95.0	55.0 - 60.0
Total Capital	280.0 - 305.0	295.0 - 310.0

1. Cash Costs and AISC are non-GAAP measures. Please refer to the section "Alternative Performance (Non-GAAP) Measures" of the MD&A for the period ended June 30, 2022 for a detailed description of these measures and where appropriate a reconciliation of the measure to the Q2 2022 Financial Statements.
2. The Cash Costs and AISC forecasts assume average metal prices of \$22.50/oz for silver, \$1,750/oz for gold, \$3,000/tonne (\$1.36/lb) for zinc, \$2,200/tonne (\$1.00/lb) for lead, and \$9,200/tonne (\$4.17/lb) for copper; and average annual exchange rates relative to 1 USD of 20.00 for the Mexican peso ("MXN"), 4.10 for the Peruvian sol ("PEN"), 122.17 for the Argentine peso ("ARS"), 7.00 for the Bolivian boliviano ("BOB"), and \$1.25 for the Canadian dollar ("CAD").





# UPDATED 2022 OPERATING OUTLOOK

	2022 Quarterly Operating Outlook				
	Q1	Q2	Q3	Q4	FY 2022
Silver Production (million ounces)	4.49 - 4.87	4.69 - 5.07	4.89 - 5.27	4.94 - 5.30	19.00 - 20.50
Gold Production (thousand ounces)	133.0 - 146.4	124.9 - 137.7	135.2 - 148.8	157.0 - 172.2	550.0 - 605.0
Silver Segment Cash Costs <sup>(1)</sup>	11.10 - 12.75	11.20 - 12.80	10.55 - 12.00	9.80 - 11.30	10.70 - 12.20
Silver Segment AISC <sup>(1)</sup>	17.00 - 18.50	16.00 - 17.50	13.00 - 14.50	12.00 - 13.50	14.50 - 16.00
Gold Segment Cash Costs <sup>(1)</sup>	980 - 1,080	990 - 1,090	995 - 1,095	915 - 1,005	970 - 1,070
Gold Segment AISC <sup>(1)</sup>	1,365 - 1,465	1,390 - 1,490	1,240 - 1,340	1,025 - 1,115	1,240 - 1,365

	August 2022 Revised Operating Outlook Gold Segment AISC <sup>(1)</sup>	
	H2 2022	FY 2022
Dolores	1,275 - 1,375	1,300 - 1,400
Shahuindo	1,400 - 1,500	1,325 - 1,425
La Arena	1,600 - 1,700	1,550 - 1,650
Timmins	1,450 - 1,550	1,615 - 1,695
<b>Total</b>	<b>1,450 - 1,550</b>	<b>1,450 - 1,550</b>

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 Q2 2022 Financial Statements. The cash costs and AISC forecasts assume was prepared with the following assumptions: of \$22.50/oz for silver, \$3,000/tonne (\$1.36/lb) for zinc, \$2,200/tonne (\$1.00/lb) for lead, \$9,200/tonne (\$4.17/lb) for copper, and \$1,750/oz for gold; and average annual exchange rates relative to 1 USD of 20.00 for the Mexican peso ("MXN"), 4.10 for the Peruvian sol ("PEN"), 122.17 for the Argentine peso ("ARS"), 7.00 for the Bolivian boliviano ("BOB"), and \$1.25 for the Canadian dollar ("CAD").

# UPDATED 2022 EXPENDITURES GUIDANCE

**Sustaining capital increased to between \$240M and \$250M due to a change in the financing of certain planned sustaining capital investments.**

	Expenditures (\$ millions)	
	2022 Operating Outlook	August 2022 Revised Operating Outlook
<b>Sustaining Capital</b>		
La Colorada	28.0 - 29.0	No change
Huaron	16.0 - 19.0	No change
San Vicente	7.0 - 8.0	No change
Manantial Espejo	2.0 - 3.0	No change
Dolores	33.0 - 34.0	No change
Shahuindo	37.0 - 38.0	57.0 - 58.0
La Arena	39.0 - 40.0	59.0 - 60.0
Timmins	38.0 - 39.0	No change
<b>Sustaining Capital Sub-total</b>	<b>200.0 - 210.0</b>	<b>240.0 - 250.0</b>
<b>Project Capital</b>		
La Colorada Skarn projects	68.0 - 81.0	50.0 - 55.0
Timmins Projects	12.0 - 14.0	5.0
<b>Project Capital Sub-total</b>	<b>80.0 - 95.0</b>	<b>55.0 - 60.0</b>
<b>Total Capital</b>	<b>280.0 - 305.0</b>	<b>295.0 - 310.0</b>



# SUMMARY OF TOTAL MINERAL RESERVES & RESOURCES<sup>1,2</sup>

// as at June 30, 2022

	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (Moz)
Proven Reserves	116	60	174.5	0.61	2.0
Probable Reserves	112	124	340.4	0.48	1.6
<b>Proven and Probable Reserves</b>	<b>228</b>	<b>91</b>	<b>514.9</b>	<b>0.54</b>	<b>3.6</b>
Measured Resources	203	89	128.0	0.39	2.3
Indicated Resources	752	118	710.6	0.30	5.8
<b>Measured and Indicated Resources</b>	<b>955</b>	<b>113</b>	<b>838.6</b>	<b>0.32</b>	<b>8.1</b>
Inferred Resources	404	51	507.7	0.73	5.7

1. See table entitled "Metal price assumptions used to estimate mineral reserves and mineral resources as of June 30, 2022" on slide 23 of this presentation.
2. Refer to the complete mineral reserve and resource table as at June 30, 2022 on slides 20 to 23 of this presentation.



# PROVEN & PROBABLE MINERAL RESERVES<sup>1,2</sup>

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Contained Cu (kt)	Pb (%)	Contained Pb (kt)	Zn (%)	Contained Zn (kt)
<b>Silver Segment</b>													
Huaron	Peru	Proven	7.0	169	38.1			0.54	38.0	1.51	105.6	2.97	208.2
		Probable	3.9	167	21.1			0.30	11.8	1.63	64.2	2.97	116.6
Morococha (92.3%) <sup>(3)</sup>	Peru	Proven	3.3	156	16.6			0.44	14.7	1.31	43.3	3.95	130.7
		Probable	3.3	158	16.6			0.32	10.6	1.43	46.5	3.78	123.1
La Colorada	Mexico	Proven	3.8	340	41.5	0.23	27.5			1.13	43.0	2.02	76.6
		Probable	6.2	303	59.9	0.18	36.0			1.12	69.1	1.97	121.5
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%) <sup>(3)</sup>	Bolivia	Proven	1.1	314	10.8			0.25	3	0.29	3	3.55	38
		Probable	0.6	289	5.2			0.25	1	0.32	2	2.98	17
Joaquin	Argentina	Proven	0.1	401	1.6	0.24	1.0						
		Probable	0.0	575	0.6	0.31	0.3						
COSE	Argentina	Proven	0.0	0	0.0	0.00	0.0						
		Probable	0.0	0	0.0	0.00	0.0						
Escobal	Guatemala	Proven	2.5	486	39.5	0.42	34.2			1.02	25.7	1.75	44.4
		Probable	22.1	316	225.0	0.34	243.8			0.77	169.9	1.25	275.7
<b>Total Silver Segment<sup>(4)</sup></b>			<b>54.3</b>	<b>275</b>	<b>479.7</b>	<b>0.33</b>	<b>376.3</b>	<b>0.41</b>	<b>79.0</b>	<b>1.06</b>	<b>572.2</b>	<b>2.14</b>	<b>1,151.3</b>
<b>Gold Segment</b>													
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	0.60	77.7	-	-	-	-	-	-
Shahuindo	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	-	-	-	-	-	-
<b>Total Gold Segment<sup>(4)</sup></b>			<b>173.6</b>	<b>9</b>	<b>35.1</b>	<b>0.58</b>	<b>3,255.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Gold and Silver Segments<sup>(4)</sup></b>			<b>228.0</b>	<b>91</b>	<b>514.9</b>	<b>0.54</b>	<b>3,631.5</b>	<b>0.41</b>	<b>79.0</b>	<b>1.06</b>	<b>572.2</b>	<b>2.14</b>	<b>1,151.3</b>

1. See slide 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 National Instrument 43-101 ("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.

# MEASURED & INDICATED MINERAL RESOURCES <sup>1,2</sup>

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
<b>Silver Segment</b>										
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%) <sup>(3)</sup>	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		0.76	1.30
		Indicated	3.4	191	20.8	0.17	18		0.95	1.65
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	Measured	0	0	0	0	0			
Joaquin	Argentina	Measured	0.1	349	1.3	0.29	1.0			
		Indicated	0.4	329	4.2	0.26	3.3			
San Vicente (95%) <sup>(3)</sup>	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
<b>Total Silver Segment<sup>(4)</sup></b>			<b>185.4</b>	<b>138</b>	<b>825.7</b>	<b>0.29</b>	<b>216.2</b>	<b>0.06</b>	<b>0.83</b>	<b>1.33</b>
<b>Gold Segment</b>										
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	4.0		-	-
		Indicated	2.1			0.17	11.9		-	-
Shahuindo	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	0.37	-	-
Whitney (79%)	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		-	-
<b>Total Gold Segment<sup>(4)</sup></b>			<b>769.7</b>	<b>9</b>	<b>12.9</b>	<b>0.32</b>	<b>7,922.2</b>	<b>0.38</b>	<b>-</b>	<b>-</b>
<b>Total Gold &amp; Silver Segments <sup>(4)</sup></b>		<b>Measured + Indicated</b>	<b>955.2</b>	<b>113</b>	<b>838.6</b>	<b>0.32</b>	<b>8,138.4</b>	<b>0.32</b>	<b>0.83</b>	<b>1.33</b>

1. See slide entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2022".

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

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

4. Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.

# INFERRED MINERAL RESOURCES <sup>1,2</sup>

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
<b>Silver Segment</b>										
Huaron	Peru	Inferred	7.2	155	36.1			0.26	1.47	2.73
Morococha (92.3%) <sup>(3)</sup>	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	Mexico	Inferred	100.4	44	141.0			0.20	1.77	4.29
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			
COSE	Argentina	Inferred	0.0	0	0.0	0.00	0.0			
Escobal	Guatemala	Inferred	1.9	180	10.7	0.90	53.7		0.22	0.42
<b>Total Silver Segment<sup>(4)</sup></b>			<b>179.2</b>	<b>79</b>	<b>453.2</b>	<b>0.32</b>	<b>182.7</b>	<b>0.16</b>	<b>1.34</b>	<b>3.83</b>
<b>Gold Segment</b>										
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	Peru	Inferred	14.6	8	3.7	0.41	194.5		-	-
Shahuindo Sulphide	Peru	Inferred	97.4	14	45.1	0.74	2,323.3		-	-
Timmins	Canada	Inferred	4.4			3.11	436.5		-	-
La Arena II	Canada	Inferred	54.7			0.23	413.2	0.29	-	-
Whitney	Canada	Inferred	0.8			5.34	141.4		-	-
Gold River	Canada	Inferred	5.3			6.06	1,027.4		-	-
Vogel	Canada	Inferred	1.5			3.60	168.8		-	-
<b>Total Gold Segment<sup>(4)</sup></b>			<b>224.8</b>	<b>13</b>	<b>54.5</b>	<b>0.76</b>	<b>5,492.2</b>	<b>0.29</b>	<b>-</b>	<b>-</b>
<b>Total Gold and Silver Segments<sup>(4)</sup></b>		<b>Inferred</b>	<b>404.0</b>	<b>51</b>	<b>507.7</b>	<b>0.73</b>	<b>5,674.9</b>	<b>0.18</b>	<b>1.34</b>	<b>3.83</b>

1. See slide entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2022".
2. Mineral resource estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in National Instrument 43-101 ("NI 43-101").
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4. Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.

# METAL PRICE ASSUMPTIONS USED TO ESTIMATE MINERAL RESERVES AND RESOURCES

// as at June 30, 2022

Mine	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
Morococho	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	18.50		6,500	2,200	2,600
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			
COSE	Reserves					
	Resources					
Escobal	All categories	20.00	1,300		2,204	2,424
Shahuindo	Reserves	19.00	1,500			
	Resources	22.00	1,700			
Shahuindo Sulphide	Inferred Resource	15.00	1,400			
La Arena	Reserves		1,500			
	Resources		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			
Marhill	All categories		1,125			
Vogel	Inside pit		1,150			
	Below pit		1,150			

# GENERAL NOTES APPLICABLE TO THE FOREGOING TABLES:

Mineral reserves and mineral 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 mineral resource estimates to be materially affected by metallurgical, environmental, permitting, legal, taxation, socio-economic, political, and marketing or other relevant issues.

The Company has undertaken a verification process with respect to the data disclosed in this news release. The mineral resource and mineral reserves databases compiling drilling and, in some cases, sampling, have been accumulated at each of Pan American mine sites by the qualified staff. Samples are analyzed at a variety of laboratories, including by in-house staff at the mine (San Vicente, Manantial Espejo, La Colorada), mine laboratories operated by third party independent commercial labs (Huaron, Morococha), and commercial laboratories off-site (Shahuindo, La Arena, Timmins, Dolores). All the assay data used in the resource evaluation provided by each of the mines has been subjected to the industry standard quality assurance and quality control ("QA/QC") program including the submission of certified standards, blanks, and duplicate samples. The results are reviewed on a monthly basis by management. In general, the assay analytical technique for silver, lead, zinc and copper is acid digestion with either ICP or atomic absorption finish. The analytical technique for gold uses fire assay and a atomic absorption (AA) finish. A gravimetric finish would be used if the gold assay exceeds >10 g/t. The results of the QA/QC samples submitted for the resource databases demonstrate acceptable accuracy and precision. The Qualified Person is of the opinion that the sample preparation,

analytical, and security procedures followed for the samples are sufficient and reliable for the purpose of this mineral resource and mineral reserve estimates. Pan American is not aware of any drilling, sampling, recovery or other factors that could materially affect the accuracy or reliability of the data reported herein.

See the Company's Annual Information Form dated February 23, 2022, available at [www.sedar.com](http://www.sedar.com) for further information on the Company's material mineral properties, including detailed 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 mineral resources.

Quantities and grades of contained metal are shown before metallurgical recoveries.

Technical information contained in this news release with respect to Pan American has been reviewed and approved by Christopher Emerson, FAusIMM., Vice President Business Development and Geology, and Martin Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, who are each Qualified Persons for the purposes of NI 43-101.

Pan American Silver Corp is authorized by The Association of Professional Engineers and Geoscientists of the Province of British Columbia to engage in Reserved Practice under Permit to Practice number 1001470.

Please refer to the cautionary information on mineral reserves and mineral resources on page 3 of this presentation.







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# Q & A

**To join the queue:**

Press \* and 1 on your touch-tone telephone.  
You will hear a tone acknowledging your request.

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