

# ANNUAL INFORMATION FORM

FOR THE YEAR ENDED DECEMBER 31, 2018

APRIL 1, 2019

WHEATON PRECIOUS METALS CORP.  
SUITE 3500 – 1021 WEST HASTINGS STREET  
VANCOUVER, BC CANADA V6E 0C3



**WHEATON PRECIOUS METALS CORP.  
ANNUAL INFORMATION FORM  
FOR THE YEAR ENDED DECEMBER 31, 2018**

**TABLE OF CONTENTS**

<b><u>DESCRIPTION</u></b>	<b><u>PAGE NO.</u></b>
<b>INTRODUCTORY NOTES .....</b>	<b>1</b>
<b>CORPORATE STRUCTURE.....</b>	<b>6</b>
<b>GENERAL DEVELOPMENT OF THE BUSINESS.....</b>	<b>7</b>
<b>Three Year History .....</b>	<b>7</b>
<b>DESCRIPTION OF THE BUSINESS .....</b>	<b>8</b>
<b>Acquisition &amp; Production History .....</b>	<b>8</b>
<b>Principal Product.....</b>	<b>10</b>
<b>Competitive Conditions .....</b>	<b>27</b>
<b>Operations .....</b>	<b>27</b>
<b>Long-Term Investments .....</b>	<b>32</b>
<b>Risk Factors.....</b>	<b>33</b>
<b>TECHNICAL INFORMATION .....</b>	<b>47</b>
<b>PEÑASQUITO MINE, MEXICO.....</b>	<b>55</b>
<b>SALOBO MINE, BRAZIL .....</b>	<b>64</b>
<b>ANTAMINA MINE, PERU .....</b>	<b>82</b>
<b>CONSTANCIA MINE, PERU .....</b>	<b>86</b>
<b>DIVIDENDS .....</b>	<b>95</b>
<b>DESCRIPTION OF CAPITAL STRUCTURE .....</b>	<b>95</b>
<b>TRADING PRICE AND VOLUME .....</b>	<b>97</b>
<b>DIRECTORS AND OFFICERS .....</b>	<b>97</b>
<b>LEGAL PROCEEDINGS AND REGULATORY ACTIONS.....</b>	<b>103</b>
<b>INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS .....</b>	<b>103</b>
<b>TRANSFER AGENT AND REGISTRAR .....</b>	<b>103</b>
<b>MATERIAL CONTRACTS.....</b>	<b>103</b>
<b>INTERESTS OF EXPERTS.....</b>	<b>104</b>
<b>AUDIT COMMITTEE .....</b>	<b>105</b>
<b>ADDITIONAL INFORMATION .....</b>	<b>106</b>

*Information in this annual information form is as of March 29, 2019 unless otherwise indicated.*

*Wheaton is a trademark of Wheaton Precious Metals Corp. in Canada, the United States and certain other jurisdictions.*

## INTRODUCTORY NOTES { TC “INTRODUCTORY NOTES” \f C \l “2” }

### Cautionary Note Regarding Forward-Looking Statements

This annual information form of Wheaton Precious Metals Corp. (“Wheaton” or the “Company”) contains “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 securities legislation. Forward-looking statements, which are all statements other than statements of historical fact, include, but are not limited to, statements with respect to:

- estimated future production as a result of the Salobo Expansion (as defined herein);
- the construction timeline, including completion, of the mine expansion, including the underground mines, at Voisey’s Bay by Vale (as defined herein) and the commencement and timing of delivery of cobalt by Vale under the Voisey’s Bay PMPA (as defined herein);
- the effect of the Servicio de Administración Tributaria (“SAT”) legal claim on the business, financial condition, results of operations and cash flows for 2010-2014 and 2015-2019 in respect of the San Dimas mine (as defined herein);
- the impact of counterparties experiencing financial, operational or other difficulties, including insolvency, in connection with the Brumadinho Incident or the AMCU strike action (as defined herein) or for any other reason;
- the repayment of the Kutcho Convertible Note (as defined herein);
- the ability of Barrick Gold Corporation (“Barrick”) to advance the Pascua-Lama project (as defined herein);
- future payments by Wheaton in accordance with precious metal purchase agreements (as defined herein), including any acceleration of payments, expansion payments, estimated throughput and exploration potential;
- projected changes to Wheaton’s production mix;
- anticipated increases in total throughput;
- the estimated future production, including projected increases to Wheaton’s production and cash flow profile;
- the future price of commodities;
- the estimation of mineral reserves and mineral resources;
- the realization of mineral reserve and mineral resource estimates;
- the timing and amount of estimated future production (including 2019 and average attributable annual production over the next five years);
- the costs of future production;
- reserve determination;
- estimated reserve conversion rates and produced but not yet delivered ounces;
- any statements as to future dividends, the ability to fund outstanding commitments and the ability to continue to acquire accretive mineral stream interests;
- confidence in the Company’s business structure;
- the Company’s estimation of the cash taxes payable in respect of the 2005 to 2010 taxation years as a result of the CRA Settlement (as defined herein);
- the Company’s assessment of the impact of the CRA Settlement for years subsequent to 2010;
- possible audits for taxation years subsequent to 2015;
- the Company’s assessment of the impact of any tax reassessments;
- the Company’s intention to file future tax returns in a manner consistent with the CRA Settlement; and
- assessments of the impact and resolution of various legal and tax matters, including but not limited to outstanding class actions and audits.

Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “projects”, “intends”, “anticipates” or “does not anticipate”, or “believes”, “potential”, or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”.

Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Wheaton to be materially different from those expressed or implied by such forward-looking statements, including but not limited to:

- Vale is unable to produce the estimated future production in connection with the Salobo Expansion;
- Vale does not meet the construction timeline, including anticipated completion, of the mine expansion, including the underground mines, at Voisey's Bay or Vale is unable to commence, or the timing of delivery of cobalt by Vale is delayed or deferred under the Voisey's Bay PMPA;
- Wheaton is unable to sell its cobalt production delivered under the Voisey's Bay PMPA at acceptable prices or at all or there is a decrease in demand for cobalt, the decrease in uses for cobalt or the discovery of new supplies of cobalt, any or all of which could result in a decrease to the price of cobalt or a decrease in the ability to sell cobalt;
- First Majestic (as defined herein) being able to defend the validity of the 2012 APA (as defined herein), is unable to pay taxes in Mexico based on realized silver prices or the SAT proceedings or actions otherwise having an adverse impact on the business, financial condition or results of operation in respect of the San Dimas mine;
- Vale not being able to meet its obligations under any of the Company's PMPAs with Vale as a result of Vale experiencing financial, operational or other difficulties, including insolvency, in connection with the Brumadinho Incident or for any other reason;
- Sibanye-Stillwater experiences financial, operational or other difficulties, including insolvency, and is not able to meet its obligations under the Stillwater PMPA (as defined herein) as a result of not being able to obtain a satisfactory resolution of the AMCU unionized employee strike within a reasonable period of time;
- Kutcho not being able to make payments under the Kutcho Convertible Note;
- that each party does not satisfy its obligations in accordance with the terms of the precious metal purchase agreements;
- risks related to the satisfaction of each party's obligations in accordance with the terms of the Company's precious metal purchase agreements, including the ability of the companies with which the Company has precious metal purchase agreements to perform their obligations under those precious metal purchase agreements in the event of a material adverse effect on the results of operations, financial condition, cash flows or business of such companies, any acceleration of payments, estimated throughput and exploration potential;
- fluctuations in the price of commodities;
- risks related to the Mining Operations (as defined herein) including risks related to fluctuations in the price of the primary commodities mined at such operations, actual results of mining and exploration activities, environmental, economic and political risks of the jurisdictions in which the Mining Operations are located, and changes in project parameters as plans continue to be refined;
- absence of control over the Mining Operations and having to rely on the accuracy of the public disclosure and other information Wheaton receives from the owners and operators of the Mining Operations as the basis for its analyses, forecasts and assessments relating to its own business;
- differences in the interpretation or application of tax laws and regulations or accounting policies and rules;
- Wheaton's interpretation of, or compliance with, tax laws and regulations or accounting policies and rules, being found to be incorrect or the tax impact to the Company's business operations being materially different than currently contemplated;
- any challenge by the CRA of the Company's tax filings being successful and the potential negative impact to the Company's previous and future tax filings;
- any reassessment of the Company's tax filings and the continuation or timing of any such process being outside the Company's control;
- any requirement to pay reassessed tax, and the amount of any tax, interest and penalties that may be payable changing due to currency fluctuations;
- risks in estimating cash taxes payable in respect of the 2005 to 2010 taxation years and assessing the impact of the CRA Settlement for years subsequent to 2010, including whether there will be any material change in the Company's facts or change in law or jurisprudence;
- credit and liquidity risks;
- indebtedness and guarantees risks;
- mine operator concentration risks;
- hedging risk;
- competition in the streaming industry;
- risks related to Wheaton's acquisition strategy;
- risks related to the market price of the common shares of Wheaton (the "Common Shares");
- equity price risks related to Wheaton's holding of long-term investments in other companies;

- risks related to interest rates;
- risks related to the declaration, timing and payment of dividends;
- the ability of Wheaton and the Mining Operations to retain key management employees or procure the services of skilled and experienced personnel;
- litigation risk associated with outstanding legal matters;
- risks related to claims and legal proceedings against Wheaton or the Mining Operations;
- risks relating to activist shareholders;
- risks relating to reputational damage;
- risks relating to unknown defects and impairments;
- risks relating to security over underlying assets;
- risks related to ensuring the security and safety of information systems, including cyber security risks;
- risks related to the adequacy of internal control over financial reporting;
- risks related to fluctuations in commodity prices of metals produced from the Mining Operations other than precious metals or cobalt;
- risks related to governmental regulations;
- risks related to international operations of Wheaton and the Mining Operations;
- risks relating to exploration, development and operations at the Mining Operations;
- risks related to environmental regulations and climate change;
- the ability of Wheaton and the Mining Operations to obtain and maintain necessary licenses, permits, approvals and rulings;
- the ability of Wheaton and the Mining Operations to comply with applicable laws, regulations and permitting requirements;
- lack of suitable infrastructure and employees to support the Mining Operations;
- uncertainty in the accuracy of mineral reserve and mineral resource estimates;
- inability to replace and expand mineral reserves;
- risks relating to production estimates from Mining Operations, including anticipated timing of the commencement of production by certain Mining Operations;
- uncertainties related to title and indigenous rights with respect to the mineral properties of the Mining Operations;
- the ability of Wheaton and the Mining Operations to obtain adequate financing;
- the ability of the Mining Operations to complete permitting, construction, development and expansion;
- challenges related to global financial conditions;
- risks relating to future sales or the issuance of equity securities; and
- other risks disclosed under the heading “Risk Factors” in this annual information form.

Forward-looking statements are based on assumptions management currently believes to be reasonable including, but not limited to:

- Vale is able to produce the estimated future production as a result of the Salobo Expansion;
- Vale is able to meet the construction timeline, including anticipated completion, of the mine expansion, including the underground mines, at Voisey's Bay and Vale is able to commence and meet its timing for delivery of cobalt under the Voisey's Bay PMPA;
- Wheaton is able to sell cobalt production delivered under the Voisey's Bay PMPA at acceptable prices and the demand and uses for cobalt will not significantly decrease and the supply of cobalt will not significantly increase;
- Vale is able to meet its obligations under the Company's PMPAs with Vale;
- Sibanye-Stillwater is able to obtain a satisfactory resolution of the AMCU unionized employee strike within a reasonable period of time;
- that Kutcho will make all required payments and not be in default under the Kutcho Convertible Note;
- that Wheaton will be able to terminate the Pascua-Lama precious metal purchase agreement in accordance with its terms;
- that each party will satisfy their obligations in accordance with the precious metal purchase agreements;
- that there will be no material adverse change in the market price of commodities;

- that the Mining Operations will continue to operate and the mining projects will be completed in accordance with public statements and achieve their stated production estimates;
- that Wheaton will continue to be able to fund or obtain funding for outstanding commitments;
- that Wheaton will be able to source and obtain accretive mineral stream interests;
- expectations regarding the resolution of legal and tax matters, including the ongoing class action litigation and CRA audits involving the Company;
- that Wheaton will be successful in challenging any reassessment by the CRA;
- that Wheaton has properly considered the application of Canadian tax law to its structure and operations;
- that Wheaton has filed its tax returns and paid applicable taxes in compliance with Canadian tax law;
- that Wheaton's ability to enter into new precious metal purchase agreements will not be impacted by any CRA reassessment;
- that expectations and assumptions concerning prevailing tax laws and the potential amount that could be reassessed as additional tax, penalties and interest by the CRA, will be met;
- that Wheaton's estimation of cash taxes payable in respect of the 2005 to 2010 taxation years as a result of the CRA Settlement and the Company's assessment of the impact of the CRA Settlement for years subsequent to 2010 are accurate, including the Company's assessment that there will be no material change in the Company's facts or change in law or jurisprudence for years subsequent to 2010;
- the estimate of the recoverable amount for any precious metal purchase agreement with an indicator of impairment; and
- such other assumptions and factors as set out herein.

Although Wheaton has attempted to identify important factors that could cause actual results, level of activity, performance or achievements to differ materially from those contained in forward-looking statements, there may be other factors that cause results, level of activity, performance or achievements not to be as anticipated, estimated or intended. There can be no assurance that forward- looking statements will prove to be accurate and even if events or results described in the forward-looking statements are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on, Wheaton. Accordingly, readers should not place undue reliance on forward-looking statements and are cautioned that actual outcomes may vary. The forward-looking statements included herein are for the purpose of providing investors with information to assist them in understanding Wheaton's expected financial and operational performance and may not be appropriate for other purposes. Any forward-looking statement speaks only as of the date on which it is made. Wheaton does not undertake to update any forward-looking statements that are included or incorporated by reference herein, except in accordance with applicable securities laws.

### Currency Presentation and Exchange Rate Information

This annual information form contains references to United States dollars and Canadian dollars. All dollar amounts referenced, unless otherwise indicated, are expressed in United States dollars. Canadian dollars are referred to herein as "Canadian dollars" or "C\$". The high, low and closing rates for Canadian dollars in terms of the United States dollar for each of the three years in the period ended December 31, 2018, as quoted by the Bank of Canada, were as follows:

	<u>2018</u>	<u>Year ended December 31</u>	
		<u>2017</u> *	<u>2016</u>
High.....	C\$1.3642	C\$1.3743	C\$1.4589
Low .....	1.2288	1.2128	1.2544
Closing .....	1.3642	1.2545	1.3427

\* As a result of changes by the Bank of Canada, for 2017 and 2018, the high, low and closing rates are the Bank of Canada daily rates. For 2016, the rates are the Bank of Canada noon spot rates.

On March 29, 2019, the daily rate for Canadian dollars in terms of the United States dollar, as quoted by the Bank of Canada, was US\$1.00 = C\$1.3363.

### Gold Prices

The high, low, average and closing afternoon fixing gold prices in United States dollars per troy ounce for each of the three years in the period ended December 31, 2018, as quoted by the LBMA, were as follows:

	<u>2018</u>	<u>Year ended December 31</u> <u>2017</u>	<u>2016</u>
High.....	\$1354.95	\$1346.25	\$1366.25
Low .....	1178.40	1151.00	1077.00
Average .....	1269.14	1257.13	1250.80
Closing.....	1279.00	1296.50	1145.90

On March 28, 2019, the LBMA Gold Price PM in United States dollars per troy ounce, as published by the LBMA, was \$1,295.

### Silver Prices

The high, low, average and closing fixing silver prices in United States dollars per troy ounce for each of the three years in the period ended December 31, 2018, as quoted by the London Bullion Market Association (“LBMA”), were as follows:

	<u>2018</u>	<u>Year ended December 31</u> <u>2017</u>	<u>2016</u>
High .....	\$17.52	\$18.56	\$20.71
Low.....	13.97	15.22	13.58
Average.....	15.71	17.05	17.14
Closing.....	15.47	16.87	16.24

On March 28, 2019, the LBMA Silver Price in United States dollars per troy ounce, as published by the LBMA, was \$15.195.

### Palladium Prices

The high, low, average and closing afternoon fixing palladium prices in United States dollars per troy ounce for each of the three years in the period ended December 31, 2018, as quoted by the LBMA, were as follows:

	<u>2018</u>	<u>Year ended December 31</u> <u>2017</u>	<u>2016</u>
High.....	\$1271.00	\$1057.00	\$770.00
Low .....	849.00	706.00	470.00
Average .....	1031.16	869.85	613.59
Closing.....	1270.00	1057.00	670.00

On March 28, 2019, the LBMA Palladium Price PM in United States dollars per troy ounce, as published by the LBMA, was \$1,352.

## CORPORATE STRUCTURE{ TC “CORPORATE STRUCTURE” \f C \l “2” }

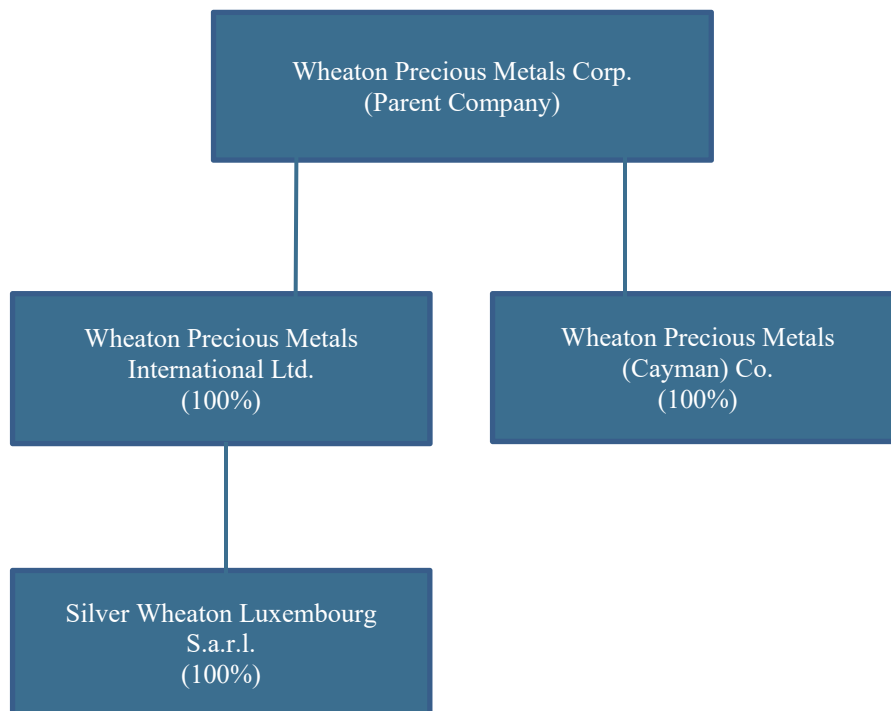
Pursuant to Articles of Continuance dated December 17, 2004, Wheaton was continued under the *Business Corporations Act* (Ontario) (the “Act”).

The Company’s head office is located at 3500 – 1021 West Hastings Street, Vancouver, British Columbia, V6E 0C3 and its registered office is located at Suite 2100, 40 King Street West, Toronto, Ontario, M5H 3C2.

The Company’s active subsidiaries are Wheaton Precious Metals International Ltd. (“Wheaton International”) (formerly Silver Wheaton (Caymans) Ltd.) and Wheaton Precious Metals (Cayman) Co. (“Wheaton Cayman”), each of which is wholly-owned by the Company and is governed by the laws of the Cayman Islands, and Silver Wheaton Luxembourg S.a.r.l. (“Silver Wheaton Luxembourg”) which is wholly-owned by Wheaton International and is governed by the laws of Luxembourg. As used in this annual information form, except as otherwise required by the context, reference to “Wheaton” or the “Company” means Wheaton Precious Metals Corp., Wheaton International, Silver Wheaton Luxembourg and Wheaton Cayman.

On May 10, 2017, the Company changed its name from “Silver Wheaton Corp.” to “Wheaton Precious Metals Corp.” and changed its Toronto Stock Exchange (“TSX”) and New York Stock Exchange (“NYSE”) ticker symbol from “SLW” to “WPM.” Concurrent with the name change, the Company’s web domain changed to [www.wheatonpm.com](http://www.wheatonpm.com). Information contained on Wheaton’s website should not be deemed to be a part of this annual information form or incorporated by reference herein.

### WHEATON AND ITS PRINCIPAL SUBSIDIARIES



**GENERAL DEVELOPMENT OF THE BUSINESS**{ TC “GENERAL DEVELOPMENT OF THE BUSINESS” \f C \l “2” }

**Three Year History**{ TC “Three Year History” \f C \l “2” }

The following is a summary of the three-year history of the Company. Further details concerning these and other transactions can be found under “Description of the Business”.

<b><u>2016</u></b>	<b><u>2017</u></b>	<b><u>2018</u></b>
<p><b>March</b> Extension of maturity date of revolving credit facility by one year and utilized letter of guarantee to appeal CRA reassessments</p>	<p><b>February</b> Extension of maturity date of revolving credit facility by one year and continued use of letter of guarantee with CRA</p>	<p><b>February</b> Extension of maturity date of revolving credit facility by one year and continued use of letter of guarantee with CRA</p>
<p><b>March</b> Acquired an early deposit silver and gold stream on the Cotabambas project for total upfront consideration of \$140 million</p>	<p><b>March</b> Amended silver stream with Alexco Resource Corp. (“Alexco”) on the Keno Hill mines to make production payment a function of silver head grade and silver spot price</p>	<p><b>February</b> Ms. Marilyn Schonberner joined Board of Directors</p>
<p><b>April</b> Completed \$633 million Common Share offering (inclusive of over-allotment)</p>	<p><b>April</b> Sale of Los Filos mine from Goldcorp Inc. (“Goldcorp”) to Leagold Mining Corporation (“Leagold”)</p>	<p><b>May</b> Termination of existing stream and entered into new mineral stream on San Dimas with First Majestic Silver Corp. (“First Majestic”)</p>
<p><b>August</b> Acquisition of additional 25% gold stream on Salobo mine for total upfront consideration of \$800 million</p>	<p><b>May</b> Changed name to Wheaton Precious Metals Corp. to better reflect precious metals portfolio</p>	<p><b>June</b> Acquired cobalt stream on Vale’s Voisey’s Bay mine for total upfront consideration of \$390 million</p>
<p><b>November</b> Mr. Charles A. Jeannes joined Board of Directors</p>	<p><b>May</b> Mr. Lawrence Bell retired from Board of Directors</p>	<p><b>July</b> Acquired gold and palladium stream on Stillwater and East Boulder mines for total upfront consideration of \$500 million</p>
	<p><b>October</b> Amended silver and gold stream with Capstone Mining Corp. (“Capstone”) on the Minto mine to increase the gold production payment where the market price of copper is lower than \$2.50 per pound</p>	<p><b>December</b> Reached settlement with CRA on appeal of transfer pricing reassessments resulting in no additional cash taxes for 2005 – 2010 tax years</p>
	<p><b>December</b> Acquired an early deposit silver and gold stream on the Kutcho project for total upfront consideration of \$65 million</p>	

DESCRIPTION OF THE BUSINESS{ TC “DESCRIPTION OF THE BUSINESS” \f C \l “2” }

Acquisition & Production History{ TC “Acquisition & Production History” \f C \l “2” }

Total Annual Production	2004/2005	2006	2007	2008	2009	2010
	San Dimas Los Filos Zinkgruvan	Yauliyacu	Peñasquito Stratoni	Keno Hill	Minto Cozamin Neves-Corvo Aljustrel Pascua-Lama (including Lagunas Norte, Pierina, Veladero)	Rosemont  Navidad/Loma de la Plata
Silver Production	11Mozs	14Mozs	13Mozs	12Mozs	16Mozs	22Mozs
Gold Production	N/A	N/A	N/A	N/A	18Kozs	27Kozs
Palladium Production	N/A	N/A	N/A	N/A	N/A	N/A

Wheaton is a mining company which generates its revenue primarily from the sale of precious metals. Wheaton enters into purchase agreements (“precious metal purchase agreements” or “PMPAs”) to purchase all or a portion of the precious metals or cobalt production from mines located around the globe for an upfront payment and an additional payment upon the delivery of the precious metal.

As of December 31, 2018, the Company has entered into 23 long-term purchase agreements (three of which are early deposit precious metal purchase agreements), with 17 different mining companies, for the purchase of precious metals and cobalt (“precious metal purchase agreements” or “PMPA”) relating to 19 mining assets which are currently operating, 9 which are at various stages of development and 2 which have been placed in care and maintenance, located in 11 countries. Wheaton acquires metal production from the counterparties for an initial upfront payment plus an additional cash payment for each ounce or pound delivered which is fixed by contract, generally at or below the prevailing market price. The primary drivers of the Company’s financial results are the volume of metal production at the various mines to which the precious metal purchase agreements relate and the price realized by Wheaton upon sale of the metals received. Attributable metal production as referred to in this annual information form is the metal production to which Wheaton is entitled pursuant to the various precious metal purchase agreements.

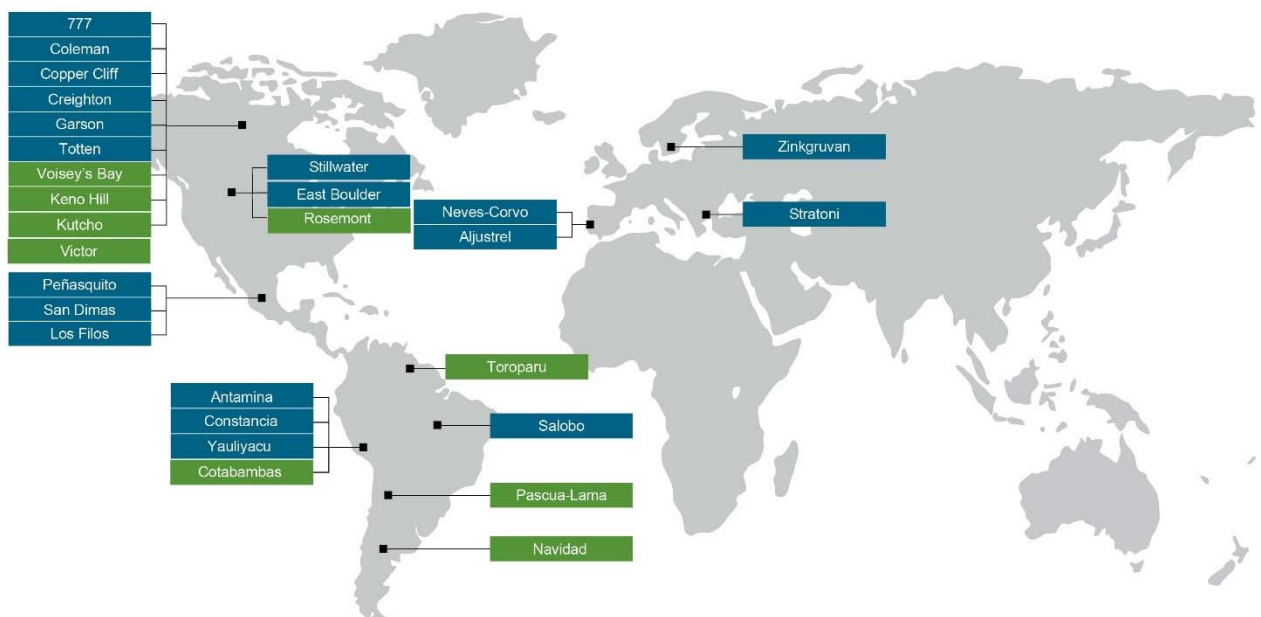
The Company is actively pursuing future growth opportunities, primarily by way of entering into additional long-term precious metal purchase agreements. There is no assurance, however, that any potential transaction will be successfully completed. The table above shows the Company’s acquisition history from inception and total annual production from all precious metal purchase agreements since inception. The following map illustrates the geographic location of the Company’s diversified portfolio of interests in the 19 operating mines and nine development projects comprising its high-quality asset base.

The Common Shares are listed and posted for trading on the NYSE (symbol: WPM) and the TSX (symbol: WPM).

Total Annual Production	2011/2012	2013	2014/2015	2016	2017	2018
	777	Sudbury (including Coleman, Copper Cliff, Creighton, Garson, Stobie, Totten, Victor) Salobo (25%) Constancia Toroparu	Antamina  Salobo (50%)	Salobo (75%)  Cotabambas	Kutcho	San Dimas  Voisey's Bay Stillwater & East Boulder
Silver Production	25Mozs/27Mozs	27Mozs	26Mozs/31Mozs	30Mozs	28Mozs	24Mozs
Gold Production	20koz/50Kozs	152Kozs	148Kozs/243Kozs	354Kozs	355Kozs	373Kozs
Palladium Production	N/A	N/A	N/A	N/A	N/A	15Kozs

### Operating Mines (19)

### Development Projects (9)



## Principal Product{ TC “Principal Product” \f C \l “2” }

The Company’s principal products are precious metals that it has agreed to purchase pursuant to PMPAs. The following tables summarize the mineral stream interests, the other gold interests, the other silver interests and the early deposit mineral stream interests currently owned by the Company (collectively, the “Mining Operations”). Note that statements made in this section contain forward-looking information. Please see “*Cautionary Note Regarding Forward-Looking Statements*” for material risks, assumptions and important disclosure associated with this information.

Mineral Stream Interests	Mine Owner	Location of Mine	Upfront Consideration Paid to Date <sup>1</sup>	Upfront Consideration to be Paid <sup>1,2</sup>	Total Upfront Consideration <sup>1</sup>	Attributable Production to be Purchased	Term of Agreement	Date of Original Contract
<b>Gold Interests</b>								
Salobo	Vale	Brazil	\$ 3,059,360	\$ -	\$ 3,059,360	75%	Life of Mine	28-Feb-13
Sudbury <sup>3</sup>	Vale	Canada	623,572	-	623,572	70%	20 years	28-Feb-13
Constancia	Hudbay	Peru	135,000	-	135,000	50% <sup>4</sup>	Life of Mine	8-Aug-12
San Dimas	First Majestic	Mexico	220,000	-	220,000	variable <sup>5</sup>	Life of Mine	10-May-18
Stillwater	Sibanye	USA	237,880	-	237,880	100%	Life of Mine	16-Jul-18
Other gold interests <sup>6</sup>			400,342	39,100	439,442			
<b>Total gold interests</b>			<b>\$ 4,676,154</b>	<b>\$ 39,100</b>	<b>\$ 4,715,254</b>			
<b>Silver Interests</b>								
Peñasquito	Goldcorp <sup>7</sup>	Mexico	\$ 485,000	\$ -	\$ 485,000	25%	Life of Mine	24-Jul-07
Constancia	Hudbay	Peru	294,900	-	294,900	100%	Life of Mine	8-Aug-12
Antamina	Glencore	Peru	900,000	-	900,000	33.75% <sup>8</sup>	Life of Mine	3-Nov-15
Other silver interests <sup>9</sup>			880,408	223,300	1,103,708			
<b>Total silver interests</b>			<b>\$ 2,560,308</b>	<b>\$ 223,300</b>	<b>\$ 2,783,608</b>			
<b>Palladium Interests</b>								
Stillwater	Sibanye	USA	\$ 262,120	\$ -	\$ 262,120	4.5% <sup>10</sup>	Life of Mine	16-Jul-18
<b>Cobalt Interests</b>								
Voisey's Bay	Vale	Canada	\$ 390,000	\$ -	\$ 390,000	42.4% <sup>11</sup>	Life of Mine	11-Jun-18
<b>Total mineral stream interests</b>			<b>\$ 7,888,582</b>	<b>\$ 262,400</b>	<b>\$ 8,150,982</b>			

1) Expressed in thousands of United States dollars; excludes closing costs and capitalized interest, where applicable.

2) Please refer to the section entitled “Other Contractual Obligations and Contingencies” in the Company’s MD&A for details of when the remaining upfront consideration to be paid becomes due.

3) Comprised of the Coleman, Copper Cliff, Garson, Stobie, Creighton, Totten and Victor gold interests. The Stobie gold interest was placed into care and maintenance as of May 2017.

4) Gold recoveries will be set at 55% for the Constancia deposit and 70% for the Pampacancha deposit until 265,000 ounces of gold have been delivered to the Company. Should Hudbay Minerals Inc. (“Hudbay”) fail to achieve a minimum level of throughput at the Pampacancha deposit during 2018, 2019 and 2020, Wheaton will be entitled to additional compensation in respect of the gold stream.

5) Under the terms of the San Dimas PMPA (as defined herein), the Company is entitled to an amount equal to 25% of the payable gold production plus an additional amount of gold equal to 25% of the payable silver production converted to gold at a fixed gold to silver exchange ratio of 70:1 from the San Dimas mine. If the average gold to silver price ratio decreases to less than 50:1 or increases to more than 90:1 for a period of 6 months or more, then the “70” shall be revised to “50” or “90”, as the case may be, until such time as the average gold to silver price ratio is between 50:1 to 90:1 for a period of 6 months or more in which event the “70” shall be reinstated.

6) Comprised of the Minto, Rosemont and 777 gold interests, as more fully detailed below. The Minto mine (as defined herein) was placed into care and maintenance as of October 2018.

7) Goldcorp and Newmont Mining Corporation (“Newmont”) announced on January 14, 2019, that the two companies entered into a definitive arrangement agreement pursuant to which Newmont agreed to acquire all of the outstanding common shares of Goldcorp. Goldcorp has indicated that the acquisition is subject to a number of conditions including shareholder approvals.

8) Once the Company has received 140 million ounces of silver under the Antamina agreement, the Company’s attributable silver production to be purchased will be reduced to 22.5%.

9) Comprised of the Los Filos, Zinkgruvan, Yauliyacu, Stratoni, Minto, Neves-Corvo, Aljustrel, Keno Hill, Pascua-Lama, Rosemont, 777 and Loma de La Plata silver interests, as more fully detailed below. The Minto mine was placed into care and maintenance as of October 2018.

- 10) Once the Company has received 375,000 ounces of palladium under the Stillwater mines PMPA, the Company's attributable palladium production to be purchased will be reduced to 2.25%, and once the Company has received 550,000 ounces of palladium under the agreement, the Company's attributable palladium production to be purchased will be reduced to 1.00%.
- 11) Once the Company has received 31 million pounds of cobalt under the Voisey's Bay agreement, the Company's attributable cobalt production to be purchased will be reduced to 21.2%.

The following table summarizes the Other gold interests currently owned by the Company:

Other Gold Interests	Mine Owner	Location of Mine	Upfront Consideration Paid to Date <sup>1</sup>	Upfront Consideration to be Paid <sup>1,2</sup>	Total Upfront Consideration <sup>1</sup>	Attributable Production to be Purchased	Term of Agreement	Date of Original Contract
Minto	Capstone <sup>3</sup>	Canada	\$ 47,283	\$ -	\$ 47,283	100% <sup>4</sup>	Life of Mine	20-Nov-08
Rosemont	Hudbay	United States	-	39,100	39,100	100%	Life of Mine	10-Feb-10
777	Hudbay	Canada	353,059	-	353,059	50%	Life of Mine	8-Aug-12
Total Other gold interests			\$ 400,342	\$ 39,100	\$ 439,442			

- 1) Expressed in thousands of United States dollars; excludes closing costs and capitalized interest, where applicable.
- 2) Please refer to the section entitled "Other Contractual Obligations and Contingencies" in the Company's MD&A for details of when the remaining upfront consideration to be paid becomes due.
- 3) The Minto mine was placed into care and maintenance as of October 2018.
- 4) The Company is entitled to acquire 100% of the first 30,000 ounces of gold produced per annum and 50% thereafter.

The following table summarizes the Other silver interests currently owned by the Company:

Other Silver Interests	Mine Owner	Location of Mine	Upfront Consideration Paid to Date <sup>1</sup>	Upfront Consideration to be Paid <sup>1,2</sup>	Total Upfront Consideration <sup>1</sup>	Attributable Production to be Purchased	Term of Agreement	Date of Original Contract
Los Filos	Leagold	Mexico	\$ 4,463	\$ -	\$ 4,463	100%	25 years	15-Oct-04
Zinkgruvan	Lundin	Sweden	77,866	-	77,866	100%	Life of Mine	8-Dec-04
Yauliyacu	Glencore	Peru	285,000	-	285,000	100% <sup>3</sup>	Life of Mine	23-Mar-06
Stratoni	Eldorado <sup>4</sup>	Greece	57,500	-	57,500	100% <sup>4</sup>	Life of Mine	23-Apr-07
Neves-Corvo	Lundin	Portugal	35,350	-	35,350	100%	50 years	5-Jun-07
Aljustrel	Almina	Portugal	2,451	-	2,451	100% <sup>5</sup>	50 years	5-Jun-07
Keno Hill	Alexco	Canada	45,065	-	45,065	25%	Life of Mine	2-Oct-08
Minto	Capstone <sup>6</sup>	Canada	7,522	-	7,522	100%	Life of Mine	20-Nov-08
Pascua-Lama	Barrick	Chile/Argentina	252,261 <sup>7</sup>	-	252,261	25%	Life of Mine	8-Sep-09
Rosemont	Hudbay	United States	-	190,900	190,900	100%	Life of Mine	10-Feb-10
777	Hudbay	Canada	102,041	-	102,041	100%	Life of Mine	8-Aug-12
Loma de La Plata	PAAS	Argentina	10,889	32,400	43,289	12.5%	Life of Mine	n/a <sup>8</sup>
Total other silver interests			\$ 880,408	\$ 223,300	\$ 1,103,708			

- 1) Expressed in thousands of United States dollars; excludes closing costs and capitalized interest, where applicable.
- 2) Please refer to the section entitled "Other Contractual Obligations and Contingencies" in the Company's MD&A for details of when the remaining upfront consideration to be paid becomes due.
- 3) Glencore (as defined herein) will deliver a per annum amount to Wheaton equal to the first 1.5 million ounces of payable silver produced at Yauliyacu and 50% of any excess.
- 4) 95% owned by Eldorado Gold Corporation ("Eldorado").
- 5) Wheaton only has the rights to silver contained in concentrate containing less than 15% copper at the Aljustrel mine (as defined herein).
- 6) The Minto mine was placed into care and maintenance as of October 2018.
- 7) The upfront consideration is net of the \$373 million cash flows received relative to silver deliveries from the Lagunas Norte, Veladero, and Pierina mines.
- 8) Wheaton and Pan American Silver Corp. ("PAAS") have not yet finalized the definitive terms of the agreement.

The following table summarizes the early deposit mineral stream interests currently owned by the Company:

Early Deposit Mineral Stream Interests	Mine Owner	Location of Mine	Upfront Consideration Paid to Date <sup>1</sup>	Upfront Consideration to be Paid <sup>1,2</sup>	Total Upfront Consideration <sup>1</sup>	Attributable Production to be Purchased		Term of Agreement	Date of Original Contract
						Gold	Silver		
Toroparu	Sandspring	Guyana	\$ 15,500	\$ 138,000	\$ 153,500	10%	50%	Life of Mine	11-Nov-13
Cotabambas	Panoro	Peru	7,000	133,000	140,000	25% <sup>3</sup>	100% <sup>3</sup>	Life of Mine	21-Mar-16
Kutcho	Kutcho	Canada	7,000	58,000	65,000	100% <sup>4</sup>	100% <sup>4</sup>	Life of Mine	12-Dec-17
			\$ 29,500	\$ 329,000	\$ 358,500				

1) Expressed in thousands of United States dollars; excludes closing costs and capitalized interest, where applicable.

2) Please refer to the section entitled "Other Contractual Obligations and Contingencies" in the Company's MD&A for details of when the remaining upfront consideration to be paid becomes due.

3) Once 90 million silver equivalent ounces attributable to Wheaton have been produced, the attributable production to be purchased will decrease to 66.67% of silver production and 16.67% of gold production for the life of mine.

4) Once 51,000 ounces of gold and 5.6 million ounces of silver have been delivered to Wheaton, the stream will decrease to 66.67% of gold and silver production for the life of mine.

Further details regarding the PMPAs entered into by the Company in respect of these mineral stream interests can be found below:

## San Dimas Mine

Mine Name:	San Dimas
Operator:	First Majestic Silver Corp.
Location:	Mexico
Stream:	25% Gold plus 25% silver production converted to Gold
Term:	Life of Mine
WPM party:	Wheaton International

On October 15, 2004, the Company entered into a precious metal purchase agreement (the “San Dimas SPA”) with Goldcorp to acquire an amount equal to 100% of the silver produced by Goldcorp’s Luismin mining operations in Mexico (owned at the date of the transaction) for a period of 25 years. The Luismin operations consisted primarily of the San Dimas mine (the “San Dimas mine”) and Los Filos mine (the “Los Filos mine”). On August 6, 2010, Goldcorp completed the sale of the San Dimas mine to Primero Mining Corp. (“Primero”). In conjunction with the sale, Wheaton amended the San Dimas SPA. The term of the San Dimas SPA, as it related to San Dimas, was extended to the life of mine. During the first four years following the closing of the transaction, Primero delivered to Wheaton a per annum amount equal to the first 3.5 million ounces of payable silver produced at the San Dimas mine and 50% of any excess, plus Wheaton received an additional 1.5 million ounces of silver per annum delivered by Goldcorp. Beginning in the fifth year after closing, Primero delivered a per annum amount to Wheaton equal to the first six million ounces of payable silver produced at the San Dimas mine and 50% of any excess. In addition, a per ounce cash payment of the lesser of \$4.04 per ounce of silver (subject to an annual inflationary adjustment) or the prevailing market price was due, for silver delivered under the San Dimas SPA. Goldcorp guaranteed the delivery by Primero of all silver produced and owing to the Company until 2029 (the “Goldcorp Guarantee”).

On May 10, 2018, First Majestic announced that it had completed the previously disclosed acquisition of all the issued and outstanding common shares of Primero (the “Acquisition”). In connection with the Acquisition, on May 10, 2018, the Company terminated the San Dimas SPA and entered into a new precious metal purchase agreement with First Majestic (the “San Dimas PMPA”) to purchase an amount of gold equal to 25% of the life of mine payable gold production from the San Dimas mine plus an additional amount of gold equal to 25% of the life of mine payable silver production from the San Dimas mine converted to gold at a fixed gold to silver exchange ratio of 70:1.<sup>1</sup> The Company paid a total upfront cash payment of \$220 million for the San Dimas PMPA and, in addition, will make ongoing payments of \$600 per gold ounce delivered.

As consideration for terminating the San Dimas SPA, the Company received a cash payment of \$220 million and 20,914,590 First Majestic common shares with a fair value of \$151 million (the “First Majestic Shares”)<sup>2</sup>, and the Goldcorp Guarantee was terminated in exchange for a payment of \$10 million.

*Mexican Tax Update* – In February 2016, Primero announced that its Mexican subsidiary, Primero Empresa Minera S.A. de C.V. (“PEM”), received a legal claim from the Mexican tax authorities, SAT, seeking to nullify the Advance Pricing Agreement issued by SAT in 2012 (“2012 APA”). The 2012 APA confirmed PEM’s ability to pay taxes in Mexico on the sale of silver on actual prices realized by its Mexican subsidiary in connection with silver sales under the San Dimas SPA for the tax years 2010 through 2014.

As disclosed by First Majestic in its MD&A for the period ended December 31, 2018, if the SAT is successful in retroactively nullifying the 2012 APA, the SAT may seek to audit and reassess PEM in respect of sales of silver in connection with the San Dimas SPA for the tax years 2010 through 2014. First Majestic indicates that if the SAT is successful in retroactively nullifying the 2012 APA and issuing reassessments, it would likely have a material adverse effect on First Majestic’s results of operations, financial condition and cash flows. PEM would have rights of appeal in connection with any reassessments. First Majestic also stated that that in June 2017 and October 2017, the SAT issued two observation letters for the 2010 tax year and the 2011 tax year that made explicit its view that PEM should pay taxes based on the market price of silver. First Majestic also indicates that since it continues to defend the 2012 APA in the Mexican legal proceeding, the 2012 APA remains valid and First Majestic will vigorously dispute any reassessment that may be issued in the future on a basis that assesses taxes on PEM’s historical silver revenues that is inconsistent with the 2012

<sup>1</sup> If the average gold to silver price ratio decreases to less than 50:1 or increases to more than 90:1 for a period of 6 months or more, then the “70” shall be revised to “50” or “90”, as the case may be, until such time as the average gold to silver price ratio is between 50:1 to 90:1 for a period of 6 months or more in which event the “70” shall be reinstated.

<sup>2</sup> The First Majestic Shares represent approximately 11% of First Majestic’s current issued and outstanding shares and are subject to volume selling restrictions.

APA. The observation letters do not represent a tax reassessment and based on First Majestic’s assessments, it believes Primero’s filings were appropriate and continue to believe its tax filing position based upon the 2012 APA is correct. However, First Majestic notes that should PEM ultimately be required to pay tax on its silver revenues based on market prices without any mitigating adjustments, the incremental income tax for the years 2012-2018 would be in the range of \$185 million, before interest or penalties.

First Majestic has indicated in their MD&A for the period ended December 31, 2018 that while it continues to vigorously defend the validity of the 2012 APA and its transfer pricing position, it is also engaging in dialogue with the SAT seeking to resolve matters and bring tax certainty through a negotiated solution. To the extent that First Majestic is not able to defend the validity of the 2012 APA or the SAT determines that the appropriate price to tax sales under the former San Dimas SPA or the new San Dimas PMPA is significantly different from the actual realized prices thereunder, it may have an adverse impact on First Majestic’s business, financial condition or results of operations. If the Company was unable to purchase any further gold under San Dimas PMPA, it may have a material adverse effect on Wheaton’s business, financial condition, results of operation and cash flows. In addition, should this occur, there is no assurance that Wheaton would be successful in enforcing its rights under the security interest granted by First Majestic or its other remedies under the San Dimas PMPA.

*Primero Guarantee* – On March 30, 2017, Wheaton provided a guarantee to the lenders under Primero’s previously outstanding revolving credit facility for which Primero paid a fee of 5% per annum (the “Guarantee”). As a result of the Acquisition, the Primero Guarantee was terminated on May 10, 2018 and Primero paid to the Company all outstanding fees.

See “Risks Relating to the Company – Security Over Underlying Assets”, “Risks Relating to the Company – Credit and Liquidity Risk” and “Risks Relating to the Mining Operations – International Operations”.

### ***Los Filos Mine***

Mine Name:	Los Filos
Operator:	Leagold
Location:	Mexico
Stream:	100% of Silver
Term:	25 years
WPM party:	Wheaton International

The Los Filos mine is located in the Nukay mining district of central Guerrero State in southern Mexico. Wheaton International entered into an agreement with Goldcorp to acquire 100% of the silver production from the Los Filos mine for a period of 25 years, commencing October 15, 2004. On April 7, 2017, Leagold completed the acquisition of the Los Filos mine from Goldcorp. In connection with the acquisition, the Los Filos PMPA was amended to include a corporate guarantee from Leagold.

Goldcorp’s guarantee of deliveries in respect of the Los Filos mine remains in place.

### ***Zinkgruvan Mine***

Mine Name:	Zinkgruvan
Operator:	Lundin
Location:	Sweden
Stream:	100% of Silver
Term:	Life of Mine
WPM party:	Wheaton International

On December 8, 2004, Wheaton International entered into an agreement with Lundin Mining Corporation (“Lundin”) and Zinkgruvan Mining AB (“Zinkgruvan AB”) to acquire 100% of the payable silver produced by Lundin’s Zinkgruvan mining operations (the “Zinkgruvan mine”) in Sweden for the life of mine for the lesser of \$3.90 per ounce of silver (subject to an annual inflationary adjustment) and the then prevailing market price per ounce of silver. Upfront consideration payable to

Zinkgruvan AB was approximately \$77.9 million. In connection with the Zinkgruvan agreement, Lundin provided Wheaton with a corporate guarantee and a pledge of charge deed over mining operations.

### ***Yauliyacu Mine***

Mine Name:	Yauliyacu
Operator:	Glencore
Location:	Peru
Stream:	100% of Silver up to 1.5Mozs and 50% excess per annum
Term:	Life of Mine
WPM party:	Wheaton International

On March 23, 2006, Wheaton International entered into a PMPA with Glencore International AG (“Glencore International”) and its subsidiary Anani Investments Ltd. (“Anani”) to acquire an amount equal to 100% of the payable silver produced from the Yauliyacu mining operations (the “Yauliyacu mine”) in Peru, up to a maximum of 4.75 million ounces per year, for a period of 20 years commencing in March of 2006, for \$3.90 per ounce of silver (subject to an annual inflationary adjustment).

On November 30, 2015, Wheaton International amended the Yauliyacu mine PMPA. The term of the agreement, which was set to expire in 2026, was extended to the life of mine. Additionally, effective January 1, 2016, Anani will deliver to Wheaton a per annum amount equal to the first 1.5 million ounces of payable silver produced at the Yauliyacu mine and 50% of any excess. The price paid for each ounce of silver delivered under the agreement has been increased by an additional \$4.50 per ounce plus, if the market price of silver exceeds \$20 per ounce, 50% of the excess, to a maximum of \$40 per ounce.

During the term of the contract, Wheaton International has a right of first refusal on any future sales of silver streams from the Yauliyacu mine and a right of first offer on future sales of silver streams from any other mine owned by Glencore International or any of its affiliates at the time of the initial transaction. In addition, Glencore International provided Wheaton with a corporate guarantee.

### ***Stratoni Mine***

Mine Name:	Stratoni
Operator:	Hellas Gold (Eldorado Gold)
Location:	Greece
Stream:	100% of Silver
Term:	Life of Mine
WPM party:	Wheaton International

On April 23, 2007, Wheaton International entered into a PMPA (the “Stratoni PMPA”) with European Goldfields Limited (“European Goldfields”) (which was acquired by Eldorado on February 24, 2012), and Hellas Gold S.A. (“Hellas Gold”), a 95%-owned subsidiary of European Goldfields, pursuant to which Wheaton International agreed to purchase 100% of the payable silver produced by Hellas Gold from the Stratoni mine (the “Stratoni mine”) located in Greece over its entire mine life, for total upfront cash consideration of \$57.5 million, plus a payment equal to the

lesser of \$3.90 per ounce of delivered silver (subject to an annual inflationary adjustment after April 23, 2010) and the then prevailing market price per ounce of silver. During the term of the Stratoni PMPA, Wheaton International has a right of first refusal on any future sales of silver streams from any other mine owned by Hellas Gold or European Goldfields. In connection with the Stratoni PMPA, Hellas Gold and European Goldfields provided certain covenants in respect of their obligations.

In October 2015, in order to incentivize additional exploration and potentially extend the limited remaining mine life of the Stratoni mine, Wheaton International and Eldorado agreed to modify the Stratoni PMPA. The primary modification was to increase the production price per ounce of silver delivered to Wheaton International over the current fixed price by one of the following amounts: (i) \$2.50 per ounce of silver delivered if 10,000 metres of drilling is completed outside of the existing ore body and within Wheaton International’s defined area of interest (“Expansion Drilling”); (ii) \$5.00 per ounce of silver delivered if 20,000 metres of Expansion Drilling is completed; and (iii) \$7.00 per ounce of silver delivered if 30,000 metres of Expansion Drilling is completed. Drilling in all three cases must be completed by December 31, 2020 in order for the agreed upon increase in production price to be initiated. In July 2018, Eldorado completed 10,000 metres of Expansion Drilling.

### ***Peñasquito Mine***

Mine Name:	Peñasquito
Operator:	Goldcorp
Location:	Mexico
Stream:	25% of Silver
Term:	Life of Mine
WPM party:	Silver Wheaton Luxembourg

On July 24, 2007, Silver Wheaton Luxembourg entered into a PMPA (the “Peñasquito PMPA”) with Goldcorp and Minera Peñasquito, S.A. de C.V. (“Minera Peñasquito”), a wholly-owned subsidiary of Goldcorp, pursuant to which Silver Wheaton Luxembourg agreed to purchase 25% of the payable silver produced by Minera Peñasquito from the Peñasquito mine located in Mexico (the “Peñasquito mine”) over its entire mine life, for upfront consideration of \$485 million, plus a payment equal to the lesser of \$3.90 per ounce of

delivered silver (subject to an annual inflationary adjustment three years after commercial production commences) and the then prevailing market price per ounce of silver. Silver Wheaton Luxembourg and Wheaton International entered into a back to back PMPA in respect of the Peñasquito mine. In connection with the Peñasquito PMPA, Goldcorp also provided Silver Wheaton with a corporate guarantee.

According to Goldcorp’s MD&A for the year ended December 31, 2018, the Pyrite Leach Project (“PLP”) at Peñasquito achieved commercial production as of December 31, 2018.

See “Further Disclosure Regarding Mineral Projects on Material Properties - Peñasquito Mine, Mexico” for details regarding the Peñasquito mine.

Goldcorp and Newmont announced on January 14, 2019, that the two companies entered into a definitive arrangement agreement pursuant to which Newmont agreed to acquire all of the outstanding common shares of Goldcorp. Goldcorp has indicated that the acquisition is subject to a number of conditions including shareholder approvals.

***Mineral Park Mine (Bankrupt)***

Mine Name:	Mineral Park
Operator:	Mercator (bankrupt)
Location:	United States
Stream:	100% of Silver
Term:	Life of Mine
WPM party:	Wheaton International

On March 17, 2008, Wheaton International entered into a precious metal purchase agreement with Mercator Minerals Ltd. (“Mercator”) and Mercator Minerals (Barbados) Ltd. (“Mercator Barbados”), a wholly-owned subsidiary of Mercator, pursuant to which Wheaton International agreed to pay, subject to the completion of certain conditions, an upfront cash payment of \$42 million in order to acquire 100% of the payable silver produced by the Mineral Park mine in the United States (the “Mineral Park mine”), over its entire mine-life, for the lesser of \$3.90 (subject to an annual adjustment beginning three years after a minimum production level has been met) and the then prevailing market price per ounce of delivered silver.

In 2014, Mercator was deemed to have filed an assignment in bankruptcy in Canada and certain Mercator’s subsidiaries (including Mineral Park Inc. the owner of the Mineral Park mine) filed Chapter 11 bankruptcy petitions in the United States and Mercator Barbados was deemed bankrupt in early 2015.

On November 4, 2014, the United States Bankruptcy Court for the District of Delaware approved a settlement agreement among Wheaton International, the four Mercator United States subsidiaries in bankruptcy and their secured lenders. Under the settlement agreement, a portion of the sale proceeds from the sale of the Mineral Park mine and assets was to be paid to Wheaton International and Wheaton International retained the right to proceed against Mercator. In return for these agreements, the settlement provided for the termination of any claim Wheaton International may have against the Mineral Park mine. Wheaton International received \$700,000 under the settlement agreement.

The Mercator Barbados bankruptcy process has completed. In connection with the Canadian and Barbados bankruptcy proceedings, as of December 31, 2018, Wheaton International had received a total of approximately \$1 million. The amount of any additional recoveries by Wheaton International from the Canadian bankruptcy proceedings is uncertain.

***Campo Morado Mine (Cancelled)***

Mine Name:	Campo Morado
Operator:	Nyrstar
Location:	Mexico
Stream:	75% of Silver
Term:	Life of Mine
WPM party:	Wheaton International

On May 13, 2008, Wheaton International entered into a PMPA with Nyrstar Mining Ltd. (formerly Farallon Mining Ltd. and prior to that Farallon Resources Ltd.) (“Nyrstar”) and Nyrstar Resources (Barbados) Ltd. (formerly Farallon Resources (Barbados) Ltd.), which are subsidiaries of Nyrstar NV as a result of Nyrstar NV’s acquisition of Farallon Mining Ltd. (as it was then named) on January 5, 2011, to acquire an amount equal to 75% of the life of mine payable silver production from its Campo Morado property in Mexico (the “Campo Morado mine”). Under the agreement, Wheaton International made an upfront cash payment of \$79.3 million and, in addition, made ongoing payments of \$3.90 per ounce of silver delivered, subject to an annual inflationary adjustment.

On December 31, 2014, Wheaton International reached an agreement with Nyrstar resulting in the cancellation of the PMPA relating to Campo Morado in exchange for cash consideration of \$25 million. As part of this agreement, Wheaton International was entitled to 75% of the payable silver contained in concentrate produced at the Campo Morado mine on or prior to December 31, 2014, and was granted a five year right of first refusal on any silver streaming or royalty transaction in relation to any Nyrstar group property, globally. All remaining silver deliveries due under the terms of the agreement were received during 2015.

## ***Keno Hill Mines***

Mine Name:	Keno Hill
Operator:	Alexco
Location:	Canada
Stream:	25% of Silver
Term:	Life of Mine
WPM party:	Wheaton

On October 2, 2008, the Company entered into a PMPA (the “Alexco PMPA”) with Alexco and Elsa Reclamation & Development Company Ltd. and Alexco Keno Hill Mining Corp. (formerly called Alexco Resource Canada Corp.), each of which are wholly-owned subsidiaries of Alexco, pursuant to which the Company agreed to pay, subject to the completion of certain conditions, an upfront cash payment of \$50 million in order to acquire 25% of all payable silver produced from the Keno Hill district, including the currently producing Bellekeno mine in the Yukon Territory, Canada (the “Keno Hill mines”), over its entire mine-life, for the

lesser of \$3.90 (subject to an annual inflationary adjustment beginning in year four after the achievement of specific operating targets) and the then prevailing market price per ounce of delivered silver. Wheaton is not required to contribute to further capital or exploration expenditures and Alexco has provided a completion guarantee with certain minimum production criteria by specific dates. In connection with the Alexco PMPA, Alexco and each of the parties to the Agreement provided Wheaton with corporate guarantees and certain other security over their assets and the Keno Hill mines.

On June 6, 2014, the Company amended the Alexco PMPA to increase the production payment to be a function of the silver price at the time of delivery. In addition, the area of interest was expanded to include properties currently owned by Alexco and properties acquired by Alexco in the future which fall within a one kilometre radius of existing Alexco holdings in the Keno Hill district. The proposed amendment to this production payment was not applicable to the Birmingham deposit area. The amended Alexco PMPA was conditional upon Alexco paying Wheaton \$20 million by December 31, 2015, or at Alexco’s option up to March 31, 2017. Alexco did not exercise its option to increase the production payment as set out in the June 2014 amendment.

On March 29, 2017, the Company and Alexco agreed to amend the Alexco PMPA to adjust the silver production payment so that it will be a percentage of the spot silver price that increases with lower mill silver head grades and lower silver prices, and decreases with higher mill silver head grades and higher silver prices, subject to certain ceiling and floor grades and prices. In addition, the outside completion date was extended to December 31, 2019 and the area of interest for the Alexco PMPA was expanded to include properties currently owned by Alexco and properties acquired by Alexco in the future which fall within a one kilometre radius of existing Alexco holdings in the Keno Hill mines silver district. As consideration, Alexco issued to Wheaton three million common shares of Alexco which had a fair value of \$5 million.

On October 2, 2017, in connection with an option granted by Alexco to Banyan Gold Corp. (“Banyan”) over claims covered by the Alexco PMPA, the Company and Banyan entered into an accession agreement under which Banyan agreed to be bound by the terms of the Alexco PMPA in respect of those claims.

On December 20, 2018, the Company agreed to amend the Alexco PMPA to extend the outside completion date under the Alexco PMPA to December 31, 2020.

## ***Silverstone Acquisition***

On May 21, 2009, the Company completed the acquisition of all of the outstanding common shares of Silverstone Resources Corp. (“Silverstone”) by way of a statutory plan of arrangement. Each common share of Silverstone was exchanged for 0.185 of a Common Share, resulting in the issuance of approximately 23.4 million Common Shares. The following interests were acquired as a result of the acquisition of Silverstone:

*Minto Mine (Canada) (Care and Maintenance)* – A PMPA to acquire 100% of the silver produced from the Minto mine (the “Minto mine”) in Canada, owned by Capstone and 100% of the first 30,000 ounces of gold produced per annum and 50% thereafter for the lesser of \$3.90 per ounce of silver and \$300 per ounce of gold (subject to an annual inflationary adjustment after three years) and the then prevailing market price per ounce of silver or gold. If gold production from the Minto mine exceeds 30,000 ounces per year, the Company has committed to purchase 50% of the amount that production exceeds those thresholds for the same per ounce payment noted above. Capstone has also provided Wheaton with a corporate

guarantee under the Minto mine agreement. In October 2017, in order to incentivize Capstone to extend to Minto mine life, the Company agreed to amend the Minto PMPA. The primary modification was to increase the production payment per ounce of gold delivered to the Company over the current fixed price in periods where the market price of copper is lower than \$2.50 per pound. In consideration for this contract amendment and certain other agreements made between the Company and Capstone, the Company received shares of Capstone with a value of \$8 million. In October 2018, Capstone announced that it was putting the Minto mine on care and maintenance.

*Cozamin Mine (Mexico) (Completed)* – A PMPA to acquire 100% of the silver produced from the Cozamin mine (the “Cozamin mine”) in Mexico, owned by Capstone until 2017 for the lesser of \$4.00 (subject to an annual inflationary adjustment after three years) and the then prevailing market price per ounce of silver. Capstone had also provided Wheaton International with a corporate guarantee under the Cozamin mine agreement. Under the terms of the agreement, all deliveries under this agreement ceased as of April 4, 2017.

*Neves-Corvo Mine (Portugal)* – A PMPA to acquire 100% of the silver produced from the Neves-Corvo mine (the “Neves-Corvo mine”) in Portugal, owned by Lundin for the life of mine (nominal term of 50 years) for the lesser of \$3.90 (subject to an annual inflationary adjustment after three years) and the then prevailing market price per ounce of silver. Lundin has also provided Wheaton International with a corporate guarantee under the Neves-Corvo mine agreement.

*Aljustrel Mine (Portugal)* – A PMPA to acquire 100% of the silver produced from the Aljustrel mine (the “Aljustrel mine”) in Portugal, owned by I’M SGPS for the life of mine (nominal term of 50 years) for the lesser of \$3.90 (subject to an annual inflationary adjustment after three years) and the then prevailing market price per ounce of silver. As part of an agreement with I’M SGPS dated July 16, 2014, Wheaton agreed to waive its rights to silver contained in copper concentrate at the Aljustrel mine. The Company has not waived its rights to the silver contained in zinc and lead concentrate. I’M SGPS has also provided Wheaton International with a corporate guarantee under the Aljustrel mine agreement. In May 2018, Wheaton International agreed to amend the Aljustrel mine PMPA to increase the production payment per ounce of silver to 50% of the spot price of silver, to fix the silver payable rates for a period of two years with certain restrictions on changes thereafter and to make certain other modernization amendments.

*Loma de La Plata Project (Argentina)* – A debenture with PAAS (formerly with Aquiline Resources Inc.) convertible into an agreement to purchase 12.5% of the life of mine silver production from the Loma de La Plata (the “Loma de La Plata project”) zone of the Navidad project in Argentina. On February 25, 2010, the Company elected to convert the debenture with Pan American into an agreement to acquire an amount equal to 12.5% of the life of mine silver production from the Loma de La Plata project. As such, Wheaton will make total upfront cash payments of \$32.4 million following the satisfaction of certain conditions, including Pan American receiving all necessary permits to proceed with the mine construction. In addition, a per ounce cash payment of the lesser of \$4.00 per ounce and the prevailing market price is due for silver delivered under the agreement. The terms of the definitive PMPA continue to be negotiated.

***Barrick Mines and Pascua-Lama Project***

Mine Name:	Barrick Mines & Pascua-Lama
Operator:	Barrick
Location:	Peru/Argentina
Stream:	100% of Silver for Lagunas Norte, Pierina and Veladero (up to 8% of silver in ore); 25% of Silver for Pascua-Lama
Term:	April 1, 2018 for Lagunas Norte, Pierina and Veladero; Life of Mine for Pascua-Lama
WPM party:	Wheaton International

On September 8, 2009, the Company entered into a PMPA (the “Pascua-Lama PMPA”) with Barrick pursuant to which the Company agreed to purchase an amount of silver equivalent to 25% of the life of mine payable silver production from Barrick’s Pascua-Lama project (the “Pascua-Lama project”) located on the border of Chile and Argentina, as well as an amount of silver equivalent to 100% of the silver production from its Lagunas Norte mine (the “Lagunas Norte mine”) and Pierina mine (the “Pierina mine”), which are both located in Peru, and its Veladero mine (the “Veladero mine”) (Wheaton’s attributable silver production is subject to a maximum of 8% of the silver contained in the ore processed at the Veladero mine during the period), which is located in Argentina, until the end of 2015 (the “Barrick Transaction”). Wheaton International made a total upfront

cash payment to Barrick of \$625 million (the “Upfront Payment”). In addition, per ounce cash payments of the lesser of \$3.90 (subject to an annual inflationary adjustment starting three years after achieving project completion at Pascua-Lama) and the prevailing market price is due for silver delivered under the Pascua-Lama PMPA. In connection with the Pascua-Lama PMPA, Barrick provided Wheaton International with a corporate guarantee.

As a result of Barrick's decision to temporarily suspend construction activities at the Pascua-Lama project, and the various amendments to the Pascua-Lama PMPA, Wheaton International was entitled to 100% of the silver production from Barrick's Lagunas Norte mine, Pierina mine (now in closure) and Veladero mine until the earlier of April 1, 2018 and the date Barrick satisfied the completion test. In 2013 Barrick initiated the closure of its Pierina mine and in accordance with the terms of the Pascua-Lama PMPA, all deliveries from the Pierina mine, Lagunas Norte mine and Veladero mine ceased as of April 1, 2018.

As part of the original agreement, Barrick provided the Company with a completion guarantee, requiring Barrick to complete the Pascua Lama project to at least 75% design capacity by December 31, 2015, which was subsequently extended to December 31, 2016. Wheaton International has agreed to extend the completion test deadline to June 30, 2020. If the requirements of the completion test have not been satisfied by the completion test deadline of June 30, 2020, Wheaton International may, within 90 days of such date, provide to Barrick notice of termination of the PMPA and demand repayment of the upfront payment of \$625 million reduced by the cash flows received relative to the Lagunas Norte mine, Pierina mine and Veladero mine. Barrick has also granted Wheaton International a five year right of first refusal on any further metal stream sales in connection with the Pascua-Lama project, where more than 50% of the value is derived from silver.

If, after Barrick satisfies the requirements of the completion test:

- certain political events occur in Argentina or Chile, including an expropriation of any part of the Pascua-Lama project, the selective and discriminatory imposition of any law or war or insurrection, that results in Barrick losing all or substantially all of the rights, privileges or benefits pertaining to any part of the Pascua-Lama project, then Wheaton's entitlement to silver production from that part of the Pascua-Lama project will be suspended until the political event ceases;
- certain political events occur in Argentina or Chile that would reduce Barrick's economic value of its investment in the Pascua-Lama project by more than 50%, then Wheaton's entitlement to silver production from the Pascua Lama project and the uncredited balance of the Upfront Payment will be reduced to reflect the reduction of Barrick's economic value of its investment in the Pascua-Lama project, until the political event ceases. If the political event continues for the term of the transaction, then Wheaton's entitlement to the repayment of the uncredited balance of the Upfront Payment will be reduced to reflect the suspension of silver sales from the affected portion of the Pascua-Lama project; or
- any of Barrick's subsidiaries that own any part of the Pascua-Lama project becomes insolvent or bankrupt, or Barrick's lenders exercise or enforce any security granted to them that results in Barrick losing all or substantially all of the rights, privileges or benefits pertaining to the Pascua-Lama project, then the transaction will terminate and Wheaton will be entitled to an immediate repayment of the uncredited balance of the Upfront Payment.

If Wheaton International fails to pay any portion of the Upfront Payment to Barrick, then Barrick may terminate Wheaton International's obligation to make any further payments of the Upfront Payment and reduce the amount of the Upfront Payment already paid to Barrick by the lesser of 20% of the amount already paid or \$50 million. Following any such reduction, Barrick will continue to sell silver to Wheaton International in accordance with the terms of the transaction until the amount of silver sold to Wheaton International equals the reduced amount of the Upfront Payment, after which the transaction will terminate.

*Pascua-Lama SMA Regulatory Sanctions* – As per Barrick's annual financial statements for the year ended December 31, 2018, in May 2013, Compañía Minera Nevada ("CMN"), Barrick's Chilean subsidiary that holds the Chilean portion of the Pascua-Lama project, received a resolution (the "Original Resolution") from Chile's environmental regulator (the Superintendencia del Medio Ambiente, or "SMA") that required Barrick to complete the water management system for the Pascua-Lama project in accordance with the Pascua-Lama project's environmental permit before resuming construction activities in Chile. The Original Resolution also required CMN to pay an administrative fine of approximately \$16 million for deviations from certain requirements of the Pascua-Lama project's Chilean environmental approval, including a series of reporting requirements and instances of non-compliance related to the Pascua-Lama project's water management system. Barrick also disclosed in its annual financial statements for the year ended December 31, 2018 that in June 2013, a group of local farmers and indigenous communities challenged the Original Resolution. The challenge, which was brought in the Environmental Court of Santiago, Chile (the "Environmental Court"), claims that the fine was inadequate and requests more severe sanctions against CMN including the revocation of the project's environmental permit. Barrick disclosed that on March 3, 2014, the Environmental Court annulled the Original Resolution and remanded the matter back to the SMA for further consideration in accordance with its decision (the "Environmental Court Decision"). In particular, the

Environmental Court ordered the SMA to issue a new administrative decision that recalculates the amount of the fine to be paid by CMN using a different methodology and addresses certain other errors it identified in the Original Resolution. The Environmental Court did not annul the portion of the Original Resolution that required Barrick to halt construction on the Chilean side of the Pascua-Lama project until the water management system is completed in accordance with the Pascua-Lama project's environmental permit. Barrick further states that on April 22, 2015, CMN was notified that the SMA has initiated a new administrative proceeding for alleged deviations from certain requirements of the Pascua-Lama project's environmental approval, including with respect to the Pascua-Lama project's environmental impact and a series of monitoring requirements. Barrick states that on June 8, 2016, the SMA consolidated the two administrative proceedings against CMN into a single proceeding encompassing both the reconsideration of the Original Resolution in accordance with the decision of the Environmental Court and the alleged deviations from the Project's environmental approval notified by the SMA in April 2015. In January 2018, the Company was notified that Barrick had received a revised resolution ("Revised Resolution") from the SMA requiring the closure of existing infrastructure on the Chilean side of the Pascua-Lama project. Barrick reported that CMN filed an appeal of the Revised Resolution on February 3, 2018 with the First Environmental Court of Antofagasta (the "Antofagasta Environmental Court") and on October 12, 2018, the Antofagasta Environmental Court issued an administrative ruling ordering review of the significant sanctions ordered by the SMA. In its ruling, the Antofagasta Environmental Court rejected four of the five closure orders contained in the Revised Resolution and remanded the related environmental infringements back to the SMA for further consideration. Barrick has reported that CMN has appealed the Revised Resolution and this appeal remains in place. A hearing on the appeal was held on November 6, 2018, and CMN continues to evaluate all of its legal options. A decision of the Environmental Court on the remaining appeals is still pending.

Barrick has reported in its MD&A for the year ended December 31, 2018 that as part of the Strategic Cooperation Agreement between Barrick and Shandong Gold, Shandong Gold will carry out an independent evaluation of the potential to develop a mining project at Lama in Argentina, including a high-level evaluation of potential synergies between Lama and the nearby Veladero operation.

### ***Rosemont Transaction***

Mine Name:	Rosemont
Operator:	Hudbay
Location:	United States
Stream:	100% of Silver and 100% Gold
Term:	Life of Mine
WPM party:	Wheaton International

On February 10, 2010, Wheaton International entered into a PMPA (the "Rosemont PMPA") with Augusta Resource Corporation ("Augusta") to acquire an amount equal to 100% of the life of mine silver and gold production from its Rosemont copper project (the "Rosemont project") located in Pima County, Arizona. The payable rate for silver and gold has been fixed at 92.5% of production. Under the Rosemont PMPA, Wheaton International was to make total upfront cash payments of \$230 million, payable on an instalment basis to partially fund construction of the mine, once certain milestones were achieved, including the receipt of key permits and securing the necessary financing to complete construction of the Rosemont project. In addition, a per ounce cash payment of the lesser of \$3.90 per ounce of silver and \$450 per ounce of gold (both subject to an inflationary adjustment) or the prevailing market price is due, for silver and gold delivered under the agreement. In connection with the Rosemont PMPA, Augusta and certain affiliates provided Wheaton International with a corporate guarantee and certain other security over their assets. In July 2014, Hudbay acquired control of Augusta and the Rosemont project in a public take-over transaction.

Effective February 8, 2019, Hudbay and Wheaton International amended the Rosemont PMPA. As a result of the amendment and given that all material permits have now been received, Wheaton International is committed to pay Hudbay the upfront payment in two instalments, with the first \$50 million being advanced upon the request of Hudbay conditional on Hudbay demonstrating that it has sufficient capital to complete construction of Rosemont, development and construction of Rosemont having commenced and other customary conditions. The balance of \$180 million will be advanced following request by Hudbay, conditional on project costs of at least \$98 million having been incurred on the Rosemont project and other customary conditions. Additionally, under the terms of the amendment, Hudbay has provided a corporate guarantee and Wheaton International will be entitled to certain delay payments, including where construction ceases in any material respect or if the completion test is not achieved within agreed upon timelines.

Hudbay announced its receipt of the approved Mine Plan of Operations ("MPO") for the Rosemont project from the U.S. Forest Service on March 19, 2019. The approval of the MPO follows the receipt of a Section 404 Water Permit from the U.S. Army Corps of Engineers for Rosemont on March 8, 2019. Hudbay has indicated that the issuance of the MPO is the final administrative step in the permitting process and allows Hudbay to proceed with construction activities at Rosemont.

### **Constancia Mine (including Pampacancha Deposit)**

Mine Name:	Constancia
Operator:	Hudbay
Location:	Peru
Stream:	100% of Silver and 50% Gold
Term:	Life of Mine
WPM party:	Wheaton International

On August 8, 2012, Wheaton International entered into a PMPA with Hudbay and its subsidiary Hudbay (BVI) Inc. to acquire 100% of the life of mine payable silver production from the Constancia mine in Peru (the “Constancia mine”). On November 4, 2013, Wheaton International amended the PMPA with Hudbay to include the acquisition of an amount equal to 50% of the life of mine payable gold production from the Constancia mine (as amended, the “Constancia PMPA”).

As at the end of the first quarter of 2014, as a result of capital expenditures at the Constancia mine reaching \$1 billion, a \$125 million cash payment was made by Wheaton International to Hudbay. On September 10, 2014, Wheaton International further amended its agreement with Hudbay and as a result of capital expenditures meeting the \$1.35 billion requirement, on September 26, 2014 Wheaton International paid further cash consideration of \$135 million to Hudbay by delivery of 6,112,282 Common Shares, at an average issuance price of \$22.09 per share. As at December 31, 2014, Wheaton International had paid Hudbay total upfront cash consideration of \$429.9 million.

Wheaton International will make ongoing payments of the lesser of \$5.90 per ounce of silver and \$400 per ounce of gold (both subject to an inflationary adjustment of 1% beginning in the fourth year) or the prevailing market price per ounce of silver and gold delivered.

The silver and gold production at the Constancia mine was subject to the same completion test which was satisfied in 2016. Should Hudbay fail to achieve a minimum level of throughput at the Pampacancha deposit (the “Pampacancha deposit”) during 2018, 2019 or 2020, Wheaton International will be entitled to additional compensation in respect of the gold stream. Hudbay has granted Wheaton International a right of first refusal on any future streaming agreement, royalty agreement, or similar transaction related to the production of silver or gold from the Constancia mine. In connection with the Hudbay agreement, Hudbay Peru S.A.C. (“Hudbay Peru”) provided Wheaton International with a corporate guarantee and certain other security over its assets and the Constancia mine. Wheaton International has also entered into intercreditor arrangements with lenders to Hudbay. Hudbay has disclosed in its MD&A for the year ended December 31, 2018 that one of its key objectives for 2019 is to commence development of the Pampacancha deposit.

Recovery rates for gold under the amended agreement have been fixed given the early nature of the metallurgical test work on gold recoveries from the Pampacancha deposit. Recoveries will be set at 55% for the Constancia mine deposit and 70% for the Pampacancha deposit until Wheaton International receives 265,000 payable ounces, after which actual recoveries will be applied.

See “*Further Disclosure Regarding Mineral Projects on Material Properties – Constancia Mine, Peru*” for details regarding the Constancia mine.

### **777 Mine**

Mine Name:	777
Operator:	Hudbay
Location:	Canada
Stream:	100% of Silver and 50% Gold
Term:	Life of Mine
WPM party:	Wheaton

On August 8, 2012, the Company entered into a PMPA (the “777 PMPA”) with Hudbay to acquire 100% of the life of mine payable silver and gold production from its currently producing 777 mine (the “777 mine”), located in Canada. Wheaton’s share of gold production at the 777 mine remained at 100% until the satisfaction of a completion test relating to the Constancia mine, after which it was reduced to 50% for the remainder of the mine life. Wheaton made an upfront cash payment of \$455.1 million in September, 2012 and, in addition, will make ongoing payments of the

lesser of \$5.90 per ounce of silver and \$400 per ounce of gold (both subject to an inflationary adjustment of 1% beginning in the fourth year and subject to being increased to \$9.90 per ounce of silver and \$550 per ounce of gold after the initial 40 year term) or the prevailing market price per ounce of silver and gold delivered. Hudbay has granted Wheaton a right of first refusal on any future streaming agreement, royalty agreement or similar transaction related to the production of silver or gold from the 777 mine. In connection with the 777 PMPA, certain supplier subsidiaries of Hudbay provided Wheaton with a corporate guarantee and certain other security over their assets and the 777 mine. On March 27, 2017, in connection with the amalgamation of Hudbay with certain of its subsidiaries, including a supplier subsidiary, the 777 PMPA was amended to correctly reference the newly amalgamated Hudbay entity.

## ***Sudbury Mine***

Mine Name:	Sudbury
Operator:	Vale
Location:	Canada
Stream:	70% Gold
Term:	Life of Mine
WPM party:	Wheaton

On February 28, 2013, the Company entered into an agreement to acquire from Vale Switzerland SA (“Vale Switzerland”), a subsidiary of Vale S.A. (“Vale”), an amount of gold equal to 70% of the payable gold production from certain of its currently producing Sudbury mines located in Canada, including the Coleman mine, Copper Cliff mine, Garson mine, Stobie mine, Creighton mine, Totten mine and the Victor project (the “Sudbury mines”) for a period of 20 years. Wheaton made a total upfront cash payment in March, 2013 of \$570 million plus warrants to purchase 10 million Common Shares of Wheaton common stock at a strike price of \$65, with a term of 10 years (refer to “Salobo Mine” below for further details). In addition, Wheaton will make ongoing payments of the lesser of \$400 per ounce of gold or the prevailing market price per ounce of gold delivered. In connection with the Sudbury agreement, Vale also provided Wheaton International with a corporate guarantee.

As of May 2017, the Stobie mine was placed on care and maintenance. Vale indicated that this decision was based upon low metal prices and ongoing market challenges, declining ore grades, and, more recently, seismicity issues that restricted production below the 3,000-foot level.

See “*Description of the Business – Principal Product – Salobo Mine – Operational Update Relative to Vale*” for disclosure regarding the Brumadinho Incident.

## ***Salobo Mine***

Mine Name:	Salobo
Operator:	Vale
Location:	Brazil
Stream:	75% Gold
Term:	Life of Mine
WPM party:	Wheaton International

On February 28, 2013, Wheaton International entered into a PMPA (the “Salobo PMPA”) to acquire from Vale an amount of gold equal to 25% of the life of mine gold production from its currently producing Salobo mine (the “Salobo mine”), located in Brazil. Wheaton International paid total upfront cash consideration of \$1.33 billion in March 2013. Vale also provided Wheaton International with a corporate guarantee.

On March 2, 2015, Wheaton International agreed to amend the Salobo PMPA with Vale Switzerland (the “First Amended Salobo PMPA”) to acquire from Vale Switzerland an additional amount of gold equal to 25% of the life of mine gold production from any minerals from the Salobo mine that enter the Salobo mineral processing facility from and after January 1, 2015. Under the First Amended Salobo PMPA, Wheaton International paid Vale cash consideration of \$900 million on March 24, 2015 for the increased gold stream.

On August 2, 2016, Wheaton International agreed to further amend the First Amended Salobo PMPA (the “Second Amended Salobo PMPA”) to acquire an additional amount of gold equal to 25% of the life of mine gold production in respect of gold production for which an off-taker payment is received after July 1, 2016. Under the Second Amended Salobo PMPA, Wheaton International paid Vale cash consideration of \$800 million and the 10 million Wheaton common share purchase warrants expiring on February 28, 2023 entitling a wholly-owned subsidiary of Vale to purchase one common share of Wheaton for each whole warrant were amended to reduce the strike price from \$65 to \$43.75.

With these amendments, Wheaton International increased the gold stream from 25% to 75% of the life of mine gold production from the Salobo mine.

In addition, Wheaton International is required to make ongoing payments of the lesser of \$400 per ounce of gold (subject to a 1% annual inflation adjustment now commencing as of January 1, 2019) or the prevailing market price per ounce of gold delivered for the full 75% of gold production.

If actual throughput is expanded above 28 Mtpa, then under the terms of the Second Amended Salobo PMPA, Wheaton will be required to make an additional set payment to Vale based on the size of the expansion, the timing of completion and the grade of the material processed. Under the Second Amended Salobo PMPA, Wheaton International will be required to make an additional payment to Vale, relative to the 75% stream, based on a set fee schedule ranging from \$113 million if throughput is expanded beyond 28 Mtpa by January 1, 2036, to up to \$953 million if throughput is expanded beyond 40 Mtpa by January 1, 2021. There will be no additional deposit due if the expansion is completed after January 1, 2036.

*Operational Update Relative to Vale* – As per Vale’s third quarter 2018 report, in October 2018, Vale’s Board of Directors approved the investment in the Salobo III mine expansion (the “Salobo Expansion”). The Salobo Expansion is proposed to include a third concentrator line and will use Salobo’s existing infrastructure. Vale anticipates that the Salobo Expansion, which is scheduled to start up in the first half of 2022 with a ramp-up of 15 months, will result in an increase of throughput capacity from 24 Mtpa to 36 Mtpa once fully ramped up. Based on Vale’s estimated size and timing of the Salobo Expansion, it is estimated that an expansion payment of between \$550 million to \$650 million would be payable. Given Vale’s proposed schedule, this payment would likely become payable in 2023 though the actual amount and timing of the expansion payment may significantly differ from this estimate. At the present time, Vale has not finalized its mine plan for the Salobo Expansion.<sup>3</sup> See “*Further Disclosure Regarding Mineral Projects on Material Properties – Salobo Mine, Brazil*” for details regarding the Salobo mine.

On January 25, 2019, Vale’s mining operations in Brumadinho, Minas Gerais, Brazil experienced a significant breach and failure of a retaining dam around the tailings disposal area, which was reported to be associated with significant injury, loss of life and property damage (the “Brumadinho Incident”). While the Brumadinho Incident did not occur at any mine that is the subject of the Company’s PMPAs, the consequences of the Brumadinho Incident may have an impact on the Company’s business, financial condition and results of operations. See “*Risks Relating to the Company – Credit and Liquidity Risk*”, “*Risks Relating to the Company – Security Over Underlying Assets*”, “*Risks Relating to the Company – Indebtedness and Guarantees Risk*”, “*Risks Relating to the Company – Mine Operator Concentration Risk*”, “*Risks Relating to the Mining Operations – International Operations*”, “*Risks Relating to the Mining Operations – Exploration, Development and Operating Risks*”, and “*Risks Relating to the Mining Operations – Land Title and Indigenous Peoples*”.

**Early Deposit Gold and Silver Interest – Sandspring Project**

Mine Name:	Toroparu
Operator:	Sandspring
Location:	Guyana
Stream:	10% Gold and 50% Silver
Term:	Life of Mine
WPM party:	Wheaton International

On November 11, 2013, Wheaton International entered into a life of mine early deposit precious metal purchase agreement (the “Toroparu Early Deposit Agreement”) to acquire from Sandspring Resources Ltd. (“Sandspring”) an amount of gold equal to 10% of the gold production from its Toroparu project (the “Toroparu project”) located in the Republic of Guyana, South America. Under the Toroparu Early Deposit Agreement, the Company agreed to pay Sandspring total upfront cash consideration of

\$148.5 million, of which \$13.5 million has been paid to date, with the additional \$135 million payable on an installment basis to partially fund construction of the mine. In addition, the Company will make ongoing payments of the lesser \$400 per ounce of gold (subject to an inflationary adjustment of 1% beginning in the fourth year of satisfaction of the completion test) or the prevailing market price per ounce of gold delivered.

<sup>3</sup> In preparing the Company’s long-term production forecast, Wheaton has considered the Salobo Expansion, however as Vale has not finalized its mine plan, Wheaton has not included any production growth as a result of the Salobo Expansion.

On April 22, 2015, the Company amended the Toroparu Early Deposit Agreement to include the acquisition of an amount equal to 50% of the payable silver production from the Toroparu project. Wheaton International will make a total upfront cash payment of \$5 million in connection with this amendment, of which \$2 million has been paid to date, and \$3 million will be payable on an installment basis to partially fund construction of the mine. In addition, Wheaton International will make ongoing payments of the lesser of \$3.90 per ounce of silver (subject to an inflationary adjustment of 1% beginning in the fourth year of satisfaction of the completion test) or the prevailing market price per ounce of silver delivered. As a result of the addition of the silver stream to the Toroparu Early Deposit Agreement, Wheaton International will pay Sandspring a total upfront cash consideration of \$153.5 million. In connection with the amendment to the Toroparu Early Deposit Agreement, Sandspring and ETK Inc., the owner of the Toroparu project, provided Wheaton International with corporate guarantees and certain other security over their assets.

In February 2019, Sandspring announced the advancement of a Preliminary Economic Assessment defining the re-scoping of the Toroparu project, including a revised operating plan. Under the amended Toroparu Early Deposit Agreement, the due date for the feasibility study, environmental study and impact assessment and other related documents (collectively the “Toroparu Feasibility Documentation”) has been extended to December 31, 2019. There will be a 60 day period following the delivery of Toroparu Feasibility Documentation, or after December 31, 2019 if the Toroparu Feasibility Documentation has not been delivered to Wheaton International by such date, where Wheaton International may elect not to proceed with the Toroparu Early Deposit Agreement. If Wheaton elects to terminate, Wheaton International will be entitled to a return of the amounts advanced less \$2 million which is non-refundable or, at Sandspring’s option, the gold stream percentage will be reduced from 10% to 0.909% and the silver stream percentage will be reduced from 50% to nil.

**Antamina Mine**

Mine Name:	Antamina
Operator:	Glencore via CMA
Location:	Peru
Stream:	100% of Glencore 33.75% silver, reduced to 22.5% after receiving 140Mozs
Term:	Life of Mine
WPM party:	Wheaton International

On November 3, 2015, Wheaton International entered into a PMPA (the “Antamina PMPA”) to acquire from Anani, a subsidiary of Glencore plc (“Glencore”), an amount of silver equal to 33.75% of the silver production from the Antamina mine in Peru until the delivery of 140 million ounces of silver and 22.5% of silver production thereafter for the life of mine at a fixed 100% payable rate. Wheaton International paid total upfront cash consideration of \$900 million for the silver stream in December 2015 by using cash on hand together with amounts drawn from the Company’s \$2 billion Revolving Facility (as defined herein). In

addition, Wheaton International will make ongoing payments of 20% of the spot price per silver ounce delivered under the Antamina PMPA. In connection with the Antamina PMPA, Glencore and Noranda Antamina SCRL (the holder of Glencore’s interest in the Antamina mine) also provided Wheaton International with corporate guarantees and certain other assurances, including encumbrance and debt restrictions by Noranda.

See “Further Disclosure Regarding Mineral Projects on Material Properties – Antamina Mine, Peru” for details regarding the Antamina mine.

**Early Deposit Gold and Silver Interest – Cotabambas Project**

Mine Name:	Cotabambas
Operator:	Panoro
Location:	Peru
Stream:	100% Silver and 25% Gold until 90 million silver equivalent ozs then decrease to 66.67% and 16.67%
Term:	Life of Mine
WPM party:	Wheaton International

On March 21, 2016, Wheaton International entered into an early deposit precious metal purchase agreement with Panoro Minerals Ltd. and its wholly owned subsidiary Cordillera Copper Ltd. (“Panoro”) (the “Cotabambas Early Deposit Agreement”) for the Cotabambas project located in Peru (the “Cotabambas project”). Panoro and its subsidiaries have provided Wheaton with corporate guarantees and certain other security over their assets.

Under the terms of the Cotabambas Early Deposit Agreement, Wheaton International is entitled to purchase 100% of the payable silver production and 25% of the payable gold production from the Cotabambas project until 90 million silver equivalent ounces attributable to Wheaton International have been delivered, at which point the stream would decrease to 66.67% of payable silver production and 16.67% of payable gold production for the life of mine.

Under the Cotabambas Early Deposit Agreement, Wheaton International will pay a total cash consideration of \$140 million plus an ongoing production payment of the lesser of: (i) \$5.90 for each silver ounce and \$450 for each gold ounce (both subject to a 1% annual inflation adjustment starting in the fourth year after the completion test is satisfied) and (ii) the prevailing market price. To December 31, 2018, Wheaton International has advanced \$7 million to Panoro. Once certain conditions have been met, Wheaton International will advance an additional \$7 million to Panoro, spread over up to five years. Following the delivery of certain feasibility documentation Wheaton International may elect to terminate the Cotabambas Early Deposit Agreement. If Wheaton International elects to terminate, Wheaton International will be entitled to a return of the portion of the \$14 million paid less \$2 million payable upon certain triggering events occurring. Until January 1, 2020, Panoro has a one-time option to repurchase 50% of the precious metals stream on a change in control for an amount based on a calculated rate of return for Wheaton International.

**Early Deposit Gold and Silver Interest – Kutcho Project**

Mine Name:	Kutcho
Operator:	Kutcho Copper
Location:	Canada
Stream:	100% Silver and 100% Gold until threshold silver and gold ozs delivered
Term:	Life of Mine
WPM party:	Wheaton

On December 14, 2017, Wheaton entered into an early deposit precious metal purchase agreement with Kutcho Copper Corp. (formerly Desert Star Resources Ltd.) (“Kutcho”) (the “Kutcho Early Deposit Agreement”) for the Kutcho project located in British Columbia, Canada (the “Kutcho project”). Kutcho and its subsidiaries have provided Wheaton with corporate guarantees and certain other security over their assets.

Under the terms of the Kutcho Early Deposit Agreement, Wheaton is entitled to purchase 100% of the payable silver production and 100% of the payable gold production from the Kutcho project until 5.6 million ounces of silver and 51,000 ounces of gold have been delivered to Wheaton, at which point the stream would decrease to 66.67% of payable silver production and payable gold production for the life of mine.

Under the Kutcho Early Deposit Agreement, Wheaton will pay total cash consideration of \$65 million plus make ongoing payments of 20% of the spot price per silver ounce and per gold ounce delivered. To December 31, 2018, Wheaton has advanced a total of \$7 million to Kutcho in accordance with the terms of the Kutcho Early Deposit Agreement. Wheaton will be required to make an additional payment to Kutcho, of up to \$20 million, if processing throughput is increased to 4,500 tonnes per day or more within 5 years of attaining commercial production. Following the delivery of certain feasibility documentation, or after two years if the feasibility documentation has not been delivered, Wheaton may elect to terminate the Kutcho Early Deposit Agreement. If Wheaton elects to terminate, Wheaton will be entitled to a return of the portion of the \$7 million paid less \$1 million payable upon certain triggering events occurring.

In addition, effective December 14, 2017, in connection with the Kutcho Early Deposit Agreement, the Company participated in an equity financing undertaken by Kutcho acquiring, by way of private placement, 6,153,846 common shares and warrants to acquire an additional 3,076,923 common shares of Kutcho for total consideration of \$3 million (C\$4 million).

Additionally, effective December 14, 2017, the Company, as lender, advanced to Kutcho \$16 million (C\$20 million) in exchange for a subordinated secured convertible term debt loan agreement (the “Kutcho Convertible Note”). The Kutcho Convertible Note, which has a seven-year term to maturity, carries interest at 10% per annum, compounded and payable semi-annually. Kutcho has the option to defer the first three interest payments until December 31, 2019, at which point one half of the deferred interest is payable in cash and the other half of the deferred interest can, at Kutcho’s option, either (i) be paid in cash; or (ii) be deferred for an additional period not to exceed four years. In the event Kutcho elects to make the second deferral, Wheaton can, at its option, convert the remaining deferred interest into common shares of Kutcho. At any time prior to the maturity date, the Company has the right to convert all or any part of the outstanding amount of the Kutcho Convertible Note into common shares of Kutcho at C\$0.8125 per share. Once the Kutcho Convertible Note has been outstanding for 24 months, Kutcho has the right to repay the Kutcho Convertible Note early, subject to the applicable pre-payment cash penalties as follows:

- 25% of the outstanding amount if pre-paid on or after 24 months until 36 months;
- 20% of the outstanding amount if pre-paid on or after 36 months until 60 months; and
- 15% of the outstanding amount if pre-paid on or after 60 months until maturity.

Effective October 31, 2018, Kutcho had 57,147,628 shares issued and outstanding, resulting in Wheaton owning approximately 11% of Kutcho on a non-diluted basis. However, as the convertible instruments described above are currently exercisable, on a fully diluted basis Wheaton has the potential to own approximately 33% of Kutcho (40% on a non-fully diluted basis).

### ***Voisey's Bay Mine***

Mine Name:	Voisey's Bay
Operator:	Vale
Location:	Canada
Stream:	42.4% cobalt until 31M pounds then 21.2%
Term:	Life of Mine (effective Jan 1, 2021)
WPM party:	Wheaton

On June 11, 2018, the Company entered into a PMPA (the "Voisey's Bay PMPA") to acquire from Vale Switzerland an amount of cobalt equal to 42.4% of the cobalt production from its Voisey's Bay mine, located in Newfoundland and Labrador in Canada, until the delivery of 31 million pounds of cobalt and 21.2% of cobalt production thereafter for the life of mine. Wheaton paid total upfront cash consideration of \$390 million for the cobalt stream in June 2018. In addition, the Company will make ongoing payments of 18% of the spot price of cobalt per pound of cobalt delivered under the agreement until the upfront cash payment is reduced to

\$NIL and 22% of the spot price thereafter. Payable rates for cobalt in concentrate have generally been fixed at 93.3% and deliveries under the contract are scheduled to begin effective January 1, 2021. The agreement also includes a completion test on underground operations measured by the throughput rate. Vale has also provided Wheaton International with a corporate guarantee.

In August 2018, the obligations under the agreement were transferred from Vale Switzerland to Vale Power SA, also a subsidiary of Vale.

See "*Description of the Business – Principal Product – Salobo Mine – Operational Update Relative to Vale*" for disclosure regarding the Brumadinho Incident.

### ***Stillwater and East Boulder Mines***

Mine Name:	Stillwater & East Boulder Mines
Operator:	Sibanye-Stillwater
Location:	United States
Stream:	100% gold & 4.5/2.25/1% palladium
Term:	Life of Mine
WPM party:	Wheaton International

On July 16, 2018, Wheaton International entered into an agreement to acquire from Sibanye Gold Limited ("Sibanye-Stillwater") from the Stillwater and East Boulder mines located in Montana, United States (collectively referred to as the "Stillwater mines") an amount of gold equal to 100% of the gold production and an amount of palladium equal to: (i) 4.5% of Stillwater mines palladium production until 375 Koz delivered to Wheaton; (ii) thereafter, 2.25% of Stillwater mines palladium production until 550 Koz delivered to Wheaton; and, (iii) 1% of Stillwater mines palladium production thereafter for the life of mine. Wheaton International

paid total upfront cash consideration of \$500 million in July 2018. In addition, Wheaton International will make ongoing payments of 18% of the spot price of each of gold and palladium for each ounce of gold or palladium delivered under the agreement until the upfront cash payment is reduced to \$NIL and 22% of the spot price thereafter. Wheaton International is entitled to the attributable gold production for which an offtaker payment is received after July 1, 2018 at a fixed payable rate of 99% and the attributable palladium production for which an offtaker payment is received after July 1, 2018 at a fixed payable rate of 99.6%. Certain subsidiaries of Sibanye-Stillwater (including the owner of the Stillwater mines) have provided Wheaton International with corporate guarantees.

*Operational Update Relative to Sibanye-Stillwater* – In its MD&A for the period ending December 31, 2018, Sibanye-Stillwater has reported that their operational results from their South African gold operations were adversely affected by a strike called by the Association of Mineworkers and Construction Union ("AMCU") on November 21, 2018. Sibanye-Stillwater has stated that this strike has continued into 2019, with their South African gold operations producing approximately 40% of planned production, and with this reduced production level resulting in operating losses and negative operating cash flow from their South African operations. See also "*Risks Relating to the Company – Security Over Underlying Assets*", "*Risks Relating to the Company – Credit and Liquidity Risk*" and "*Risks Relating to the Mining Operations – International Operations*".

## ***Metates Royalty***

On August 7, 2014, the Company, through its wholly owned subsidiary Wheaton Cayman, purchased a 1.5% net smelter return royalty interest (the “Royalty”) in the Metates properties in Mexico from Chesapeake Gold Corp. (“Chesapeake”) for \$9 million. Under the terms of the agreement, at any time prior to August 7, 2019, Chesapeake may reacquire two-thirds of the Royalty, or 1%, for the sum of \$9 million. The Company also has a right of first refusal on any silver streaming, royalty or any other transaction on the Metates properties. In connection with the Royalty, American Gold Metates, S. de R.L. de C.V., the owner of the Metates properties, granted Wheaton a mortgage on the Metates properties. The Royalty is currently the only royalty owned by the Company.

## **Competitive Conditions**{ TC “Competitive Conditions” \f C \l “2” }

The Company is the one of the largest precious metals streaming companies in the world. The Company competes with other companies for PMPAs and similar transactions. The ability of the Company to acquire additional precious metals in the future will depend on its ability to select suitable properties, be successful in any competitive process initiated by a mine operator in respect of a property, and enter into similar PMPAs. See “*Description of the Business — Risk Factors — Competition*” in this annual information form.

## **Operations**{ TC “Operations” \f C \l “2” }

### ***Raw Materials***

The Company purchases precious metals and cobalt pursuant to the PMPAs described under “*Description of the Business – Principal Product*” in this annual information form.

### ***Sales of Principal Product***

There are worldwide markets into which the Company can sell the precious metals and cobalt purchased under its PMPAs and, as a result, the Company will not be dependent on a particular purchaser with regard to the sale of the precious metals or cobalt that it acquires pursuant to its PMPAs. Under certain PMPAs, gold and/or silver is acquired from the mine operator in concentrate form, which is then sold under the terms of the concentrate sales contracts to third-party smelters or traders. The payable silver in concentrate from the Zinkgruvan mine, the Stratoni mine and the Neves-Corvo mine and the payable silver and gold from the Minto mine is/was purchased from the Company by third-party smelters and off-takers at the worldwide market price for gold and silver.

### ***Precious Metal Credit Sales***

Under certain PMPAs, precious metal is acquired from the mine operator in the form of precious metal credits, which is then sold through a network of financial institutions such as third-party brokers or dealers. Revenue from precious metal credit sales is recognized at the time of the sale of such credits, which is also the date that control of the precious metal is transferred to the customer. The Company would not be materially affected should any of these financial institutions cease to buy precious metal credits from the Company as these sales would be redirected to alternate financial institutions.

### ***Employees***

As of the date hereof, the Company and its subsidiaries have an aggregate of 39 employees.

### ***Foreign Interests***

In addition to Canada, the Company currently purchases or expects to be purchasing precious metals from mines in Mexico, the United States, Brazil, Greece, Sweden, Peru, Chile, Argentina, Portugal and Guyana. Any changes in legislation, regulations or shifts in political attitudes in such foreign countries are beyond the control of the Company and may adversely affect its business. The Company may be affected in varying degrees by such factors as government legislation and regulations (or changes thereto) with respect to the restrictions on production, export controls, income and other taxes, expropriation of property, repatriation of profits, environmental legislation, land use, water use, land claims of local people and mine safety. The effect of these factors on the Company cannot be accurately predicted. See “*Description of the Business — Risk Factors — Risks Relating to the Mining Operations — International Operations*” in this annual information form.

## ***Environmental, Health and Sustainability Policies***

Under its environmental and sustainability policy, the Company is committed to the protection of life, health, and the environment for present and future generations. Wheaton is dedicated to providing a safe workplace for all employees, officers, directors, consultants, and visitors, in addition to conducting business in a manner that utilizes best practices to minimize the impact of operations on the environment. Wheaton's Corporate Social Responsibility ("CSR") programs are focused on the communities where the Company's offices are based as well as the communities near the mines from which Wheaton has attributable precious metals production.

Wheaton encourages its employees to contribute their time, resources, and skills to charitable organizations through volunteering and participation in fundraisers, community events, and related activities. Employees are eligible for charitable activity leave each year in addition to employee donation matching programs that promote involvement in charitable fundraising initiatives. As the Company continues to evolve, additional policies will be developed to ensure the highest standards of health, safety, and environmental management are met.

Through the Partner CSR Program, which was established in 2014, Wheaton provides long-term, sustainable benefits to the communities where these mining operations are located by providing financial support for CSR projects managed by the Company's partners. Notably in 2018, the Company supported several programs through the Vale Foundation focused on health, community engagement and income generation opportunities near the Salobo mine, an initiative in collaboration with Glencore to help improve the level of education in the region near the Antamina mine and a program with Hudbay to enhance economic opportunities through improved dairy production in four communities near the Constancia mine.

Through the Local CSR Program, Wheaton has supported a wide variety of charities and causes over the years. Notably in 2018, Wheaton committed a C\$5 million donation over two years to the Department of Earth, Ocean and Atmospheric Sciences at the University of British Columbia to enhance educational and community outreach opportunities designed to inspire and motivate future generations to pursue a career in earth sciences. In addition, Wheaton International commenced a multi-year commitment to support the Special Needs Foundation Cayman, an organization dedicated to the development and provision of appropriate and comprehensive support services for persons with special needs in the Cayman Islands. Wheaton International is proud to be the lead donor on this initiative to change the community's attitude towards disabilities and improve the lives of children and their families.

Wheaton recognizes the importance of taking action on climate change. As part of the Carbon Disclosure Project, the Company measured its total greenhouse gas emissions, reduced them where possible, and offset the difference through Offsetters, Canada's leading carbon management solutions provider. Wheaton has contributed to projects that prevent the equivalent amount of emissions from entering the atmosphere. Since 2016, Wheaton has maintained its status as a carbon neutral company.

## ***Significant Tax Matters***

### Settlement of the Canada Revenue Agency International Tax Dispute

After application of non-capital losses, the CRA Settlement results in no additional cash taxes in respect of the 2005-2010 taxation years.

On July 6, 2015, the Company received a proposal letter (the "Proposal") from the CRA in which the CRA was proposing to reassess the Company under the transfer pricing provisions contained in the *Income Tax Act* (Canada) (the "Tax Act").

On September 24, 2015, the Company received Notices of Reassessment (the "Reassessments") from the CRA totaling C\$353 million for federal and provincial tax, transfer pricing penalties, interest and other penalties for the 2005-2010 taxation years. The CRA's position in the Reassessments was that the transfer pricing provisions of the Tax Act relating to income earned by the Company's foreign subsidiaries outside of Canada should apply such that the income of Wheaton subject to tax in Canada should be increased by an amount equal to substantially all of the income earned outside of Canada by the Company's foreign subsidiaries for the 2005-2010 taxation years.

On January 8, 2016, the Company commenced an appeal in the Tax Court of Canada. The Company was required to make a deposit of 50% of the reassessed amounts of tax, interest and penalties. Additional deposits were required on an annual basis for additional interest accruing. Instead of making this deposit in cash, the Company posted security in the form of letters of guarantee totaling C\$213 million.

On December 13, 2018, the Company announced that it reached a settlement with the CRA which provides for a final resolution of the Company's tax appeal in connection with the reassessment under transfer pricing rules of the 2005 to 2010 taxation years related to the income generated by the Company's foreign subsidiaries outside of Canada (the "CRA Settlement").

Under the terms of the CRA Settlement:

- Income earned outside of Canada by the Company's foreign subsidiaries will not be subject to income tax in Canada;
- The service fee charged by the Company for the services provided to its foreign subsidiaries will be adjusted to:
  - (i) include capital-raising costs incurred by the Company for the purpose of funding streaming transactions entered into by the Company's foreign subsidiaries; and
  - (ii) increase the mark-up applied to the Company's cost of providing services to the Company's foreign subsidiaries, including the above capital-raising costs, from the current 20% to 30%.
- Transfer pricing penalties in the Reassessments will be reversed. Interest will be adjusted consequentially to the adjustments described above, subject to some minor adjustments;
- These transfer pricing principles will also apply to all taxation years after 2010, including the 2011 to 2015 taxation years which are currently under audit, and on a go forward basis, subject to there being no material change in facts or change in law or jurisprudence.

The letters of guarantee totaling C\$213 million posted as security for the Reassessments were cancelled on December 18, 2018 in connection with the CRA Settlement.

After the application of non-capital losses, the CRA Settlement resulted in no additional cash taxes in respect of the 2005 to 2010 taxation years. The Company has requested adjustments to its 2011 to 2017 tax returns to apply the CRA Settlement principles to those taxation years. After the application of non-capital losses, for the 2005 to 2017 taxation years, the Company estimates cash taxes of approximately \$4 million (Cdn\$5.5 million) as well as interest and other penalties of approximately \$4.3 million (Cdn\$5.9 million). The additional taxes and interest and other penalties resulting from the CRA Settlement have been accounted for in the financial statements for the year ended December 31, 2018.

#### 2011 – 2015 Taxation Years: Audit of International Transactions

The CRA had previously commenced audits of the Company's international transactions covering the 2011-2015 taxation years, which are currently ongoing.

#### 2013 Taxation Year: Domestic Reassessment and Audit

On July 24, 2018, the Company received a Notice of Reassessment for the 2013 taxation year ("the 2013 Domestic Reassessment") in which the CRA is seeking to change the timing of the deduction of upfront payments with respect to the Company's PMPAs in respect of Canadian mining assets, so that the cost of precious metal acquired under these Canadian PMPAs is equal to the cash cost paid on delivery plus an amortized amount of the upfront payment determined on a units-of-production basis over the estimated recoverable reserves, and where applicable, resources and exploration potential at the respective mine. The Company's position, as reflected in its Canadian income tax returns, is that the cost of the precious metal acquired under the Canadian PMPAs is equal to the market value while a deposit is outstanding, and the cash cost thereafter, as provided for in the PMPAs.

Management believes the Company's position is correct and that it has filed its tax returns and paid applicable taxes in compliance with Canadian tax law. On October 18, 2018, Wheaton filed a notice of objection under the Tax Act challenging the 2013 Domestic Reassessment.

The 2013 Domestic Reassessment resulted in no additional tax for the 2013 taxation year after applying non-capital losses carried back from subsequent taxation years. However, interest and penalties of approximately \$1 million remained owing (calculated to the date of the 2013 Domestic Reassessment), 50% of which was paid in order to object to the 2013 Domestic Reassessment. Consequential to the 2013 Domestic Reassessment, losses available to offset taxable

income in the 2011 and 2012 taxation years was reduced resulting in reassessments for tax, interest and penalties totaling approximately \$2 million, 50% of which was paid in order to object to the reassessments.

If CRA were to apply the 2013 Domestic Reassessment methodology to the Company's Canadian precious metal purchase agreements for the 2014 to 2018 taxation years, the Company estimates the impact, after applying the principles of the CRA Settlement, to be approximately \$2 million of tax, interest and penalties. The CRA is conducting a domestic audit for the 2014 and 2015 taxation years. The 2016 to 2018 taxation years remain open to a domestic audit.

### ***U.S. Shareholder Class Action***

During July 2015, after the receipt of the Proposal, two putative securities class action lawsuits were filed against the Company in the U.S. District Court for the Central District of California in connection with the Proposal (the "Complaints").

On October 19, 2015, the Complaints were consolidated into one action, *In re Silver Wheaton Securities Litigation*, as against the Company, Randy Smallwood, President & Chief Executive Officer, Gary Brown, Senior Vice President & Chief Financial Officer and Peter Barnes, former Chief Executive Officer (together the "Defendants") and a lead plaintiff (the "Plaintiff") was selected. On December 18, 2015, the Plaintiff filed a consolidated amended complaint (the "Amended Complaint"). The Amended Complaint alleges, among other things, that the Defendants made false and/or misleading statements, as well as failed to disclose material adverse facts about the Company's business, operations, prospects and performance in violation of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Specifically, the Amended Complaint focuses on the Reassessments. The Amended Complaint does not specify a quantum of damages. The Amended Complaint purports to be brought on behalf of persons who purchased or otherwise acquired the Company's securities during an alleged class period of March 30, 2011 to July 6, 2015.

At a hearing on June 6, 2016, the Court denied the Defendants' motion to dismiss. A denial of such a motion is not a ruling on the merits of the claims in the lawsuit. Certification of the class was granted by the Court on May 11, 2017.

On March 27, 2018, the court granted Plaintiff's motion for leave to file a Second Amended Complaint, which adds a claim under Section 10(b) against our auditors. Defendants filed motions to dismiss the Second Amended Complaint, however on March 29, 2019 the court issued a ruling denying the motion to dismiss as against both defendants and our auditors. No trial date is currently set for this matter.

The Company believes the allegations are without merit and intends to vigorously defend against this matter.

### ***Canadian Shareholder Class Action***

By Notice of Action dated August 10, 2016 (as amended September 2, 2016), proposed representative plaintiff Suzan Poirier commenced proceedings pursuant to the *Class Proceedings Act* (Ontario) in the Ontario Superior Court of justice against Wheaton, Randy Smallwood, President and Chief Executive Officer and Gary Brown, Chief Financial Officer. The statement of claim filed alleges, among other things, misrepresentation pursuant to primary and secondary market civil liability provisions under the *Securities Act* (Ontario), common law negligence and negligent misrepresentation. The claim focuses on the Reassessments. The statement of claim purports to be brought on behalf of persons who (i) acquired Common Shares in Wheaton's March 2015 public offering, and (ii) acquired Common Shares in the secondary market, other than in the United States, during an alleged class period of August 14, 2013 to July 6, 2015 inclusive.

The Company believes that the allegations are without merit and intends to vigorously defend against this matter.

## ***Amended Revolving Credit Facilities***

Wheaton's available credit is \$2.0 billion under the Revolving Facility

On February 27, 2015, each of The Bank of Nova Scotia and Bank of Montreal, as co-lead arrangers, joint book-runners and lenders, Canadian Imperial Bank of Commerce, Royal Bank of Canada and The Toronto-Dominion Bank, as co-documentation agents and lenders, HSBC Bank Canada, Bank of Tokyo-Mitsubishi (UFJ) (Canada) and Export Development Canada, as Senior Managers and lenders, and Bank of America, N.A., Canada Branch, Mizuho Bank, Ltd. and National Bank of Canada, as lenders agreed with the Company to enter into a revolving facility (the "Revolving Facility"). The Revolving Facility made available credit of \$2 billion with a maturity date of February 27, 2020. As part of the Revolving Facility, the financial covenants required the Company to maintain: (i) a net debt to tangible net worth ratio of less than or equal to 0.75:1; and (ii) an interest coverage ratio of greater than or equal to 3.00:1. Effective November 20, 2015, the Revolving Facility was amended to only include cash interest expenses for the purposes of calculating the interest coverage ratio. At the Company's option, amounts drawn under the Revolving Facility incur interest based on the Company's leverage ratio at either (i) LIBOR plus 1.20% to 2.20%; or (ii) the Bank of Nova Scotia's Base Rate plus 0.20% to 1.20%. Undrawn amounts under the Revolving Facility are subject to a stand-by fee of 0.24% to 0.44% per annum, dependent on the Company's leverage ratio. Effective March 18, 2016, the maturity date for the Revolving Facility was extended by one year to February 27, 2021. On February 27, 2017, the Revolving Facility was amended to extend the maturity date to February 27, 2022 and make certain other amendments, on February 27, 2018, the Revolving Facility was amended again to extend the maturity date to February 27, 2023 and on February 27, 2019 the Revolving Facility was amended again to extend the maturity date to February 27, 2024. Effective December 31, 2018, the Company had \$1.3 billion drawn under the Revolving Facility.

## ***2016 Offering***

On April 14, 2016, the Company completed a bought deal equity financing (the "2016 Offering"), whereby a total of 38,105,250 Common Shares (inclusive of the underwriters' over-allotment option) were sold at a price of \$16.60 per share, for aggregate gross proceeds to Wheaton of approximately \$633 million. After deducting underwriter commissions, the Company raised total net proceeds of approximately \$607 million, which was used to repay a portion of the debt that was drawn on the Revolving Facility in November 2015 for the \$900 million purchase of the silver stream on the Antamina mine in Peru.

## ***Counterparty Concentration***

Precious metals and cobalt purchases under certain of Wheaton's PMPAs are subject to counterparty concentration, including as follows:

- The counterparty obligations under the Second Amended Salobo PMPA, the Sudbury PMPA and the Voisey's Bay PMPA are guaranteed by the parent company Vale. Total revenues relative to Vale during the year ended December 31, 2018 were 45% of the Company's total revenue;
- The obligations under the Antamina PMPA and the Yauliyacu PMPA are guaranteed by Glencore and its subsidiary. Total revenues relative to Glencore during the year ended December 31, 2018 were 15% of the Company's total revenue;
- The counterparty obligations under the Penasquito PMPA and the Los Filos PMPA are guaranteed by the parent company Goldcorp. Total revenues relative to Goldcorp during the year ended December 31, 2018 were 10% of the Company's total revenue; and
- The counterparty obligations under the Constancia PMPA and the 777 PMPA (which is included as part of Other gold and silver interests) are guaranteed by the parent company Hudbay. Total revenues relative to Hudbay during the year ended December 31, 2018 were 10% of the Company's total revenue.

See "*Description of the Business – Risk Factors – Mine Operator Concentration Risk*".

## Long-Term Investments{ TC “Long-Term Investments” \f C \l “2” }

At December 31, 2018, the Company held long-term investments with a market value of approximately \$164.7 million.

### ***Bear Creek Mining Corporation***

At December 31, 2018, Wheaton owned approximately 13.3 million common shares of Bear Creek Mining Corporation (“Bear Creek”), representing approximately 13% of the outstanding shares of Bear Creek. At December 31, 2018, the fair value of the Company’s investment in Bear Creek was approximately \$10.1 million.

### ***Sabina Gold & Silver Corp.***

At December 31, 2018, Wheaton owned approximately 11.7 million common shares of Sabina Gold & Silver Corp. (“Sabina”), representing approximately 4% of the outstanding shares of Sabina. At December 31, 2018, the fair value of the Company’s investment in Sabina was approximately \$10.5 million.

### ***Arizona Mining Inc.***

On August 10, 2018, Wheaton disposed of its common shares of Arizona Mining Inc. (“Arizona Mining”) in connection with South32 Limited’s acquisition of Arizona Mining for total proceeds of Cdn\$62 million (\$48 million) and a realized gain of \$34 million.

### ***First Majestic Silver Corp.***

During 2018, as part of the consideration for terminating the San Dimas SPA, the Company received 20,914,590 First Majestic common shares, representing approximately 11% of the outstanding shares of First Majestic. At December 31, 2018, the fair value of the Company’s investment in First Majestic was \$123.1 million.<sup>4</sup>

### ***Kutcho Copper Corp.***

At December 31, 2018, Wheaton owned approximately 6.2 million common shares of Kutcho, representing approximately 11% of the outstanding shares of Kutcho. At December 31, 2018, Wheaton also owned warrants to acquire an additional 3.1 million common shares and the Kutcho Convertible Note and as a result, on a fully diluted basis Wheaton has the potential to own 33% of Kutcho common shares (approximately 40% of the common shares of Kutcho on a non fully diluted basis). As a result of this potential ownership position, Wheaton has concluded that it has significant influence over Kutcho and as such the investment in Kutcho is considered an Investment in Associate under accounting rules.

### ***Other***

At December 31, 2018, Wheaton owned common shares of a number publicly-traded mineral exploration, development, technology and mining companies, including:

- ***Tradewind Markets, Inc.*** – On April 25, 2018, Wheaton participated in a strategic private placement with Tradewind Markets, Inc. (“Tradewind”), a private financial technology company that uses blockchain to speed up and streamline digital gold trading.
- ***Adventus Zinc Corporation*** – On July 17, 2018, Wheaton acquired 7,093,392 common shares of Adventus Zinc Corporation (“Adventus”) in a private placement transaction for total consideration of C\$6 million, which shares are subject to certain resale restrictions. Concurrently, Wheaton International paid an additional C\$1 million to acquire a right of first refusal on any new streaming or royalty transactions on precious metals on the existing Adventus properties located in Ecuador and a right of first offer on any subsequently acquired properties in Ecuador. Adventus has announced a proposed change of its name to Adventus Mining Corporation to be approved by shareholders.

---

<sup>4</sup> The First Majestic Shares are subject to volume selling restrictions.

- **MineHub Technologies Inc.** – On December 17, 2018, the Company acquired 1,500,000 common shares of MineHub Technologies Inc. as founder’s equity received by a syndicate of industry partners. MineHub is a technology company seeking to develop a new generation of cost saving applications for the metals and mining industry, including using blockchain technology to help improve operational efficiencies, logistics and financing and reduce costs in the high-value mineral concentrates supply chain.

At December 31, 2018, the fair value of all long-term investments other than Bear Creek, Sabina, First Majestic and Kutcho was approximately \$20.9 million. As these other long-term investments represent less than 10% of the outstanding shares of each of the respective companies and are not considered material to Wheaton’s overall financial position, these investments are not separately identified in this annual information form.

## **Risk Factors**

The operations of the Company are speculative due to the nature of its business which is the purchase of silver and/or gold production from producing mining companies. These risk factors could materially affect the Company’s future operating results and could cause actual events to differ materially from those described in forward-looking statements relating to the Company. The risks described herein are not the only risks facing the Company. Additional risks and uncertainties not currently known to the Company, or that the Company currently deems immaterial, may also materially and adversely affect its business.

### **Risks Relating to the Company**

#### ***Commodity Prices***

The price of the Common Shares and the Company’s financial results may be significantly and adversely affected by a decline in the price of precious metals and cobalt. The price of precious metals and cobalt fluctuates widely, especially in recent years, and is affected by numerous factors beyond the Company’s control, including but not limited to, the sale or purchase of precious metals by various central banks and financial institutions, interest rates, exchange rates, inflation or deflation, fluctuation in the value of the United States dollar and foreign currencies, global and regional supply and demand, and the political and economic conditions of major precious metals and cobalt producing countries throughout the world. The precious metals and cobalt markets tend to be cyclical, and a general downturn could result in a significant decrease in the Company’s revenue. Any such price decline may have a material adverse effect on the Company.

The profitability of Wheaton’s interests under the PMPAs is directly related to the market price of precious metals and cobalt. The Company’s revenue is sensitive to changes in the price of precious metals and cobalt and the overall condition of the precious metal mining industry, as it derives all of its revenue from precious metals and cobalt streams.

In the event that the prevailing market price of precious metals and cobalt is at or below the price at which the Company can purchase such commodities pursuant to the terms of the PMPAs associated with its precious metals and cobalt interests, the Company will not generate positive cash flow or earnings.

Precious metals and cobalt are by-product metals at all of the Mining Operations, other than silver at the Keno Hill mines, silver at the Loma de La Plata zone of the Navidad project, gold at the Toroparu project, palladium at the Stillwater mines and therefore, the economic cut-off applied to the reporting of precious metals and cobalt reserves and resources will be influenced by changes in the commodity prices of other metals at the mines.

#### ***Risks Relating to the Mining Operations***

To the extent that they relate to the production of precious metals or cobalt from, or the continued operation of, the Mining Operations, the Company will be subject to the risk factors applicable to the operators of such mines or projects, some of which are set forth below under “*Risks Relating to the Mining Operations*”.

## ***No Control Over Mining Operations***

The Company has agreed to purchase a certain percentage of the gold, silver, palladium and/or cobalt produced by the Mining Operations. The Company is not directly involved in the ownership or operation of mines and has no contractual rights relating to the operation of the Mining Operations. The owners and operators will generally have the power to determine the manner in which the relevant properties subject to the asset portfolio are exploited, including decisions to expand, advance, continue, reduce, suspend or discontinue production from a property and decisions about the marketing of products extracted from the property. The interests of the Company and the operators of the relevant properties may not always be aligned. As a result, the cash flows of the Company are dependent upon the activities of third parties, which creates the risk that at any time those third parties may: (i) have business interests or targets that are inconsistent with those of the Company; (ii) take action contrary to the Company's policies or objectives; (iii) be unable or unwilling to fulfill their obligations under their agreements with the Company; or (iv) experience financial, operational or other difficulties, including insolvency, which could limit or suspend a third party's ability to perform its obligations under the PMPAs. At any time, any of the operators of the Mining Operations may decide to suspend or discontinue operations, including if the costs to operate the mine, or observe the obligations of the precious metals purchase agreement, exceed the revenues from operations.

Except in limited circumstances, the Company will not be entitled to any material compensation if such operations do not meet their forecasted precious metals or cobalt production targets in any specified period or if the operations shut down, suspend or discontinue on a temporary or permanent basis. There can be no assurance that the precious metals or cobalt production from such properties will ultimately meet forecasts or targets. In addition, payments from production generally flow through the operator and there is a risk of delay and additional expense in receiving such revenues. The PMPA payments are calculated by the operators based on reported production and calculations of the Company's payments are subject to, and dependent upon, the adequacy and accuracy of the operators' production and accounting functions. Failure to receive payments under the PMPAs to which the Company is entitled may have a material adverse effect on the Company. In addition, the Company must rely on the accuracy and timeliness of the public disclosure and other information it receives from the owners and operators of the Mining Operations, and uses such information, including production estimates, in its analyses, forecasts and assessments relating to its own business. If the information provided by such third parties to the Company contains material inaccuracies or omissions, the Company's ability to accurately forecast or achieve its stated objectives may be materially impaired.

## ***Taxes***

A significant portion of the Company's operating profit is derived from its subsidiaries, including Wheaton International which is incorporated and operated in the Cayman Islands and historically, Silverstone Resources (Barbados) Corp., which was incorporated and operated in Barbados, such that the Company's profits are subject to low income tax.

The introduction of new tax laws, regulations or rules, or changes to, or differing interpretation of, or application of, or court decisions in respect of, existing tax laws, regulations or rules in Canada, the Cayman Islands, Barbados, Luxembourg, the Netherlands or any of the countries in which the Company's subsidiaries or the Mining Operations are located, or to which deliveries of precious metals, precious metals credits or cobalt are made, could result in an increase in the Company's taxes, or other governmental charges, duties or impositions. No assurance can be given that new tax laws, regulations or rules will not be enacted or that existing tax laws, regulations or rules will not be changed, interpreted, applied or decided upon in a manner which could result in the Company's profits being subject to additional taxation or which could otherwise have a material adverse effect on the Company or the price of the Common Shares.

Due to the size, complexity and nature of the Company's operations, various tax matters are outstanding from time to time, including audits. If the Company is unable to resolve any of these matters favourably, there may be a material adverse effect on the Company. See "*Description of the Business – Operations – Significant Tax Matters*" for further details on the 2013 taxation year domestic reassessment and audit.

The CRA Settlement principles relative to the 2005 to 2010 taxation years also apply to taxation years after 2010, including the 2011 to 2015 taxation years which are currently under audit, and on a go forward basis, subject to there being no material change in facts or change in law or jurisprudence.

See "*Description of the Business – Operations – Significant Tax Matters*" for further details in respect of the CRA Settlement.

## ***Credit and Liquidity Risk***

The Company is exposed to counterparty risks and liquidity risks including, but not limited to: (i) through the companies with which the Company has PMPAs which may experience financial, operational or other difficulties, including insolvency, which could limit or suspend those companies' ability to perform their obligations under those PMPAs; (ii) through the companies with which the Company has advanced funds in exchange for convertible notes receivable; (iii) through financial institutions that hold the Company's cash and cash equivalents; (iv) through companies that have payables to the Company, including concentrate customers; (v) through the Company's insurance providers; and (vi) through the Company's lenders. The Company is also exposed to liquidity risks in meeting its operating expenditure requirements in instances where cash positions are unable to be maintained or appropriate financing is unavailable. These factors may impact the ability of the Company to obtain loans and other credit facilities in the future and, if obtained, on terms favourable to the Company. If these risks materialize, the Company's operations could be adversely impacted and the trading price of the Common Shares could be adversely affected.

In the event that a counterparty with which the Company has a PMPA were to experience financial, operational or other difficulties (such as Vale in connection with the Brumadinho Incident and Sibanye-Stillwater in respect of the AMCU strike action), then that counterparty may (i) be unable to deliver some or all of the precious metals or cobalt due under the applicable PMPA with that counterparty; (ii) otherwise default in its obligations under that PMPA; (iii) cease operations at one or more mines that are the subject of that PMPA; or (iv) become insolvent. As a result, any of these or other adverse financial or operational consequences on a counterparty may also have a material adverse effect on Wheaton's business, financial condition, results of operation and cash flows. In addition, there is no assurance that Wheaton will be successful in enforcing its rights under any security or guarantees provided to Wheaton.

See "*Description of the Business – Principal Product – Salobo Mine – Operational Update Relative to Vale*" for disclosure regarding the Brumadinho Incident. See "*Description of the Business – Principal Product – Stillwater and East Boulder Mines – Operational Update Relative to Sibanye-Stillwater*" for disclosure regarding the AMCU strike action.

See also "*Risks Relating to the Company – Security Over Underlying Assets*", "*Risks Relating to the Company – Indebtedness and Guarantees Risk*", "*Risks Relating to the Company – Mine Operator Concentration Risk*", "*Risks Relating to the Mining Operations – International Operations*" and "*Risks Relating to the Mining Operations – Exploration, Development and Operating Risks*".

## ***Indebtedness and Guarantees Risk***

Effective December 31, 2018, the Company had \$1.3 billion drawn under the Revolving Facility. As a result of this indebtedness, the Company is required to use a portion of its cash flow to service principal and interest on the debt, which will limit the cash flow available for other business opportunities. The Company's ability to make scheduled payments of the principal of, to pay interest on, or to refinance indebtedness depends on its future performance, which is subject to economic, financial, competitive and other factors beyond its control. The Company may not continue to generate cash flow in the future sufficient to service debt and make necessary capital expenditures. If the Company is unable to generate such cash flow, it may be required to adopt one or more alternatives, such as reducing or eliminating dividends, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. The Company's ability to refinance indebtedness will depend on the capital markets and its financial condition at such time. The Company 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 its debt obligations.

The terms of our Revolving Facility require the Company to satisfy various affirmative and negative covenants and to meet certain financial ratios and tests. These covenants limit, among other things, the Company's ability to incur further indebtedness if doing so would cause it to fail to meet certain financial covenants, create certain liens on assets or engage in certain types of transactions. The Company can provide no assurances that in the future, it will not be limited in its ability to respond to changes in its business or competitive activities or be restricted in its ability to engage in mergers, acquisitions or dispositions of assets. Furthermore, a failure to comply with these covenants, including a failure to meet the financial tests or ratios, would likely result in an event of default under the Revolving Facility and would allow the lenders to accelerate the debt, which could materially and adversely affect the Company's business, financial condition and results of operations and its ability to meet its payment obligations under debt, and the price of the Common Shares.

## **Mine Operator Concentration Risk**

Precious metals and cobalt purchases under certain of Wheaton's PMPAs are subject to mine operator concentration risk, including those set out under the heading "*Description of the Business – Operations – Counterparty Concentration*".

Should any of these mine operators become unable or unwilling to fulfill their obligations under their agreements with Wheaton, or should any of the risk factors identified by Wheaton materialize in respect of the mine operators or the Mining Operations, there could be a material adverse impact on Wheaton, including, but not limited to, Wheaton's revenue, net income and cash flows from operations.

In particular, total revenues relative to PMPAs with Vale during the year ended December 31, 2018 were 45% of the Company's total revenue; operating cash flows from the PMPAs with Vale represented approximately 51% and 45% of the Company's operating cash flows for the years ended December 31, 2018 and December 31, 2017, respectively; and as at December 31, 2018, the PMPAs with Vale proven and probable precious metal and cobalt reserves represented approximately 50% of the Company's total proven and probable gold equivalent ounce ("GEO") reserves, measured and indicated precious metals and cobalt resources represented approximately 13% of the Company's GEO measured and indicated precious metals and cobalt resources and inferred precious metals and cobalt resources represented approximately 14% of the Company's total inferred GEO resources (as described in the Attributable Reserves and Resources section of the Company's MD&A). If Wheaton was unable to purchase any further precious metals or cobalt under the PMPAs with Vale, Wheaton's reserves and resources would be significantly reduced and Wheaton's forecasted gold equivalent production for 2019 and average five year forecasted gold equivalent production for 2019-2023 would be lowered by 40%, leading to a corresponding reduction to its revenue, net earnings and cash flows. See "*Description of the Business – Principal Product – Salobo Mine – Operational Update Relative to Vale*" for disclosure regarding the Brumadinho Incident.

See also "*Risks Relating to the Company – Credit and Liquidity Risk*", "*Risks Relating to the Company – Security Over Underlying Assets*", "*Risks Relating to the Company – Indebtedness and Guarantees Risk*", "*Risks Relating to the Mining Operations – International Operations*", and "*Risks Relating to the Mining Operations – Exploration, Development and Operating Risks*".

## **Hedging Risk**

The Company has a policy that permits hedging its foreign exchange and interest rate exposures to reduce the risks associated with currency and interest rate fluctuations. The Company also has adopted a policy to allow the forward sale of forecast precious metals deliveries provided that such sales shall not extend beyond the end of a financial quarter of the Company.

Hedging involves certain inherent risks including: (a) credit risk — the risk that the creditworthiness of a counterparty may adversely affect its ability to perform its payment and other obligations under its agreement with the Company or adversely affect the financial and other terms the counterparty is able to offer the Company; (b) market liquidity risk — the risk that the Company has entered into a hedging position that cannot be closed out quickly, by either liquidating such hedging instrument or by establishing an offsetting position; and (c) unrealized fair value adjustment risk — the risk that, in respect of certain hedging products, an adverse change in market prices for commodities, currencies or interest rates will result in the Company incurring losses in respect of such hedging products as a result of the hedging products being out-of-the money on their settlement dates.

There is no assurance that a hedging program designed to reduce the risks associated with foreign exchange/currency, interest rate or commodity fluctuations will be successful. Although hedging may protect the Company from adverse changes in foreign exchange/currency, interest rate or commodity fluctuations, it may also prevent the Company from fully benefitting from positive changes.

## **Competition**

The Company competes with other companies for PMPAs and similar transactions. Some of these companies may possess greater financial and technical resources than the Company. Such competition may result in the Company being unable to enter into desirable PMPAs or similar transactions, to recruit or retain qualified employees or to acquire the capital necessary to fund its PMPAs. Existing or future competition in the mining industry could materially adversely affect the Company's prospects for entering into additional PMPAs in the future.

## ***Acquisition Strategy***

As part of the Company's business strategy, it has sought and will continue to seek new exploration, development and mining opportunities in the resource industry. In pursuit of such opportunities, the Company may fail to select appropriate acquisition candidates or negotiate acceptable arrangements, including arrangements to finance acquisitions or integrate the acquired businesses and their personnel into the Company. The Company cannot assure that it can complete any acquisition or business arrangement that it pursues or is pursuing, on favourable terms, or that any acquisitions or business arrangements completed will ultimately benefit the Company.

In the event that the Company chooses to raise debt capital to finance any acquisition, the Company's leverage will be increased. In addition, if the Company chooses to complete an equity financing to finance any acquisition, shareholders may suffer dilution.

In addition, the introduction of new tax laws or regulations, or accounting rules or policies, or rating agency policies, or changes to, or differing interpretations of, or application of, existing tax laws or regulations or accounting rules or policies or rating agency policies, could make PMPAs less attractive to counterparties. Such changes could adversely affect the Company's ability to enter into new PMPAs.

## ***Market Price of the Common Shares***

The Common Shares are listed and posted for trading on the TSX and on the NYSE. An investment in the Company's securities is highly speculative and the price of the Common Shares has fluctuated significantly in the past. During the year ended December 31, 2018, the trading price of the Common Shares on the NYSE has ranged from a low of \$15.08 per share to a high of \$22.87 per share and on the TSX has ranged from a low of C\$19.87 per share to a high of C\$29.93 per share. The market price of the Company's common shares may increase or decrease in response to a number of events and factors, including: the factors identified in this annual information form.

In addition, the global stock markets and prices for mining company shares have experienced volatility that often has been unrelated to the operating performance or prospects of such companies. These market and industry fluctuations may adversely affect the market price of the Common Shares, regardless of the Company's operating performance. The variables which are not directly related to the Company's success and are, therefore, not within the Company's control, include other developments that affect the market for mining company shares, macroeconomic developments globally, the breadth of the public market for the Common Shares and the attractiveness of alternative investments and particular industries. The effect of these and other factors on the market price of the Common Shares on the exchanges on which they trade has historically made its common share price volatile and suggests that the Common Share price will continue to be volatile in the future.

It is not uncommon for securities class actions to be brought against publicly listed companies following periods of volatility or significant decline in the market price of their securities. The Company is currently the subject of litigation in securities class action complaints in the United States and in Canada. See "*Description of the Business – U.S. Shareholder Class Action*" and "*Description of the Business – Canadian Shareholder Class Action*".

## ***Equity Price Risk***

The Company is exposed to equity price risk as a result of holding long-term investments in other companies, including, but not limited to, exploration and mining companies. Just as investing in the Company is inherent with risks such as those set out in this annual information form, by investing in these other companies, the Company is exposed to the risks associated with owning equity securities and those risks inherent in the investee companies. The Company does not actively trade these investments. See "*Description of the Business – Long Term Investments*".

## ***Interest Rate Risk***

The Company is exposed to interest rate risk on its outstanding borrowings and short-term investments. Presently, all of the Company's outstanding borrowings are at floating interest rates. The Company monitors its exposure to interest rates and has not entered into any derivative contracts to manage this risk. During the year ended December 31, 2018, the weighted average effective interest rate paid by the Company on its outstanding borrowings was 3.57% (2017 – 2.57%).

During the years ended December 31, 2018 and December 31, 2017, a fluctuation in interest rates of 100 basis points (1 percent) would have impacted the amount of interest expensed by approximately \$10 million.

### ***Dividend Policy***

The declaration, timing, amount and payment of dividends are at the discretion of the Board of Directors and will depend upon the Company's future earnings, cash flows, acquisition capital requirements and financial condition, and other relevant factors. There can be no assurance that the Company will continue to declare a dividend on a quarterly, annual or other basis.

### ***Dependence Upon Key Management Personnel***

The Company is dependent on the services of a small number of key executives who are highly skilled and experienced. The loss of these persons or the Company's inability to attract and retain additional highly skilled employees may adversely affect its business and future operations.

### ***Litigation***

The Company is from time to time involved in various claims, legal proceedings and disputes arising in the ordinary course of business. If the Company is unable to resolve these disputes favorably, it may have a material adverse effect on the Company. The Company is currently the subject of litigation in securities class action complaints in the United States and Canada. See "*Description of the Business – U.S. Shareholder Class Action*" and "*Description of the Business – Canadian Shareholder Class Action*".

Securities litigation, including current proceedings against the Company as well as potential future proceedings, could result in substantial costs and damages and divert the Company's management's attention and resources. Any decision resulting from any such litigation that is adverse to the Company could have a negative impact on the Company's financial position.

### ***Activist Shareholders***

Publicly-traded companies are often subject to demands or publicity campaigns from activist shareholders advocating for changes to corporate governance practices, such as executive compensation practices, social issues, or for certain corporate actions or reorganizations. There can be no assurance that the Company will not be subject to any such campaign, including proxy contests, media campaigns or other activities. Responding to challenges from activist shareholders can be costly and time consuming and may have an adverse effect on the Company's reputation. In addition, responding to such campaigns would likely divert the attention and resources of the Company's management and Board, which could have an adverse effect on the Company's business and results of operations. Even if the Company were to undertake changes or actions in response to activism, activist shareholders may continue to promote or attempt to effect further changes, and may attempt to acquire control of the Company. If shareholder activists are ultimately elected to the Board, this could adversely affect the Company's business and future operations. This type of activism can also create uncertainty about the Company's future strategic direction, resulting in loss of future business opportunities, which could adversely affect the Company's business, future operations, profitability and the Company's ability to attract and retain qualified personnel.

### ***Reputation Damage***

Reputational damage can be the result of the actual or perceived occurrence of any number of events, and could include any negative publicity, whether true or not. While the Company does not ultimately have direct control over how it is perceived by others, reputational loss could have a material adverse impact on the Company's financial performance, financial condition, cash flows and growth prospects.

### ***Unknown Defects and Impairments***

A defect in a streaming transaction and/or a PMPA may arise to defeat or impair the claim of the Company to such streaming transaction, which may have a material adverse effect on the Company. It is possible that material changes could occur that may adversely affect management's estimate of the recoverable amount for any PMPA. Any impairment estimates, which are based on applicable key assumptions and sensitivity analysis, are based on management's best knowledge of the amounts, events or actions at such time, and the actual future outcomes may differ from any estimates that are provided by the Company. Any impairment charges on the Company's carrying value of the PMPAs could have a material adverse effect on the Company.

### ***Security Over Underlying Assets***

There is no guarantee that the Company will be able to effectively enforce any guarantees, indemnities or other security interests it may have. Should a bankruptcy or other similar event related to a mining operator occur that precludes a party from performing its obligations under the PMPA, the Company would have to enforce its security interest. In the event that the mining operator has insufficient assets to pay its liabilities, it is possible that other liabilities will be satisfied prior to the liabilities owed to the Company. In addition, bankruptcy or other similar proceedings are often a complex and lengthy process, the outcome of which may be uncertain and could result in a material adverse effect on the Company.

In addition, because many of the Mining Operations are owned and operated by foreign affiliates, the Company's security interests may be subject to enforcement and insolvency laws of foreign jurisdictions that differ significantly from those in North America, and the Company's security interests may not be enforceable as anticipated. Further, there can be no assurance that any judgments obtained in Canadian courts will be enforceable in any of those jurisdictions. If the Company is unable to enforce its security interests, there may be a material adverse effect on the Company.

### ***Information Systems and Cyber Security***

Wheaton's information systems, and those of its counterparties under the PMPAs, third-party service providers and vendors, are vulnerable to an increasing threat of continually evolving cyber security risks. Unauthorized parties may attempt to gain access to these systems or the Company's information through fraud or other means of deceiving the Company's counterparties under its PMPAs, third-party service providers or vendors.

Wheaton's operations depend, in part, on how well Wheaton and its suppliers, as well as counterparties under the PMPAs, protect networks, equipment, information technology ("IT") systems and software against damage from a number of threats. Wheaton has entered into agreements with third parties for hardware, software, telecommunications and other services in connection with its operations. The Company's operations and Mining Operations also depend on the timely maintenance, upgrade and replacement of networks, equipment, IT systems and software, as well as pre-emptive expenses to mitigate the risks of failures. Any of these and other events could result in information system failures, delays and/or increases in capital expenses. The failure of information systems or a component of information systems could, depending on the nature of any such failure, adversely impact the Company's reputation and results of operations.

Although to date the Company has not experienced any material losses relating to cyber attacks or other data/information security breaches, there can be no assurance that Wheaton will not incur such losses in the future. The Company's risk and exposure to these matters cannot be fully mitigated because of, among other things, the evolving nature of these threats. As a result, cyber security and the continued development and enhancement of controls, processes and practices designed to protect systems, computers, software, data and networks from attack, damage or unauthorized access remain a priority.

Any future significant compromise or breach of the Company's data/information security, whether external or internal, or misuse of data or information, could result in additional significant costs, lost sales, fines and lawsuits, and damage to the Company's reputation. In addition, as the regulatory environment related to information security, data collection and use, and privacy becomes increasingly rigorous, with new and constantly changing requirements applicable to Wheaton's business and counterparties to the PMPAs, compliance with those requirements could also result in additional costs. As cyber threats continue to evolve, the Company or its counterparties may be required to expend additional resources to continue to modify or enhance protective measures or to investigate and remediate any security vulnerabilities.

### ***Adequacy of Internal Control over Financial Reporting***

The Company documented and tested its internal control procedures during its most recent fiscal year in order to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act (“SOX”). SOX requires an annual assessment by management of the effectiveness of the Company’s internal control over financial reporting and an attestation report by the Company’s independent auditors addressing this assessment. The Company may fail to achieve and maintain the adequacy of its internal control over financial reporting as such standards are modified, supplemented, or amended from time to time, and the Company may not be able to ensure that it can conclude on an ongoing basis that it has effective internal controls over financial reporting in accordance with Section 404 of SOX. The Company’s failure to satisfy the requirements of Section 404 of SOX on an ongoing, timely basis could result in the loss of investor confidence in the reliability of its financial statements, which in turn could harm the Company’s business and negatively impact the trading price of the Common Shares or market value of its other securities. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm the Company’s operating results or cause it to fail to meet its reporting obligations. There can be no assurance that the Company 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 the Company will be able to retain sufficient skilled finance and accounting personnel. Future acquisitions of companies, if any, may provide the Company with challenges in implementing the required processes, procedures and controls in its acquired operations. Future acquired companies, if any, may not have disclosure controls and procedures or internal control over financial reporting that are as thorough or effective as those required by securities laws currently applicable to the Company.

No evaluation can provide complete assurance that the Company’s internal control over financial reporting will detect or uncover all failures of persons within the Company to disclose material information otherwise required to be reported. The effectiveness of the Company’s internal controls and procedures could also be limited by simple errors or faulty judgments. In addition, as the Company continues to expand, the challenges involved in implementing appropriate internal controls over financial reporting will increase and will require that the Company continue to improve its internal controls over financial reporting. The Company cannot be certain that it will be successful in complying with Section 404 of SOX.

### **Risks Relating to the Mining Operations**

#### ***Commodity Price Fluctuations***

The price of metals has fluctuated widely in recent years, and future serious price declines could cause continued development of and commercial production from the Mining Operations to be impracticable. Depending on the price of other metals produced from the mines which generate cash flow to the owners, cash flow from the Mining Operations may not be sufficient and such owners could be forced to discontinue production and may lose their interest in, or may be forced to sell, some of their properties. Future production from the Mining Operations is dependent on metal prices that are adequate to make these properties economic.

In addition to adversely affecting the reserve estimates and financial conditions, declining commodity prices can impact operations by requiring a reassessment of the feasibility of a particular project. Such a reassessment may be the result of a management decision or may be required under financing arrangements related to a particular project. Even if the project is ultimately determined to be economically viable, the need to conduct such a reassessment may cause substantial delays or may interrupt operations until the reassessment can be completed.

#### ***Governmental Regulations***

The Mining Operations are subject to extensive laws and regulations governing exploration, development, production, exports, taxes, labour standards, waste disposal, protection and remediation of the environment, reclamation, historic and cultural resources preservation, mine safety and occupational health, handling, storage and transportation of hazardous substances and other matters. The costs of discovering, evaluating, planning, designing, developing, constructing, operating and closing the Mining Operations in compliance with such laws and regulations are significant. It is possible that the costs and delays associated with compliance with such laws and regulations could become such that the owners or operators of the Mining Operations would not proceed with the development of or continue to operate a mine. Moreover, it is possible that future regulatory developments, such as increasingly strict environmental protection laws, regulations and enforcement policies thereunder, and claims for damages to property and persons resulting from the Mining Operations could result in substantial costs and liabilities for the owners or operators of the Mining Operations in the future such that they would not proceed with the development of, or continue to operate, a mine.

With respect to the Argentinean federal glacier protection law and other environmental matters relating to the Pascua-Lama project, see “*Description of the Business — Principal Product — Pascua-Lama Project*”. See also “*Description of the Business — Principal Product — Peñasquito Mine*”.

### ***International Operations***

The operations at the San Dimas mine, the Los Filos mine, the Peñasquito mine and the Cozamin mine are located in Mexico, the operations at the Salobo mine are located in Brazil, the operations at the Zinkgruvan mine are located in Sweden, the operations at the Yauliyacu mine, the Lagunas Norte mine, the Pierina mine, the Constanca mine, the Antamina mine and the Cotabambas project are located in Peru, the operations of the Stratonis mine are located in Greece, the operations at the Rosemont project and Stillwater mines are located in the United States, the operations of the Keno Hill mines, the Minto mine, the 777 mine, the Sudbury mines, the Kutcho project and the Voisey’s Bay mine are located in Canada, the operations of the Pascua-Lama project are located in Chile and Argentina, the operations of the Veladero mine and the Loma de La Plata project are located in Argentina, the operations at the Toroparu project are located in the Republic of Guyana, and the operations of the Neves-Corvo mine and the Aljustrel mine are located in Portugal, and as such the operations are all exposed to various levels of political, economic and other risks and uncertainties. These risks and uncertainties include, but are not limited to, terrorism, hostage taking, military repression, crime, political instability, currency controls, extreme fluctuations in currency exchange rates, high rates of inflation, labour unrest, the risks of war or civil unrest, expropriation and nationalization, renegotiation or nullification of existing concessions, licenses, permits, approvals and contracts, illegal mining, changes in taxation and mining laws, regulations and policies, restrictions on foreign exchange and repatriation, and changing political conditions and governmental regulations relating to foreign investment and the mining business. Argentina, Peru and Greece are countries that have experienced political, social and economic unrest in the past and protestors have from time to time targeted foreign mining firms.

Changes, if any, in mining or investment policies or shifts in political attitude may adversely affect the operations or profitability of the Mining Operations in these countries. Operations may be affected in varying degrees by government regulations with respect to, but not limited to, restrictions on production, price controls, export controls, currency remittance, income taxes, expropriation of property, foreign investment, maintenance of claims, environmental legislation, land use, land claims of local people, water use, mine safety and the rewarding of contracts to local contractors or requiring foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction. Failure to comply strictly with applicable laws, regulations and local practices relating to mineral right applications and tenure, could result in additional taxes, costs, fines, penalties or other expenses being levied on the Mining Operations, as well as other potential adverse consequences such as economic impacts on the Mining Operations, loss, reduction or expropriation of entitlements, or the imposition of additional local or foreign parties as joint venture partners with carried or other interests.

For example, in February 2016, Primero (the then owner of the San Dimas mine) announced that its Mexican subsidiary, PEM, received a legal claim from the Mexican tax authorities, SAT, seeking to nullify the 2012 APA. As disclosed by First Majestic in its MD&A for the period ended December 31, 2018, if the SAT is successful in retroactively nullifying the 2012 APA, the SAT may seek to audit and reassess PEM in respect of sales of silver in connection with the San Dimas SPA for the tax years 2010 through 2014. First Majestic has indicated in their MD&A for the period ended December 31, 2018 that while it continues to vigorously defend the validity of the 2012 APA and its transfer pricing position, it is also engaging in dialogue with the SAT seeking to resolve matters and bring tax certainty through a negotiated solution. In the event that First Majestic (i) is unable to defend the validity of the 2012 APA, (ii) is unable to pay taxes in Mexico based on realized silver prices, and/or (iii) the SAT proceedings or actions otherwise have an adverse impact on the business, financial condition or results of operation of First Majestic, then, in Wheaton’s opinion (i) First Majestic may be unable to deliver some or all of the silver ounces due under the San Dimas PMPA; (ii) First Majestic may otherwise default in its obligations under the San Dimas PMPA; or (iii) First Majestic may cease operations at San Dimas if it is uneconomic to continue to operate the mine. As a result, any of these or other adverse financial or operational consequences on First Majestic may also have a material adverse effect on Wheaton’s business, financial condition, results of operation and cash flows. See “*Description of the Business — Principal Product — San Dimas Mine*” for further details.

In its MD&A for the period ending December 31, 2018, Sibanye-Stillwater has reported that their operational results from their South African gold operations were adversely affected by a strike called by the AMCU on November 21, 2018. Sibanye-Stillwater has stated that this strike has continued into 2019, with their South African gold operations producing approximately 40% of planned production, and with this reduced production level resulting in operating losses and negative operating cash flow from their South African operations. See “*Description of the Business — Principal Product — Stillwater and East Boulder Mines — Operational Update Relative to Stillwater-Sibanye*”. See also “*Risks Relating to the Company — Security Over Underlying Assets*” and “*Risks Relating to the Company — Credit and Liquidity Risk*”.

The occurrence of these various factors and uncertainties cannot be accurately predicted and could have an adverse effect on the Mining Operations or on the ability of the companies with which the Company has PMPAs to perform their obligations under those PMPAs.

### ***Exploration, Development and Operating Risks***

Mining operations generally involve a high degree of risk. The Mining Operations are subject to all the hazards and risks normally encountered in the exploration, development and production of metals, including unusual and unexpected geologic formations, seismic activity, rock bursts, cave-ins, flooding, environmental hazards and the discharge of toxic chemicals, explosions and other conditions involved in the drilling, blasting and removal of material, any of which could result in damage to, or destruction of mines and other producing facilities, damage to property, injury or loss of life, environmental damage, work stoppages, delays in production, increased production costs and possible legal liability. Milling operations, waste rock dumps and tailings impoundments are subject to hazards such as equipment failure, or breaches in or the failure of retaining dams around tailings disposal areas and may be subject to ground movements or deteriorating ground conditions, or extraordinary weather events that may result in structure instability, or impoundment overflow, requiring that deposition activities be suspended. The tailings storage facility infrastructure, including pipelines, pumps, liners, etc. may fail or rupture. Should any of these risks or hazards affect a Mining Operation, it may (i) result in an environmental release or environmental pollution and liability; (ii) cause the cost of development or production to increase to a point where it would no longer be economic to produce, (iii) result in a write down or write-off of the carrying value of one or more projects, (iv) cause extended interruption to the business, including delays or stoppage of mining or processing, (v) result in the destruction of properties, processing facilities or third party facilities necessary to the Mining Operations, (vi) cause personal injury or death and related legal liability, (vii) result in regulatory fines and penalties, revocation or suspension of permits or licenses; (viii) result in the loss of insurance coverage; or (ix) result in the loss of a social license to operate. The occurrence of any of above-mentioned risks or hazards could result in an interruption or suspension of operation of the Mining Operations and have a material adverse effect on the Company and the trading price of the Company's securities as well as the Company's reputation.

While the Brumadinho Incident did not occur at any mine that is the subject of the Company's PMPAs, the consequences of the Brumadinho Incident may have an impact on the Company's business, financial condition and results of operations. See "*Description of the Business – Principal Product – Salobo Mine – Operational Update Relative to Vale*" for disclosure regarding the Brumadinho Incident. See also "*Risks Relating to the Company – Credit and Liquidity Risk*", "*Risks Relating to the Company – Security Over Underlying Assets*", "*Risks Relating to the Company – Indebtedness and Guarantees Risk*", "*Risks Relating to the Company – Mine Operator Concentration Risk*" and "*Risks Relating to the Mining Operations – International Operations*".

The exploration for and development of mineral deposits involves significant risks which even a combination of careful evaluation, experience and knowledge may not eliminate. Few properties which are explored are ultimately developed into producing mines. Major expenditures may be required to locate and establish mineral reserves, to develop metallurgical processes and to construct mining and processing facilities at a particular site. It is impossible to ensure that the exploration or development programs planned by the owners or operators of the Mining Operations will result in a profitable commercial mining operation. Whether a mineral deposit will be commercially viable depends on a number of factors, some of which are: the particular attributes of the deposit, such as size, grade and proximity to infrastructure; metal prices which are highly cyclical; government regulations, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals and environmental protection; and political stability. The exact effect of these factors cannot be accurately predicted. There can be no assurances that Mining Operations will be established or that the Mining Operations, which are not currently in production, will be brought into a state of commercial production.

While these risks exist for all Mining Operations, these risks are heightened with Early Deposit interests in which the Company invests prior to the production of a final feasibility study. In such a case, there can be no assurances that the Company will be able to secure repayment of any upfront deposit paid to the counterparty under the terms of the precious metals purchase agreement where Mining Operations are not established or not brought into a state of commercial production.

### ***Environmental Regulation and Climate Change***

All phases of mining and exploration operations are subject to governmental regulation including environmental regulation. Environmental legislation is becoming stricter, with increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and heightened responsibility for companies and their officers, directors and employees. Continuing issues with tailings dam failures at other companies' operations may increase the

likelihood that these stricter standards and enforcement mechanisms will be implemented in the future. There can be no assurance that possible future changes in environmental regulation will not adversely affect the Mining Operations, and consequently, the results of Wheaton's operations. Failure by the operators of the Mining Operations to comply with these laws, regulations and permitting requirements may result in enforcement actions, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in Mining Operations or in the exploration or development of mineral properties may also be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations. The occurrence of any environmental violation or enforcement action may have an adverse impact on the Mining Operations, Wheaton's reputation and could adversely affect Wheaton's results of operations. As well, environmental hazards may exist on a property in which the owners or operators of the Mining Operations hold an interest which were caused by previous or existing owners or operators of the properties and of which such owners or operators are not aware at present and which could impair the commercial success, levels of production and continued feasibility and project development and mining operations on these properties.

Wheaton acknowledges international and community concerns around climate change. Wheaton supports initiatives consistent with international initiatives on climate change. Wheaton also acknowledges the increase in the introduction of climate change legislation and treaties at the international, national, state/provincial and local levels. Government regulation relating to emission levels (such as carbon taxes) and energy efficiency is becoming more prevalent and stringent. While some of the costs associated with reducing emissions may be offset by increased energy efficiency and technological innovation, Wheaton expects that increased government regulation will result in increased costs at some Mining Operations if the current regulatory trend continues.

All of Wheaton's PMPAs are exposed to climate-related risks through the Mining Operations. Climate change could result in challenging conditions and extreme weather that may adversely affect the Mining Operations and there can be no assurances that Mining Operations will be able to predict, respond to, measure, monitor or manage the risks posed as a result of climate change factors. While Wheaton will consider certain environmental and climate factors in its decision to proceed with a streaming transaction, Wheaton may not be able to accurately predict which Mining Operations will be subject to climate-related risks or the quantum of such risks. Wheaton's own operations are exposed to climate-related risks as a result of geographical location. Wheaton has sought to reduce its environmental footprint and located its operations in appropriate facilities, however Wheaton's operations may be adversely affected by climate change factors, including extreme weather.

### ***Licenses, Permits, Approvals and Rulings***

The Mining Operations are subject to receiving and maintaining licenses, permits, approvals and rulings from appropriate governmental authorities. Changes in laws and regulations or in the granting or renewal of licenses, permits, approvals and rulings could have a material adverse impact on the revenue the Company derives from the Mining Operations. There can be no assurance that such licenses, permits, approvals or rulings will continue to be obtained, that delays will not occur in connection with obtaining all necessary renewals of such licenses, permits, approvals or rulings for the existing operations, or that additional licenses, permits, approvals or rulings for any possible future changes to operations or additional permits associated with new legislation will be obtained. Prior to any development on any of these properties, licenses and permits from appropriate governmental authorities may be required. Such licenses and permits are subject to change and legal challenge in various circumstances and are required to be kept in good standing through a variety of means, including cash payments and satisfaction of conditions of issue. Such licenses and permits are subject to expiration, relinquishment and/or termination without notice to, control of or recourse by the Company. There can be no assurance that the owners or operators of the Mining Operations will continue to hold all licenses and permits necessary to develop or continue operating at any particular property or successfully respond to any legal challenge to any such licenses or permits. Any failure to comply with applicable laws and regulations, permits and licenses, or to maintain permits and licenses in good standing, even if inadvertent, could result in interruption or closure of exploration, development or mining operations or fines, penalties or other liabilities accruing to the owner or operator of the Mining Operations. Any such occurrence could substantially decrease production or cause the termination of operations on the property and have a material adverse effect on the Company and the trading price of the Company's securities.

See "*Permitting, Construction, Development and Expansion Risk*" for additional permitting risks associated with development projects.

## ***Compliance with Laws***

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may be liable for civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permitting requirements, or more stringent application of existing laws, may have a material adverse impact on the owners or operators of the Mining Operations, resulting in increased capital expenditures or production costs, reduced levels of production at producing properties or abandonment or delays in development of properties.

## ***Infrastructure and Employees***

Natural resource exploration, development and mining activities are dependent on the availability of mining, drilling and related equipment in the particular areas where such activities are conducted. A limited supply of such equipment or access restrictions may affect the availability of such equipment to the owners and operators of the Mining Operations and may delay exploration, development or extraction activities. Certain equipment may not be immediately available, or may require long lead time orders. The lack of availability on acceptable terms or the delay in the availability of any one or more of these items could prevent or delay exploration, development or production at the Mining Operations.

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. Unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Mining Operations.

The ability of the owners and operators of properties to hire and retain geologists and persons with mining expertise is key to those operations. Changes in legislation or otherwise in the relationships of the owners and operators of such properties with their employees may result in strikes, lockouts or other work stoppages. If these factors cause the owners and operators of such properties to decide to cease production at one or more of the properties, such decision could have a material adverse effect on the Company.

## ***Mineral Reserve and Mineral Resource Estimates***

The reported mineral reserves and mineral resources for the Mining Operations are only estimates. No assurance can be given that the estimated mineral reserves and mineral resources will be recovered or that they will be recovered at the rates estimated. Mineral reserve and mineral resource estimates are based on limited sampling and geological interpretation, and, consequently, are uncertain. Mineral reserve and mineral resource estimates may require revision (either up or down) based on actual production experience. Market fluctuations in the price of metals, as well as increased production costs, short-term operating factors or reduced recovery rates, may render certain mineral reserves and mineral resources uneconomic and may ultimately result in a restatement of estimated mineral reserves and/or mineral resources. For example, the Mining Operations may base their estimates of mineral reserves and/or mineral resources on commodity prices that may be higher than spot commodity prices. The economic viability of a mineral deposit may also be impacted by other attributes of a particular deposit, including, but not limited to, size, grade and proximity to infrastructure, governmental regulations and policy relating to price, taxes, duties, land tenure, land use permitting, the import and export of minerals and environmental protection, by political and economic stability and by a social license to operate in a particular jurisdiction. Any of these factors may require operators of Mining Operations to reduce their mineral reserves and mineral resources, which may result in a material and adverse effect on the Company's profitability, results of operations, financial condition and the trading price of the Company's securities.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. Due to the uncertainty of inferred mineral resources, there is no assurance that inferred mineral resources will be upgraded to proven and probable mineral reserves as a result of continued exploration. It should not be assumed that any part or all of the mineral resources on properties underlying the Company's streaming transactions constitute or will be converted into mineral reserves. See "*Technical Information – Cautionary Note to United States Investors Regarding Presentation of Mineral Reserve and Mineral Resource Estimates.*"

### ***Need for Additional Mineral Reserves***

Because mines have limited lives based primarily on proven and probable mineral reserves, the Mining Operations must continually replace and expand their mineral reserves as their mines produce metals. The life of mine estimates for the Mining Operations may not be correct. The ability of the owners or operators of the Mining Operations to maintain or increase their annual production of precious metals or cobalt will be dependent in significant part on their ability to bring new mines into production and to expand mineral reserves at existing mines.

### ***Production Forecasts***

The Company prepares estimates and forecasts of future attributable production from the Mining Operations and relies on public disclosure and other information it receives from the owners, operators and independent experts of the Mining Operations to prepare such estimates. Such information is necessarily imprecise because it depends upon the judgment of the individuals who operate the Mining Operations as well as those who review and assess the geological and engineering information. These production estimates and projections are based on existing mine plans and other assumptions with respect to the Mining Operations which change from time to time, and over which the Company has no control, including the availability, accessibility, sufficiency and quality of ore, the costs of production, the operators' ability to sustain and increase production levels, the sufficiency of infrastructure, the performance of personnel and equipment, the ability to maintain and obtain mining interests and permits and compliance with existing and future laws and regulations. Any such information is forward-looking and no assurance can be given that such production estimates and projections will be achieved. Actual attributable production may vary from the Company's estimates for a variety of reasons, including: actual ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; actual ore mined being less amenable than expected to mining or treatment; short-term operating factors relating to the ore reserves, such as the need for sequential development of orebodies and the processing of new or different ore grades; delays in the commencement of production and ramp up at new mines; revisions to mine plans; unusual or unexpected orebody formations; risks and hazards associated with the Mining Operations, including but not limited to cave-ins, rock falls, rock bursts, pit wall failures, seismic activity, weather related complications, fires or flooding or as a result of other operational problems such as production drilling challenges, power failures or a failure of a key production component such as a hoist, an autoclave, a filter press or a grinding mill; and unexpected labour shortages, strikes, local community opposition or blockades. Occurrences of this nature and other accidents, adverse conditions or operational problems in future years may result in the Company's failure to achieve the production forecasts currently anticipated. If the Company's production forecasts prove to be incorrect, it may have a material adverse effect on the Company.

### ***Land Title and Indigenous Peoples***

A defect in the chain of title to any of the properties underlying the Mining Operations or necessary for the anticipated development or operation of a particular project to which an interest relates may arise to defeat or impair the claim of the operator to a property. In addition, claims by third parties or aboriginal groups in Canada and elsewhere may impact on the operator's ability to conduct activities on a Mining Operation to the detriment of the Company's interests. No assurances can be given that there are no title defects affecting the properties and mineral claims owned or used by the Mining Operations. Such properties and claims may be subject to prior unregistered liens, agreements, transfers or claims, including native land claims, and title may be affected by, among other things, undetected defects. To the extent an owner or operator does not have title to the property, it may be required to cease operations or transfer operational control to another party. In addition, the operators of such operations may be unable to operate them as permitted or to enforce their rights with respect to their properties and claims which may ultimately impair the ability of these operators to fulfill their obligations under the PMPAs.

Various international and national, state and provincial laws, codes, regulations, resolutions, conventions, guidelines, treaties, and other materials relate to the rights of indigenous peoples. Some of the Mining Operations are located in areas presently or previously inhabited or used by indigenous peoples. Many of these laws impose obligations on government to respect the rights of indigenous people. Some mandate that government consult with indigenous people regarding government actions which may affect indigenous people, including actions to approve or grant mining rights or permits. The obligations of government and private parties under the various international and national laws pertaining to indigenous people continue to evolve and be defined. One or more groups of indigenous people may oppose continued operation, further development, or new development of the Mining Operations. Such opposition may be directed through legal or administrative proceedings or protests, roadblocks or other forms of public expression against the activities at the Mining Operations. Opposition by indigenous people to such activities may require modification of or preclude operation

or development of projects or may require the entering into of agreements with indigenous people. Claims and protests of indigenous peoples may disrupt or delay activities of the operators of the Mining Operations.

Primero/First Majestic has noted that three of the properties included in the San Dimas mine are subject to legal proceedings commenced by Ejidos seeking title to the property. Primero/First Majestic has indicated that the proceedings were initiated against defendants who were previous owners of the properties, either deceased individuals who, according to certain public deeds, owned the properties more than 80 years ago, corporate entities that are no longer in existence, or Goldcorp companies. Some of the proceedings also name the Tayolita Property Public Registry as co-defendant.

Primero/First Majestic has indicated that in 2015, two of the legal proceedings were decided in favour of the Ejidos, resulting in Primero/First Majestic gaining standing rights as an affected third party. Primero/First Majestic has disclosed that it obtained injunctions to suspend any legal effect of the decision while it proceeds with a legal process to nullify the Ejidos' claim by submitting evidence of Primero/First Majestic's legal title. Primero/First Majestic has indicated that in February 2017 and April 2017 that two of the two legal processes to nullify the Ejidos' claim was decided in favour of Primero/First Majestic which have been appealed by the relevant Ejido. Primero/First Majestic has indicated that the third legal proceeding commenced by the Ejidos has not been decided and Primero/First Majestic remains without standing to participate therein because it was not named as a party. In the event a final decision is rendered in favour of the Ejido in that proceeding, Primero/First Majestic has indicated that it will seek to annul such decision by defending its position as the legitimate owner. Primero/First Majestic has indicated that the San Dimas mine could face higher costs associated with agreed or mandated payments that would be payable to the Ejidos for use of the properties.

For additional information regarding these matters, see "*Description of the Business — Principal Product — Peñasquito Mine*" and "*Description of the Business – Principal Product – San Dimas Mine*".

#### ***Additional Capital***

The mining, processing, development and exploration of the Mining Operations may require substantial additional financing. Failure to obtain sufficient financing may result in delaying or indefinite postponement of exploration, development or production on any or all of the Mining Operations and related properties or even a loss of property interest. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, will be on satisfactory terms.

#### ***Permitting, Construction, Development and Expansion Risk***

The Salobo mine, the Peñasquito mine, the Keno Hill mines, the Pascua-Lama project, the Loma de La Plata project, the Rosemont project, the Constancia mine, the Victor mine, the Aljustrel mine, the Toroparu project, the Kutcho project and the Cotabambas project are currently in various stages of permitting, construction, development and expansion. Construction, development and expansion of such projects is subject to numerous risks, including, but not limited to, delays in obtaining equipment, material and services essential to completing construction of such projects in a timely manner; delays or inability to obtain all required permits; changes in environmental or other government regulations; currency exchange rates; labour shortages; and fluctuation in metal prices. There can be no assurance that the operators of such projects will have the financial, technical and operational resources to complete the permitting, construction, development and expansion of such projects in accordance with current expectations or at all. See "*Description of the Business – Principal Product – Barrick Mines and Pascua Lama Project*" and "*Description of the Business – Principal Product – Peñasquito Mine*".

#### ***Challenging Global Financial Conditions***

Global financial conditions have been characterized by increased volatility, with numerous financial institutions having either gone into bankruptcy or having to be rescued by government authorities. Global financial conditions could suddenly and rapidly destabilize in response to future events, as government authorities may have limited resources to respond to future crises. Global capital markets have continued to display increased volatility in response to global events. Future crises may be precipitated by any number of causes, including natural disasters, geopolitical instability, changes to energy prices or sovereign defaults. Any sudden or rapid destabilization of global economic conditions could negatively impact the Company's ability, or the ability of the operators of the properties in which the Company holds streams or other interests, to obtain equity or debt financing or make other suitable arrangements to finance their projects. If increased levels of volatility continue or in the event of a rapid destabilization of global economic conditions, it may result in a material adverse effect on the Company and the trading price of the Company's securities could be adversely affected.

***CIM Standards Definitions***

The estimated Mineral Reserves and Mineral Resources for the Mining Operations have been calculated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) — Definitions adopted by CIM Council on May 10, 2014 (the “CIM Standards”) or in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves (the “JORC Code”), the Australian worldwide standards, and were restated in accordance with the requirements of the Canadian Securities Administrators’ National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (“NI 43-101”) to comply with the CIM Standards. The following definitions are reproduced from the CIM Standards:

The term “***Mineral Resource***” is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth’s crust in such form, 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. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

The term “***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 is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes.

The term “***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.

The term “***Measured Mineral Resource***” is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are established with sufficient confidence to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

The term “***Modifying Factors***” are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

The term “***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 term “***Probable Mineral Reserve***” is the economically mineable part of an Indicated Mineral Resource 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.

The term “***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.

***Cautionary Note to United States Investors Regarding Presentation of Mineral Reserve and Mineral Resource Estimates***

The information contained herein has been prepared in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of United States securities laws. The terms “mineral reserve”, “proven mineral reserve” and “probable mineral reserve” are Canadian mining terms defined in accordance with NI 43-101

and the CIM Standards. These definitions differ from the definitions in Industry Guide 7 (“SEC Industry Guide 7”) under the U.S. Securities Act of 1933, as amended (the “U.S. Securities Act”). 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. Also, under SEC Industry Guide 7 standards, a “final” or “bankable” feasibility study is required to report reserves, the three-year historical average price is used in any reserve or cash flow analysis to designate reserves and the primary environmental analysis or report must be filed with the appropriate governmental authority.

In addition, the terms “mineral resource”, “measured mineral resource”, “indicated mineral resource” and “inferred mineral resource” are defined in and required to be disclosed by NI 43-101; however, these terms are not defined terms under SEC Industry Guide 7 and are normally not permitted to be used in reports and registration statements filed with the SEC. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into reserves. “Inferred mineral resources” have a great amount of uncertainty as to their existence and as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Investors are cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Disclosure of “contained ounces” in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute “reserves” by SEC standards as in place tonnage and grade without reference to unit measures.

Accordingly, information contained herein that describes Wheaton’s mineral deposits may not be comparable to similar information made public by U.S. companies subject to reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder. United States investors are urged to consider closely the disclosure in the Company’s annual information form and Form 40-F, copies of which are, or will be, available at [www.sedar.com](http://www.sedar.com) or [www.sec.gov](http://www.sec.gov).

#### ***Summary of Mineral Reserves and Mineral Resources***

The following tables set forth the estimated Mineral Reserves and Mineral Resources (gold, silver, palladium and/or cobalt) for the mines relating to which the Company has PMPAs, adjusted where applicable to reflect the Company’s percentage entitlement to gold, silver, palladium and/or cobalt produced from such mines, as of December 31, 2018, unless otherwise noted. The tables are based on information available to the Company as of the date of this annual information form, and therefore will not reflect updates, if any, after such date. The most current Mineral Reserves and Mineral Resources will be available on the Company’s website:

**Attributable Proven and Probable Reserves (1,2,3,8,25)**

As of December 31, 2018 unless otherwise noted <sup>(6)</sup>	Proven			Probable			Proven & Probable			Process Recovery <sup>(7)</sup> %
	Tonnage	Grade	Contained	Tonnage	Grade	Contained	Tonnage	Grade	Contained	
	Mt	g/t / %	Moz / Mlbs	Mt	g/t / %	Moz / Mlbs	Mt	g/t / %	Moz / Mlbs	
<b>GOLD</b>										
Salobo (75%) <sup>(10)</sup>	464.4	0.34	5.10	403.3	0.29	3.76	867.7	0.32	8.86	68%
Sudbury (70%) <sup>(11)</sup>	14.5	0.51	0.24	21.8	0.45	0.32	36.3	0.48	0.56	77%
Constancia (50%)	227.1	0.06	0.43	39.8	0.06	0.08	266.9	0.06	0.51	61%
Stillwater <sup>(12,13)</sup>	6.3	0.47	0.09	40.1	0.47	0.61	46.4	0.47	0.70	69%
San Dimas (25%) <sup>(14)</sup>	0.4	4.09	0.05	0.9	3.34	0.10	1.4	3.56	0.16	95%
777 (50%)	1.1	1.77	0.06	0.7	2.03	0.05	1.8	1.87	0.11	59%
Minto	0.5	0.25	0.004	3.0	0.63	0.06	3.4	0.58	0.06	77%
Toroparu (10%) <sup>(15,16)</sup>	3.0	1.10	0.10	9.7	0.98	0.31	12.7	1.00	0.41	89%
Kutcho <sup>(16,17)</sup>	-	-	-	10.4	0.37	0.12	10.4	0.37	0.12	41%
Metates Royalty <sup>(18)</sup>	4.3	0.70	0.10	12.3	0.45	0.18	16.5	0.52	0.27	91%
<b>TOTAL GOLD</b>			<b>6.17</b>			<b>5.58</b>			<b>11.76</b>	
<b>SILVER</b>										
Peñasquito (25%) <sup>(10)</sup>	94.1	34.6	104.6	36.0	23.6	27.3	130.1	31.5	131.9	85%
Antamina (33.75%) <sup>(10,11,19)</sup>										
Copper	52.0	7.0	11.7	42.5	8.0	10.9	94.5	7.4	22.6	71%
Copper-Zinc	27.3	17.0	14.9	43.5	13.0	18.2	70.9	14.5	33.1	71%
Constancia	454.2	3.0	43.6	79.5	3.3	8.5	533.7	3.0	52.1	70%
Neves-Corvo										
Copper	5.7	39.0	7.2	24.6	34.0	26.9	30.3	34.9	34.1	24%
Zinc	5.1	78.0	12.7	25.3	63.0	51.2	30.4	65.5	64.0	30%
Zinkgruvan										
Zinc	5.1	78.0	12.7	5.3	89.0	15.0	10.3	83.6	27.7	83%
Copper	2.9	32.0	3.0	0.3	33.0	0.3	3.2	32.1	3.3	70%
Yauliyacu <sup>(20)</sup>	2.5	86.6	6.8	6.1	108.9	21.5	8.6	102.5	28.3	83%
San Dimas (25%) <sup>(14)</sup>	0.4	323.5	4.2	0.9	303.2	9.2	1.4	309.3	13.5	94%
Los Filos	26.2	3.5	3.0	78.1	10.2	25.5	104.2	8.5	28.5	10%
Stratoni	-	-	-	0.6	161.0	3.0	0.6	161.0	3.0	80%
777	2.2	26.4	1.8	1.4	21.6	1.0	3.6	24.6	2.8	48%
Minto	0.5	3.1	0.0	3.0	5.3	0.5	3.4	5.0	0.6	78%
Rosemont <sup>(21)</sup>	408.6	5.0	66.2	108.0	3.0	10.4	516.6	4.6	76.7	76%
Kutcho <sup>(16,17)</sup>	-	-	-	10.4	34.6	11.6	10.4	34.6	11.6	46%
Metates Royalty <sup>(18)</sup>	4.3	17.2	2.4	12.3	13.1	5.2	16.5	14.2	7.5	66%
<b>TOTAL SILVER</b>			<b>294.9</b>			<b>246.3</b>			<b>541.3</b>	
<b>PALLADIUM</b>										
Stillwater (4.5%) <sup>(12,13)</sup>	0.2	13.38	0.09	1.3	13.39	0.58	1.5	13.39	0.66	92%
<b>TOTAL PALLADIUM</b>			<b>0.09</b>			<b>0.58</b>			<b>0.66</b>	
<b>COBALT</b>										
Voisey's Bay (42.4%) <sup>(22)</sup>	4.8	0.14	14.5	6.6	0.13	18.1	11.3	0.13	32.6	84%
<b>TOTAL COBALT</b>			<b>14.5</b>			<b>18.1</b>			<b>32.6</b>	

See Notes Below.

**Attributable Measured & Indicated Resources** <sup>(1,2,3,4,5,9,25)</sup>

As of December 31, 2018 unless otherwise noted <sup>(6)</sup>	Measured			Indicated			Measured & Indicated		
	Tonnage	Grade	Contained	Tonnage	Grade	Contained	Tonnage	Grade	Contained
	Mt	g/t / %	Moz / Mlbs	Mt	g/t / %	Moz / Mlbs	Mt	g/t / %	Moz / Mlbs
<b>GOLD</b>									
Salobo (75%) <sup>(10)</sup>	24.6	0.43	0.34	129.2	0.31	1.29	153.8	0.33	1.63
Sudbury (70%) <sup>(11)</sup>	1.1	0.70	0.02	10.1	0.38	0.12	11.2	0.41	0.15
Constancia (50%)	90.4	0.04	0.12	93.3	0.04	0.13	183.7	0.04	0.25
777 (50%)	-	-	-	0.2	1.79	0.01	0.2	1.79	0.01
Minto	3.4	0.40	0.04	9.3	0.57	0.17	12.6	0.53	0.21
Toroparu (10%) <sup>(15,16)</sup>	1.2	0.93	0.03	9.0	0.87	0.25	10.2	0.87	0.29
Cotabambas (25%) <sup>(16,24)</sup>	-	-	-	29.3	0.23	0.22	29.3	0.23	0.22
Kutcho <sup>(16,17)</sup>	-	-	-	6.7	0.62	0.13	6.7	0.62	0.13
<b>TOTAL GOLD</b>			<b>0.56</b>			<b>2.32</b>			<b>2.88</b>
<b>SILVER</b>									
Peñasquito (25%) <sup>(10)</sup>	23.5	28.3	21.4	26.2	22.8	19.2	49.7	25.4	40.6
Antamina (33.75%) <sup>(10,11,19)</sup>									
Copper	29.7	7.0	6.7	106.7	9.0	30.9	136.4	8.6	37.5
Copper-Zinc	8.1	16.0	4.2	46.2	18.0	26.8	54.3	17.7	30.9
Constancia	180.8	2.4	13.7	186.5	2.3	13.5	367.3	2.3	27.3
Neves-Corvo									
Copper	4.4	59.0	8.4	28.5	50.9	46.6	32.9	52.0	55.0
Zinc	10.4	55.7	18.7	64.0	52.2	107.3	74.4	52.7	126.0
Zinkgruvan									
Zinc	2.6	67.5	5.7	3.5	56.3	6.3	6.1	61.1	12.0
Copper	2.0	34.7	2.2	0.2	52.2	0.3	2.1	36.0	2.5
Yauliyacu <sup>(20)</sup>	5.3	111.9	19.1	8.4	163.4	43.9	13.7	143.4	63.0
Los Filos	88.5	5.3	15.2	133.7	8.1	35.0	222.2	7.0	50.2
Aljustrel <sup>(23)</sup>	1.3	65.6	2.7	20.5	60.3	39.7	21.8	60.7	42.4
Stratoni	-	-	-	0.3	148.2	1.2	0.3	148.2	1.2
777	-	-	-	0.4	29.6	0.4	0.4	29.6	0.4
Minto	3.4	3.4	0.4	9.3	5.0	1.5	12.6	4.5	1.8
Rosemont <sup>(21)</sup>	112.2	3.9	14.1	358.0	2.7	31.5	470.2	3.0	45.6
Pascua-Lama (25%)	10.7	57.2	19.7	97.9	52.2	164.4	108.6	52.7	184.1
Keno Hill (25%)									
Underground	-	-	-	1.1	523.1	18.6	1.1	523.1	18.6
Elsa Tailings	-	-	-	0.6	119.0	2.4	0.6	119.0	2.4
Loma de La Plata (12.5%)	-	-	-	3.6	169.0	19.8	3.6	169.0	19.8
Toroparu (50%) <sup>(15,16)</sup>	21.9	1.1	0.8	98.5	0.7	2.3	120.4	0.8	3.1
Cotabambas <sup>(16,24)</sup>	-	-	-	117.1	2.7	10.3	117.1	2.7	10.3
Kutcho <sup>(16,17)</sup>	-	-	-	6.7	27.3	5.9	6.7	27.3	5.9
<b>TOTAL SILVER</b>			<b>153.0</b>			<b>627.6</b>			<b>780.6</b>
<b>COBALT</b>									
Voisey's Bay (42.4%) <sup>(22)</sup>	-	-	-	1.4	0.05	1.6	1.4	0.05	1.6
<b>TOTAL COBALT</b>						<b>1.6</b>			<b>1.6</b>

See Notes Below.

**Attributable Inferred Resources** <sup>(1,2,3,4,5,9,25)</sup>

As of December 31, 2018 unless otherwise noted <sup>(6)</sup>	Inferred		
	Tonnage	Grade	Contained
	Mt	g/t / %	Moz / Mlbs
<b>GOLD</b>			
Salobo (75%) <sup>(10)</sup>	128.4	0.28	1.16
Sudbury (70%) <sup>(11)</sup>	4.7	0.66	0.10
Constancia (50%)	30.4	0.08	0.08
Stillwater <sup>(12,13)</sup>	87.3	0.45	1.25
San Dimas (25%) <sup>(14)</sup>	1.4	3.60	0.17
777 (50%)	0.2	3.09	0.02
Minto	6.1	0.51	0.10
Cotabambas (25%) <sup>(16,24)</sup>	151.3	0.17	0.84
Toroparu (10%) <sup>(15,16)</sup>	12.9	0.76	0.32
Kutcho <sup>(16,17)</sup>	10.7	0.26	0.09
Metates Royalty <sup>(18)</sup>	0.8	0.39	0.01
<b>TOTAL GOLD</b>			<b>4.13</b>
<b>SILVER</b>			
Peñasquito (25%) <sup>(10)</sup>	3.7	13.5	1.6
Antamina (33.75%) <sup>(10,11,19)</sup>			
Copper	211.3	10.0	67.9
Copper-Zinc	105.6	16.0	54.3
Constancia	60.8	2.7	5.2
Neves-Corvo			
Copper	10.5	38.0	12.8
Zinc	14.1	52.0	23.5
Yauliyacu <sup>(20)</sup>	11.9	298.9	114.8
Zinkgruvan			
Zinc	16.3	76.0	39.9
Copper	0.4	27.0	0.4
San Dimas (25%) <sup>(14)</sup>	1.4	341.3	15.7
Stratoni	1.1	153.0	5.5
777	0.4	40.4	0.5
Minto	6.1	4.9	1.0
Los Filos	98.2	6.1	19.4
Rosemont <sup>(21)</sup>	68.7	1.7	3.7
Pascua-Lama (25%)	3.8	17.8	2.2
Aljustrel <sup>(23)</sup>	8.7	50.4	14.0
Keno Hill (25%)			
Underground	0.4	404.1	5.7
Loma de La Plata (12.5%)	0.2	76.0	0.4
Cotabambas <sup>(16,24)</sup>	605.3	2.3	45.4
Toroparu (50%) <sup>(15,16)</sup>	58.7	0.1	0.1
Kutcho <sup>(16,17)</sup>	10.7	21.5	7.4
Metates Royalty <sup>(18)</sup>	0.8	9.5	0.2
<b>TOTAL SILVER</b>			<b>441.7</b>
<b>PALLADIUM</b>			
Stillwater (4.5%) <sup>(12,13)</sup>	0.9	12.75	0.36
<b>TOTAL PALLADIUM</b>			<b>0.36</b>
<b>COBALT</b>			
Voisey's Bay (42.4%) <sup>(22)</sup>	4.0	0.11	9.3
<b>TOTAL COBALT</b>			<b>9.3</b>

See Notes Below.

- (1) All Mineral Reserves and Mineral Resources have been estimated in accordance with the 2014 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards for Mineral Resources and Mineral Reserves and National Instrument 43-101 – Standards for Disclosure for Mineral Projects (“NI 43-101”), or the 2012 Australasian Joint Ore Reserves Committee (JORC) Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- (2) Mineral Reserves and Mineral Resources are reported above in millions of metric tonnes (“Mt”), grams per metric tonne (“g/t”) for gold, silver and palladium, percent (“%”) for cobalt, millions of ounces (“Moz”) for gold, silver and palladium and millions of pounds (“Mlbs”) for cobalt.
- (3) Qualified persons (“QPs”), as defined by the NI 43-101, for the technical information contained in this document (including the Mineral Reserve and Mineral Resource estimates) are:
  - a. Neil Burns, M.Sc., P.Ge. (Vice President, Technical Services); and
  - b. Ryan Ulansky, M.A.Sc., P.Eng. (Senior Director, Engineering),
 both employees of the Company (the “Company’s QPs”).
- (4) The Mineral Resources reported in the above tables are exclusive of Mineral Reserves. The San Dimas mine, Minto mine, Neves-Corvo mine, Zinkgruvan mine, Stratoni mine, Stillwater mines and Toroparu project (gold only) report Mineral Resources inclusive of Mineral Reserves. The Company’s QPs have made the exclusive Mineral Resource estimates for these mines based on average mine recoveries and dilution.
- (5) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.
- (6) Other than as detailed below, Mineral Reserves and Mineral Resources are reported as of December 31, 2018 based on information available to the Company as of the date of this document, and therefore will not reflect updates, if any, after such date.
  - a. Mineral Resources for Aljustrel’s Feitais and Moinho mines are reported as of November 30, 2010. Mineral Resources for the Estação project are reported as of December 31, 2007.
  - b. Mineral Resources and Mineral Reserves for the Minto mine are reported as of December 31, 2017.
  - c. Mineral Resources for the Cotabambas project are reported as of June 20, 2013.
  - d. Mineral Resources for Keno Hill’s Elsa Tailings project are reported as of April 22, 2010, Bellekeno mine Indicated Mineral Resources as of September 30, 2013, Mineral Resources for the Lucky Queen, Flame & Moth, Onek projects as of January 3, 2017 and Birmingham projects as of September 17, 2018.
  - e. Mineral Resources for the Kutcho project are reported as of February 22, 2019 and Mineral Reserves for the Kutcho project are reported as of June 15, 2017.
  - f. Mineral Resources for the Loma de La Plata project are reported as of May 20, 2009.
  - g. Mineral Resources and Mineral Reserves for the Los Filos mine are reported as of October 31, 2018.
  - h. Mineral Resources and Mineral Reserves for the Peñasquito, Neves-Corvo and Zinkgruvan mines are reported as of June 30, 2018.
  - i. Mineral Resources and Mineral Reserves for the Metates royalty are reported as of April 29, 2016.
  - j. Mineral Resources and Mineral Reserves for the Rosemont project are reported as of March 30, 2017.
  - k. Mineral Resources and Mineral Reserves for the Stratoni mine are reported as of September 30, 2018.
  - l. Mineral Resources for the Toroparu project are reported as of September 20, 2018 and Mineral Reserves are reported as of March 31, 2013.
- (7) Process recoveries are the average percentage of gold, silver palladium or cobalt in a saleable product (doré or concentrate) recovered from mined ore at the applicable site process plants as reported by the operators.
- (8) Mineral Reserves are estimated using appropriate process and mine recovery rates, dilution, operating costs and the following commodity prices:
  - a. Antamina mine - \$2.94 per pound copper, \$1.05 per pound zinc, \$7.96 per pound molybdenum and \$19.54 per ounce silver.
  - b. Constancia mine - \$1,260 per ounce gold, \$18.00 per ounce silver, \$3.00 per pound copper and \$11.00 per pound molybdenum.
  - c. Kutcho project – 1.5% copper cut-off for the Main deposit and 1.0% copper cut-off for the Esso deposit, both assuming \$2.75 per pound copper, \$1.10 per pound zinc, \$1,250 per ounce gold and \$17.00 per ounce silver.
  - d. Los Filos mine - \$1,200 per ounce gold and \$4.39 per ounce silver.
  - e. Metates royalty – 0.34 grams per tonne gold equivalent cut-off assuming \$1,200 per ounce gold and \$19.20 per ounce silver.
  - f. Minto mine – 0.5% copper cut-off for Open Pit and \$64.00 per tonne NSR cut-off for Underground assuming \$300 per ounce gold, \$3.90 per ounce silver and \$2.50 per pound copper.
  - g. Neves-Corvo mine – 1.3% copper cut-off for the copper Mineral Reserves and 5.5% zinc equivalent cut-off for the zinc Mineral Reserves, both assuming \$2.75 per pound copper, \$1.00 per pound lead and zinc.
  - h. Peñasquito mine - \$1,200 per ounce gold, \$18.00 per ounce silver, \$2.75 per pound copper, \$0.95 per pound lead and \$1.15 per pound zinc.
  - i. Rosemont project - \$6.00 per ton NSR cut-off assuming \$18.00 per ounce silver, \$3.15 per pound copper and \$11.00 per pound molybdenum.
  - j. Salobo mine – 0.253% copper equivalent cut-off assuming \$1,275 per ounce gold and \$3.22 per pound copper.
  - k. San Dimas mine – 220 grams per tonne silver equivalent cut-off for longhole and 230 grams per tonne silver equivalent cut-off for cut and fill assuming \$1,250 per ounce gold and \$17.00 per ounce silver.
  - l. Stillwater mines - combined platinum and palladium cut-off of 6.86 g/t
  - m. Stratoni mine – 13.5% zinc equivalent cut-off assuming \$8.14 per ounce silver, \$1.02 per pound lead and \$1.13 per pound zinc.
  - n. Sudbury mines - \$1,275 per ounce gold, \$8.16 per pound nickel, \$3.22 per pound copper, \$800 per ounce platinum, \$875 per ounce palladium and \$22.68 per pound cobalt.
  - o. Toroparu project – 0.38 grams per tonne gold cut-off assuming \$1,070 per ounce gold for fresh rock and 0.35 grams per tonne gold cut-off assuming \$970 per ounce gold for saprolite.

- p. Voisey's Bay mines:
    - i. Ovoid, Mini Ovoid and SE Extension Mineral Reserves – Cdn \$25.43 per tonne assuming \$6.35 per pound nickel, \$3.04 per pound copper and \$24.81 per pound cobalt.
    - ii. Reid Brook Mineral Reserves - \$275.00 per tonne assuming \$9.72 per pound nickel, \$3.40 per pound copper and \$11.50 per pound cobalt.
    - iii. Eastern Deeps Mineral Reserves - \$225.00 per tonne assuming \$6.35 per pound nickel, \$2.81 per pound copper and \$18.13 per pound cobalt.
  - q. Yauliyacu mine - \$19.54 per ounce silver, \$2.94 per pound copper, and \$1.05 per pound zinc.
  - r. Zinkgruvan mine – 5.2% zinc equivalent cut-off for the zinc Mineral Reserve and 1.4% copper cut-off for the copper Mineral Reserve, both assuming \$2.75 per pound copper and \$1.00 per pound lead and zinc.
  - s. 777 mine – \$1,283 per ounce gold, \$17.50 per ounce silver, \$3.10 per pound copper and \$1.24 per pound zinc.
- (9) Mineral Resources are estimated using appropriate recovery rates and the following commodity prices:
- a. Aljustrel mine – 4.5% zinc cut-off for Feitais and Moinho mines zinc Mineral Resources and 4.0% zinc cut-off for Estação zinc Mineral Resources.
  - b. Antamina mine - \$3.30 per pound copper, \$1.23 per pound zinc, \$9.29 per pound molybdenum and \$20.50 per ounce silver.
  - c. Constancia mine – \$1,260 per ounce gold, \$18.00 per ounce silver, \$3.00 per pound copper and \$11.00 per pound molybdenum.
  - d. Cotabambas project – 0.2% copper equivalent cut-off assuming \$1,350 per ounce gold, \$23.00 per ounce silver, \$3.20 per pound copper and \$12.50 per pound molybdenum.
  - e. Keno Hill mines:
    - i. Bellekeno mine – Cdn \$185 per tonne NSR cut-off assuming \$22.50 per ounce silver, \$0.85 per pound lead and \$0.95 per pound zinc.
    - ii. Lucky Queen, Onek, Flame and Moth – Cdn \$185 per tonne NSR cut-off assuming \$1,300 per ounce gold, \$20.00 per ounce silver, \$0.95 per pound lead and \$1.00 per pound zinc.
    - iii. Birmingham - Cdn \$185 per tonne NSR cut-off assuming \$20.80 per ounce silver, \$1.10 per pound lead, \$1.20 per pound zinc and \$1,450 per ounce gold.
    - iv. Elsa Tailings project – 50 grams per tonne silver cut-off assuming \$17.00 per ounce silver and \$1,000 per ounce gold.
  - f. Kutcho project – 1.2% copper equivalent cut-off assuming \$3.00 per pound copper, \$1.25 per pound zinc, \$1,350 per ounce gold and \$17.00 per ounce silver.
  - g. Loma de La Plata project – 50 grams per tonne silver equivalent cut-off assuming \$12.50 per ounce silver and \$0.50 per pound lead.
  - h. Los Filos mine - \$1,400 per ounce gold and \$4.39 per ounce silver.
  - i. Metates royalty – 0.34 grams per tonne gold equivalent cut-off assuming \$1,200 per ounce gold and \$19.20 per ounce silver.
  - j. Minto mine – 0.5% copper cut-off for Open Pit and 1.0% copper cut-off for Underground.
  - k. Neves-Corvo mine – 1.0% copper cut-off for the copper Mineral Resource and 3.0% zinc cut-off for the zinc Mineral Resource, both assuming \$2.75 per pound copper and \$1.00 per pound lead and zinc.
  - l. Pascua-Lama project – \$1,500 per ounce gold, \$18.75 per ounce silver and \$3.50 per pound copper.
  - m. Peñasquito mine - \$1,400 per ounce gold, \$20.00 per ounce silver, \$1.05 per pound lead and \$1.25 per pound zinc.
  - n. Rosemont project – \$5.70 per ton NSR cut-off assuming \$18.00 per ounce silver, \$3.15 per pound copper and \$11.00 per pound molybdenum.
  - o. Salobo mine – 0.253% copper equivalent cut-off assuming \$1,275 per ounce gold and \$3.22 per pound copper.
  - p. San Dimas mine – 210 grams per tonne silver equivalent cut-off assuming \$1,300 per ounce gold and \$17.50 per ounce silver.
  - q. Stillwater mines – geologic boundaries for Inferred Mineral Resources at both the Stillwater mine and East Boulder mine.
  - r. Stratoni mine – Geologically constrained to massive sulfide contacts.
  - s. Sudbury mines - \$1,275 per ounce gold, \$8.16 per pound nickel, \$3.22 per pound copper, \$800 per ounce platinum, \$875 per ounce palladium and \$22.68 per pound cobalt.
  - t. Toroparu project – 0.30 grams per tonne gold cut-off assuming \$1,350 per ounce gold and \$3.00 per pound copper.
  - u. Voisey's Bay mines:
    - i. Reid Brook Mineral Resources - \$275.00 per tonne assuming \$9.72 per pound nickel, \$3.40 per pound copper and \$11.50 per pound cobalt.
    - ii. Discovery Hill Mineral Resources - \$24.81 per tonne assuming \$9.53 per pound nickel, \$3.13 per pound copper and \$12.50 per pound cobalt.
  - v. Yauliyacu mine – \$20.50 per ounce silver, \$3.30 per pound copper, and \$1.23 per pound zinc.
  - w. Zinkgruvan mine – 3.7% zinc equivalent cut-off for the zinc Mineral Resource and 1.0% copper cut-off for the copper Mineral Resource, both assuming \$2.75 per pound copper and \$1.00 per pound lead and zinc.
  - x. 777 mine – \$1,283 per ounce gold, \$17.50 per ounce silver, \$3.10 per pound copper and \$1.24 per pound zinc.
- (10) The scientific and technical information in these tables regarding the Peñasquito mine, the Antamina mine and the Constancia mine was sourced by the Company from the following SEDAR ([www.sedar.com](http://www.sedar.com)) filed documents:
- a. Peñasquito - Goldcorp annual information form filed on March 28, 2019;

- b. Antamina – Glencore’s December 31, 2018 Resources and Reserves report (<http://www.glencore.com/investors/reports-results/reserves-and-resources>); and
- c. Constancia – Hudbay’s annual information form for the year ended December 31, 2018 filed on March 29, 2019.

The Company QP’s have approved this partner disclosed scientific and technical information in respect of the Peñasquito mine, Antamina mine and Constancia mine, as well as the Company’s Mineral Resource and Mineral Reserve estimates for the Salobo mine.

- (11) The Company’s attributable Mineral Resources and Mineral Reserves for the Antamina silver interest, Sudbury gold interest and Voisey’s Bay cobalt interest, have been constrained to the production expected for the various contracts.
- (12) The Stillwater precious metals purchase agreement provides that effective July 1, 2018, Sibanye-Stillwater will deliver 100% of the gold production for the life of the mines and 4.5% of palladium production until 375,000 ounces are delivered, 2.25% of palladium production until a further 175,000 ounces are delivered and 1.0% of the palladium production thereafter for the life of the mines. Attributable palladium Mineral Reserves and Mineral Resources have been calculated based upon the 4.5% / 2.25% / 1.0% production entitlements.
- (13) The Stillwater mine has been in operation since 1986 and the East Boulder mine since 2002. Individual grades for platinum, palladium, gold and rhodium are estimated using ratios applied to the combined platinum plus palladium grades based upon average historic production results provided to the Company as of the date of this document. As such, the Attributable Mineral Resource and Mineral Reserve palladium and gold grades for the Stillwater mines have been estimated using the following ratios:
  - a. Stillwater mine:  $Pd = (Pt + Pd) / (1/3.5 + 1)$  and  $Au = (Pd + Pt) \times 0.0238$
  - b. East Boulder mine:  $Pd = (Pt + Pd) / (1/3.6 + 1)$  and  $Au = (Pd + Pt) \times 0.0323$
- (14) Under the terms of the San Dimas PMPA, the Company is entitled to an amount equal to 25% of the payable gold production plus an additional amount of gold equal to 25% of the payable silver production converted to gold at a fixed gold to silver exchange ratio of 70:1 from the San Dimas mine. If the average gold to silver price ratio decreases to less than 50:1 or increases to more than 90:1 for a period of 6 months or more, then the “70” shall be revised to “50” or “90”, as the case may be, until such time as the average gold to silver price ratio is between 50:1 to 90:1 for a period of 6 months or more in which event the “70” shall be reinstated.
- (15) The Company’s agreement with Sandspring is an Early Deposit agreement, whereby the Company will be entitled to purchase 10% of the gold production and 50% of the silver production from the Toroparu project for the life of mine.
- (16) The Company has the option in the Early Deposit agreements, to terminate the agreement following the delivery of a feasibility study or if feasibility study has not been delivered within a required time frame.
- (17) The Company’s agreement with Kutcho Copper is an Early Deposit agreement, whereby the Company will be entitled to purchase 100% of the gold and silver production from the Kutcho project until 51,000 ounces of gold and 5.6 million ounces of silver have been delivered, after which both streams will decrease to 66.67% for the remaining life of mine.
- (18) Effective August 7, 2014, the Company entered into an agreement for a 1.5% net smelter returns royalty on Chesapeake Gold Corp.’s (Chesapeake) Metates property, located in Mexico. As part of the agreement, Chesapeake will have the right at any time for a period of five years to repurchase two-thirds of the royalty, with the Company retaining a 0.5% royalty interest.
- (19) The Antamina silver purchase agreement in respect to the Antamina mine (November 3, 2015) provides that Glencore will deliver 33.75% of the silver production until 140 million ounces are delivered and 22.5% of silver production thereafter, for a 50 year term that can be extended in increments of 10 years at the Company’s discretion. Attributable reserves and resources have been calculated on the 33.75% / 22.5% basis.
- (20) The Yauliyacu mine silver purchase agreement provides that Glencore will deliver to the Company a per annum amount equal to the first 1.5 million ounces of payable silver produced at the Yauliyacu mine and 50% of any excess for the life of the mine.
- (21) The Rosemont mine Mineral Resources and Mineral Reserves do not include the Oxide material.
- (22) The Voisey’s Bay cobalt purchase agreement provides that effective January 1, 2021, Vale will deliver 42.4% of the cobalt production until 31 million pounds are delivered to the Company and 21.2% of cobalt production thereafter, for the life of the mine. Attributable reserves and resources have been calculated on the 42.4% / 21.2% basis.
- (23) The Company only has the rights to silver contained in concentrates containing less than 15% copper at the Aljustrel mine.
- (24) The Company’s agreement with Panoro is an Early Deposit agreement, whereby the Company will be entitled to purchase 100% of the silver production and 25% of the gold production from the Cotabambas project until 90 million silver equivalent ounces have been delivered, at which point the stream will drop to 66.67% of silver production and 16.67% of gold production for the life of mine.
- (25) Precious metals and cobalt are by-product metals at all of the Mining Operations, other than silver at the Keno Hill mines and the Loma de La Plata zone of the Navidad project, gold at the Toroparu project and palladium at the Stillwater mines and therefore, the economic cut off applied to the reporting of precious metals and cobalt reserves and resources will be influenced by changes in the commodity prices of other metals at the mines.

## FURTHER DISCLOSURE REGARDING MINERAL PROJECTS ON MATERIAL PROPERTIES

### PEÑASQUITO MINE, MEXICO {TC “PEÑASQUITO MINE, MEXICO” \F C \L 2}

The Peñasquito mine, wholly-owned by Goldcorp, is an open pit mining operation located in north-central Mexico with two separate process facilities, an oxide ore facility and a plant to process sulfide ore.

The following description of the Peñasquito mine is based on the information disclosed in the annual information form of Goldcorp filed on March 28, 2019. The Company QP's have approved the disclosure of scientific and technical information in respect of the Peñasquito mine in this document.

#### *Property Description, Location and Access*

The Peñasquito mine is wholly-owned by Goldcorp's subsidiary, Minera Peñasquito S.A. de C.V. (“Minera Peñasquito”). The Peñasquito mine is situated in the western half of the Concepción Del Oro district in the northeast corner of Zacatecas State, Mexico, approximately 200 kilometres northeast of the city of Zacatecas. The mine site is accessed via a turnoff from Highway 54 approximately 25 kilometres south of Concepción Del Oro. There is an airport on site.

The Peñasquito Mine is comprised of 20 mining concessions (approximately 45,823 hectares), held in the name of Minera Peñasquito. Concessions were granted for durations of 50 years and a second 50-year term can be granted if the applicant has abided by all appropriate regulations and makes the application within five years prior to the expiration date. Obligations which arise from the mining concessions include performance of assessment work, payment of mining taxes and compliance with environmental laws. Duty payments for the concessions have been made as required. Minimum expenditures, pursuant to Mexican regulations, may be substituted for sales of minerals from the mine for an equivalent amount. Goldcorp holds additional tenure in the greater Peñasquito Mine area (within about 200 to 300 kilometres of the Peñasquito Mine infrastructure), which is under application, is granted, or is part of joint ventures with third parties.

Mining concessions give the holder the right to mine within the concession boundary, sell the mining product, dispose of waste material generated by mining activities within the lease boundary, and have access easements. Surface rights near the Chile Colorado and Peñasco open pits are held by four ejidos, as well as certain private owners. Goldcorp has signed current land use agreements with all of the ejidos and the relevant private owners. Under current agreements with the ejidos, payments are made to the ejidos on an annual basis, in addition to certain upfront payments that have already been made.

#### *Agreements and Royalties*

In 2007, the Company acquired 25 percent of the silver produced by the Peñasquito mine over the life of mine for an upfront cash payment of \$485 million and a per ounce cash payment of the lesser of \$3.90 and the prevailing market price (subject to an inflationary adjustment commencing in 2011), for silver delivered under the contract.

A 2% net smelter return royalty is owed to Royal Gold Inc. from both the Chile Colorado and Peñasco locations of the Peñasquito Mine. The Mexican Government, since January 1, 2014, levies a 7.5% mining royalty that is imposed on earnings before interest, taxes, depreciation, and amortization. There is also a 0.5% royalty on precious metals revenue (applicable to precious metals mining companies) made effective as of January 1, 2014.

#### *Environment, Permitting and Socio-Economic*

Environmental liabilities are limited to those that would be expected to be associated with a polymetallic mine, where production occurs from open pit sources, and where disturbance includes mining operations, roads, site infrastructure, heap leach, and waste and tailings disposal facilities. A closure and reclamation plan has been prepared for the mine site. Goldcorp holds the appropriate permits under local, state and federal laws required for mining operations.

#### *Accessibility, Climate, Local Resources, Infrastructure and Physiography*

There are two access routes to the site. The first is via a turnoff from Highway 54 onto the State La Pardita road,

then onto the Mazapil to Cedros State road. The second access is via the Salaverna by-pass road from Highway 54 approximately 25 kilometres south of Concepción Del Oro. Within the Peñasquito mine, access is by foot trails and tracks. The closest rail link is 100 kilometres to the west. There is a private airport on site and commercial airports in the cities of Saltillo, Zacatecas and Monterrey. Travel from Monterrey/Saltillo is approximately 150 kilometres, about two hours to site. Travel from Zacatecas is approximately 275 kilometres, about 3.5 hours to site.

There is sufficient suitable land available within the Goldcorp mineral tenure for tailings disposal, mine waste disposal, and mining-related infrastructure, such as the open pit, process plant, workshops and offices. A skilled labour force is available in the region where the Peñasquito mine is located and in the surrounding mining areas of Mexico. Accommodation comprises a 3,421-bed camp with full dining, laundry and recreational facilities. Fuel and supplies are sourced from nearby regional centres such as Monterrey, Monclova, Saltillo and Zacatecas and imports from the United States via Laredo.

The climate is generally dry with precipitation being limited for the most part to a rainy season in the months of June and July. Annual precipitation for the area is approximately 700 millimetres, most of which falls in the rainy season. The Peñasquito mine area can be affected by tropical storms and hurricanes which can result in short-term high precipitation events. Temperatures range between 20 degrees Celsius and 30 degrees Celsius in the summer and zero degrees Celsius to 15 degrees Celsius in the winter. Mining operations can be conducted year-round.

The Peñasquito mine is situated in a wide valley bounded to the north by the Sierra El Mascarón and the south by the Sierra Las Bocas. Except for one small outcrop, the area is covered by up to 30 metres of alluvium. The terrain is generally flat, rolling hills; vegetation is mostly scrub, with cactus and coarse grasses. The prevailing elevation of the property is approximately 1,900 metres above sea level.

### ***History***

The earliest recorded work in the Peñasquito mine consists of excavation of a shallow shaft and completion of two drill holes in the 1950s. Kennecott Canada Explorations Inc. through its Mexican subsidiary, Minera Kennecott S.A. de C.V. (“Kennecott”) acquired initial title to the Peñasquito mine and commenced exploration in 1994. Regional geochemical and geophysical surveys were undertaken in the period 1994 to 1997. This work led to the early discovery of two large mineralized diatreme breccia bodies, the Outcrop (Peñasco) and Azul Breccias.

In 1998, Western Copper Holdings Ltd. (“Western Copper”) acquired a 100% interest in the Peñasquito mine from Kennecott. Exploration efforts were focused on the Chile Colorado zone and the Azul Breccia pipe targets. Western Copper optioned the property to Minera Hochschild S.A. (“Hochschild”) in 2000. Hochschild completed core drilling into the Chile Colorado anomaly, but subsequently returned the property to Western Copper. From 2002 to 2009, Western Copper completed additional core and reverse circulation drill holes and undertook a scoping-level study, a pre-feasibility study, and a feasibility study in 2003, 2004, and 2005 respectively. The feasibility study was updated in 2006. Under the assumptions in the studies, the Peñasquito mine returned positive economics. In 2003, Western Copper underwent a name change to Western Silver Corporation (“Western Silver”). Glamis acquired Western Silver in May 2006, and Goldcorp subsequently acquired the combined company in November 2006.

During 2005, a drill rig was used to perform geotechnical field investigations to support the design of the heap leach facility, waste rock piles, tailings impoundment and process plant. Standard penetration tests were performed. Construction in the Peñasquito mine commenced in 2007. In October 2009, the first lead and zinc concentrates were produced and concentrate shipment to smelters commenced with first sales recorded in November 2009.

### ***Geological Setting, Mineralization and Deposit Types***

Deposits currently mined within the Peñasquito mine Operations are considered to be examples of breccia pipe deposits developed as a result of intrusion-related hydrothermal activity.

#### ***Regional Geology***

The regional geology of the operations area is dominated by Mesozoic sedimentary rocks, which are intruded by Tertiary stocks of intermediate composition (granodiorite and quartz monzonite), and overlain by Tertiary terrestrial sediments and Quaternary alluvium. The Mesozoic sedimentary rocks comprise a 2.5 kilometre thick series of marine sediments deposited during the Jurassic and Cretaceous Periods with a 2,000 metre thick sequence of carbonaceous and

calcareous turbiditic siltstones and interbedded sandstones underlain by a 1,500 metre to 2,000 metre thick limestone sequence.

Large granodiorite stocks are interpreted to underlie large portions of the mineralized areas within the Concepción Del Oro District, including Peñasquito. Slightly younger quartz–feldspar porphyries, quartz monzonite porphyries, and other feldspar-phyric intrusions occurring as dikes, sills, and stocks cut the sedimentary units. The intrusions are interpreted to have been emplaced from the late Eocene to mid-Oligocene.

The two diatreme pipes, Peñasco and Brecha Azul, are the principal hosts for gold–silver–zinc–lead mineralization at the Peñasquito mine. The pipes flare upward, and are filled with breccia clasts in a milled matrix of similar lithological composition. The larger diatreme, Peñasco, has a diameter of 900 metres by 800 metres immediately beneath surface alluvial cover. The second, and smaller, diatreme, Brecha Azul, is about 500 metres in diameter immediately below alluvium. The diatremes are surrounded by coalesced halos of lower grade, disseminated sphalerite, galena, and sulphosalts containing silver and gold.

Chile Colorado is a mineralized stock work located southwest of Brecha Azul, in sediments of the Caracol Formation. It has a geometry of approximately 600 metres by 400 metres immediately beneath the surface alluvial cover, and it extends to at least 500 metres below surface.

Both of the breccia pipes lie within a hydrothermal alteration shell consisting of a central sericite–pyrite–quartz (phyllitic) alteration assemblage, surrounding sericite–pyrite–quartz–calcite assemblage, and peripheral calcite–pyrite alteration halo.

Manto-style sulphide replacements of carbonate strata have been discovered beneath the clastic-hosted disseminated sulphide zones, and adjacent to the diatreme pipes. The mantos consist of semi-massive to massive sulphide replacements of sub-horizontal limestone beds, as well as cross-cutting chimney-style, steeply dipping, fracture and breccias zones filled with high concentrations of sulphides.

Garnet skarn-hosted polymetallic mineralization has been identified at depth between the Peñasco and Brecha Azul diatremes. The skarn has horizontal dimensions of approximately 1,000 metres by 1,200 metres and is open at depth.

### ***Exploration***

Work undertaken included reconnaissance geological inspections, regional-scale geochemical and geophysical surveys (including gravity, controlled source audio frequency magnetotellurics, reconnaissance induced polarization, scalar induced polarization, airborne radiometrics, magnetics and ground magnetics), rotary air blast, reverse circulation and core drilling.

The exploration programs completed to date are appropriate to the style of the deposits and prospects within the Peñasquito mine and support the genetic and geological interpretations. During 2018 regional drilling was undertaken at the Santa Rosa and Santa Cruz deposits - at this stage drill density was insufficient to determine potential resources.

### ***Drilling***

Drilling completed on the Peñasquito Mine area for the period 1994 to June 2018 comprised 1,774 drill holes (853,982 metres). Drilling has focused on the exploration and delineation of three principal areas: the Chile Colorado Zone, the Brecha Azul Zone and the Peñasco Zone.

In 2018, in-fill drilling at the Peñasquito Mine included 97 holes (32,865 metres). Drill hole spacing is generally on 50 metre sections in the main deposits with tighter spacing for infill drilling in the Peñasco pit, spreading out to 400 metre spaced sections in the condemnation zones. Drill spacing is wider again in the areas outside the conceptual pit outlines used to constrain Mineral Resources. Drilling covers an area approximately 11 kilometres east–west by 7 kilometres north–south with the majority of drill holes concentrated in an area 2.1 kilometres east–west by 2.8 kilometres north–south.

Drill logs record deposit-specific information, including lithologies, breccia type, fracture frequency and orientation, oxidation, sulphide mineralization type and intensity, and alteration type and intensity. From mid-2013, logs have been recorded electronically and are uploaded directly to the project database.

Drill traces were down-hole surveyed using a single shot, through the bit, survey instrument. All drill holes have been down-hole surveyed except 51 Western Silver reverse circulation drill holes and 11 of the 71 Kennecott drill holes. Use of a gyroscopic survey instrument began in 2012 when Silver State Survey Inc. (“Silver State Survey”) was contracted. In the first 800 metres of any drill hole, Silver State Survey takes a measurement at 50 metre intervals and at the end of the drill hole.

The quantity and quality of the lithological, geotechnical, collar, and down-hole survey data collected during Goldcorp’s exploration and infill drill programs are sufficient to support Mineral Resource and Mineral Reserve estimation.

### *Geotechnical Drilling*

Geotechnical drilling in support of infrastructure locations were completed as follows:

- Major Drilling Co 2004: eight core holes completed in the area of the planned Chile Colorado pit and three core holes in the planned Peñasco pit area for a total 11 core holes (4,126 metres). Core holes were oriented at an angle of 60° to the horizontal and were sited to intersect the November 2005 design basis pit wall one-third of the ultimate wall height above the base of the final pit level. Core orientation was accomplished using two independent methods: clay impression and a mechanical down-hole system referred to as Corientor™. Field point load tests were completed for each core run to estimate the unconfined compressive strength of the intact rock;
- Estudios Especializados de Mecánica de Suelos, S.A. de C.V. 2005: geotechnical field investigations to support the design of the heap leach facility, waste rock piles, tailings impoundment and process plant. Standard penetration tests were performed;
- Adviser Drilling, S.A. de C.V. 2010: oriented core program with seven holes (3,014.17 metres) completed to provide information on the bedding orientations within the area planned for the Chile Colorado pit and identify structures that could affect the bench stability;
- Boart Longyear Drilling Services-Mexico and BDW 2013: seven hole program (1,856.25 metres), which focused on obtaining information on the bedding orientations in the north of the Peñasco pit. The drill holes were sited to provide geotechnical information for pit phase designs and for support of potential modification of pit wall slope angles in selected pit sectors. A total of 68 laboratory triaxial tests of intact rocks were performed and 52 direct shear tests to estimate the unconfined strength of the intact rock. The rock quality designation model was updated with the recent drill information, and a total of 1,211 holes were used. A total of 1,348 holes and 13 geomechanical cells were used to construct a model of bedding orientation in the Caracol Formation;
- Call & Nicholas Inc (2015): performed intact strength testing on 96 samples of core, taken from the 2014 drilling campaign, from the Brecha Peñasco to determinate the intact shear strength and elastic properties;
- Layne de México (2015): oriented core program with eight holes (3,240.6 metres), which focused on obtaining information of the bedding orientations in the north of Peñasco pit for Ph-7, Caracol Formation. These holes were sited according to SRK recommendations. SGS CIMM T&S Laboratory tested 101 samples to determine the intact shear strength and elastic properties; and
- Layne de México (2016): oriented core program with nineteen holes (7,007.9 metres). These drill holes were sited to provide geotechnical information for pit phase designs (Ph-7, Ph-8, Ph-9), focused on design for final pit.

### *Metallurgical Drilling*

Metallurgical drilling was first performed in 2003–2006, with 12 holes (3,853 metres) completed. Holes averaged 310 metres in depth. An additional 29 core holes were drilled in 2006–2012 (15,537 metres), which were typically 550 metres long. During 2013, 18 holes (9,156 metres) were completed, averaging 510 metres in length.

During 2016, characterization of organic carbon-bearing sedimentary ores was made through reverse circulation drilling of stockpiles.

In 2018, a stockpile drilling campaign was carried out on the Stock 5 organic carbon-bearing stockpile consisting

of 86 holes (3,958 metres). The aim of the program was to better characterize the stockpile feed and relative department of carbon, gold, silver, lead, and zinc through carbon pre-flotation and the downstream metallurgical processes as the stockpile will be a significant feed source to the sulphide plant starting in the second half of 2018.

### *Geological and Geotechnical Logging*

Logging of reverse circulation drill cuttings and core utilized standard logging procedures. Initial logging utilized paper forms, with data hand-entered into a database from the form. Logs recorded lithologies, breccia type, fracture frequency and orientation, oxidation, sulphide mineralization type and intensity, and alteration type and intensity.

In July 2013, digital logging was implemented. Data are logged directly into acQuire using custom forms. Logs are stored on the mine server in an exploration database. Information now recorded includes lithology, alteration, minerals, structural features, oxidation description, and vein types.

Core was photographed; core photographs are retained on the mine data server. Video was recorded from drill collar to toe; these digital files are stored on hard discs.

Geotechnical logging for pit design purposes was typically completed at three metre intervals, and recorded on CDs. For site location purposes, geotechnical logging included sample descriptions, sample numbers and visual classifications based on the united soil classification system. From 2010 onwards, all geotechnical logging has been stored in an acQuire database.

### *Collar Surveys*

All drill hole collars are identified with a concrete monument, allowing all drill holes to be identified at a later date. The monument is placed directly over the collar on completion of each drill hole.

Prior to 2001, drill holes were located using chain-and-compass methods. From 2002 onwards, collar surveys have been performed by a qualified surveyor. Since preparation for mining operations commenced in 2007, all surveys have been performed using differential GPS instruments. The mine currently uses Trimble R-6 GPS instruments.

### *Deposit Drilling*

Drilling is normally perpendicular to the strike of the mineralization. Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths.

### *Sampling, Analysis and Data Verification*

Independent sample preparation and analytical laboratories used during the exploration, development and operational core drill programs on the project include ALS Chemex, and Bondar Clegg (absorbed into ALS Chemex in 2001). The umpire (check) laboratories are Acme Analytical Laboratories Ltd. (“Acme”) in Vancouver, and SGS Mexico. Laboratories are certified and independent of Goldcorp. The run-of-mine samples are assayed in an on-site mine laboratory that is not accredited. Sample collection and handling of core was done in accordance with industry standard practices, with procedures to limit sample losses and sampling biases. Reverse circulation drill cuttings were sampled at intervals of 2 metres. The standard core sample interval is two metres. Some samples are limited to geological boundaries and are less than 2 metres in length.

The sampling has been undertaken over a sufficient area to determine deposit limits, and the data collected adequately reflects deposit dimensions, true widths of mineralization, and the style of the deposits. The samples are representative of the mineralization, and respect the geology of the deposits.

The sample preparation method typically consists of drying, pulverizing and splitting to generate a 30 gram pulp for assay. Prior to 2003, the pulverization standard was 85% passing 75 micrometres; after 2003, samples were pulverized to a minimum of 85% passing 200 mesh. Standard fire assay procedures are used for analysis of gold. Inductively-coupled plasma analyses are used for silver, lead, zinc and deleterious elements.

QA/QC measures for Goldcorp’s programs include submission of standard reference materials and blanks, and re-assay of a proportion of the samples.

Entry of information into databases has utilized a variety of techniques and procedures to check the integrity of the data entered. Geological data from early drill programs were entered into spreadsheets in a single pass.

All drill data from 2007 to July 2013 was entered from paper logging forms into Excel files before being imported into acQuire. Since July 2013, logging and recording of other drill hole data by geologists and technicians has been entered directly into acQuire on laptop computers, with the data subsequently imported into the main database.

Assays received electronically from the laboratories are imported directly into the database. Analytical certificates received since 2010 have been stored in the database and were validated via the acQuire software.

Data are verified on entry to the database by means of built-in program triggers within the mining software. Checks are performed on surveys, collar co-ordinates, lithology data, and assay data.

The quality of the analytical data is sufficiently reliable to support Mineral Resource and Mineral Reserve estimation and sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards.

### ***Mineral Processing and Metallurgical Testing***

Mineralogical studies have been performed to increase the knowledge of the different ore types in the mine targeted to ensure the best possible treatment for each ore category and maximize the recovery. Metallurgical testwork focused on recovery of the key elements, lead and zinc, with co-recovery of gold and silver.

Various testwork programs have investigated comminution, flotation, heavy media separation, flowsheet variability schemes, concentrate filtration, dewatering, and regrind tests, modal and liberation analyses, and bottle roll and column cyanide leach extraction tests. Programs were performed that were sufficient to establish the optimal processing routes for oxide and sulphide ores, and supported estimation of recovery factors for the various ore types. The Pyrite Leach Plant (PLP) has also investigated the metallurgical responses to treatment for additional gold and silver recovery from the zinc flotation tailings.

Over the life of mine gold and silver recovery from the oxide heap leach has stabilised. Recovery from the heap leach is currently fixed at approximately 59% for gold and 24.5% for silver in the life of mine plan (“LOM”).

The mineralogical complexity of the Peñasquito mine ore makes the development of mill processing models difficult as eight elements (gold, silver, lead, zinc, copper, iron, arsenic and antimony) are tracked through the process, and the models need to be robust enough to allow for changes in mineralogy and plant operations while giving reasonable predictions of concentrate quality and tonnage. The current models incorporate grade-recovery relationships and the impact of organic carbon on all ore types. Based on updated 2017 metallurgical recovery models the forecasted LOM average recoveries (including operation of the PLP circuit) are:

- Gold 72.3%
- Silver 87.6%
- Lead 75.0%
- Zinc 79.1%

All stated recoveries exhibit short-term variability around the expected LOM averages due to complex mineralogy and mining stages.

The carbon pre-flotation process enables the treatment of higher carbon-containing material without significant disruption to the existing lead, zinc, and future pyrite flotation process. Implementation of the circuit as an add-on to the current sulphide processing plant was completed during the second quarter of 2018.

After an extensive investigative program on the recovery of valuable metals in zinc tailings, the Peñasquito mine has developed the pyrite leach process. The pyrite leach process circuit consists of: flotation of zinc tails to produce a rich gold-silver-pyrite concentrate; concentrate re-grind; concentrate leaching; precipitation; cyanide detoxification; and precious metals refining to produce doré bars as final product. Implementation of this circuit as an add-on to the existing sulphide processing plant was completed during the fourth quarter of 2018.

### ***Mineral Reserve and Mineral Resource Estimates***

See “*Technical Information – Summary of Mineral Reserves and Mineral Resources*” for the estimated Mineral Reserves and Mineral Resources (silver only, 25% attributable) for the Peñasquito mine as of June 30, 2018.

Risk factors that can affect the Mineral Reserve estimates are: metal prices and exchange rate assumptions, mining, process, operating and capital cost assumptions; availability of water to support the process plant throughput assumptions; metallurgical recovery rates, capital project timelines, geotechnical and hydrogeological assumptions; social license to operate; and any additional modifications to the proposed changes to the taxation and royalty regime.

To support declaration of Mineral Reserves, an economic analysis is undertaken to confirm the economics based on Mineral Reserves over the mine life repays life of mine operating and capital costs. The mine was evaluated on an after-tax free cash flow basis.

Risk factors that can affect the Mineral Resource estimates are: metal prices and exchange rate assumptions; assumptions which are used in the Lerchs-Grossman shell constraining Mineral Resources, including mining, processing and general and administrative costs; metal recoveries; geotechnical and hydrogeological assumptions; and assumptions that the operation will maintain the social license to operate.

### ***Mining Operations***

Peñasquito mine is a conventional, large scale, truck-and-shovel open pit mining operation. In 2018, the mine operations moved 35.2 million tonnes of mill ore and 6.9 million tonnes of heap leach ore, with total material movement of 207.4 million tonnes. The open pit operations will progress at a nominal annual mining rate of 200 million tonnes per year until the end 2021, after which it continues to decline at a significant rate as the stripping ratios of ore to waste decrease.

The Mineral Reserve estimate for the operations is based on Measured and Indicated Mineral Resources. A four-step process is used to estimate the Mineral Reserves. The Peñasquito mine contained metal block model is interpolated with a series of software scripts in which a net smelter return value (NSR) is calculated for each block, based on recovery and marketing assumptions.

The Peñasquito mine NSR block model then undergoes a process of “pit optimization” where Whittle mine planning software optimizes the potential future financial return for numerous intermediate pit shells, and defines the ultimate pit size and shape for each of the two deposits. The ultimate pit shell offering the best economic results is selected, based on the defined parameters while respecting geotechnical limitations.

With the ultimate pit limits defined, practical design parameters are completed within a mine design software package. This process results in a series of minable cutbacks that together form the ultimate pit design for the deposit.

A series of potential production schedules are produced that are based on the practical sequencing of each cutback, the mining equipment available, and operational limitations such as production rates, haulage distance and mill throughput capacity. From this process, which in most cases is iterative, a practical LOM production schedule is developed that tries to maximize NSR and metal production, minimize operating and capital costs and defines the annual mining, milling and metal production schedules.

The current mine plan is based on the 2018 Mineral Reserve estimate and will produce oxide and sulphide material to be processed through the existing heap leach facility and sulphide plant respectively over a 13-year mine life (2018–2029).

Dilution is accounted for in block models by ensuring the models have the appropriate change of support to produce a grade-tonnage curve that reflects the expected mining selectivity. Block models also incorporate anticipated contact dilution through the interpolation plan that utilizes both mineralization and waste samples within interpolation domains. Accordingly, no further dilution factors are needed to reflect the appropriate grade and tonnage distributions. Because the same models are used for both Mineral Reserves and Mineral Resources, dilution is incorporated in both estimates. Mineral Reserves and Mineral Resources are reported at 100% of the block model.

An ore stockpiling strategy is practiced. The mine plan considers the value of the blocks mined on a continuous

basis combined with the expected concentrates quality. From time to time ore material with a lower net smelter return value will be stockpiled to bring forward the processing of higher-value ore earlier in the LOM. In some instances, the ore is segregated into stockpiles of known composition to allow for blending known quantities of material at the stockpile as required by the mill/customer. Stockpiling at Peñasquito mine also allows for forward planning for ore quality to ensure optimal mill performance and consistent gold production to match, within the normal bounds of expected variability within the mine plan.

### ***Processing and Recovery Operations***

The Peñasquito mine consists of a leach facility that processes a nominal 6,000 tonnes per day of oxide ore and a sulphide plant that processes 115,732 tonnes per day of sulphide ore. Mine construction commenced in 2007. Ore placement on the heap leach pad began in February 2008. On April 8, 2008, ore leaching was initiated and the first gold pour occurred on May 10, 2008. In October 2009, the first lead and zinc concentrates were produced and concentrate shipment to smelters commenced with first sales recorded in November 2009.

For the milling throughput, the LOM plan assumes a nominal rate of 42.5 million tonnes per year until the end of 2029, and the heap leach pad will be stacked with incremental oxide ore as it is mined.

Run-of-mine oxide ore is delivered to the heap leach pad from the mine by haul trucks. Lime is added to the ore, prior to the addition of the ore to the pad. Ore is placed in ten metre lifts and leached with cyanide solution. Pregnant leach solution is clarified, filtered, and de-aerated, then treated with zinc dust to precipitate the precious metals. The precipitated metals are subsequently pressure filtered, and the filter cake smelted to produce doré.

### ***Sulphide Ore***

Run-of-mine sulphide ore is delivered to the crusher dump pocket from the mine by 290 tonne rear-dump-haul trucks. The crushing circuit is designed to process up to 136,000 tonnes per day of run-of-mine sulphide ore to 80 percent passing 150 millimetres. The crushing facility initially consisted of a gyratory crusher capable of operating at 92 percent utilization on a 24-hour-per-day, 365-days-per-year basis.

For 2018, a total of 35,247,772 metric tonnes of ore was processed through the sulphide plant facility, for a total of 272,001 ounces of gold, 18,292,121 ounces of silver, 318,210,712 pounds of zinc, and 116,286,606 pounds of lead produced (payable metal). Metallurgical recoveries averaged 65.97% for gold, 78.84% for silver, 80.36% for zinc, and 69.99% for lead.

### ***Pyrite Leach***

A feasibility study for the PLP was completed during the fourth quarter of 2015. An investment decision on the PLP was approved in 2016, and the PLP was completed in the fourth quarter of 2018. The PLP is expected to increase overall gold and silver recovery by treating the zinc tailings before discharge to the tailings storage facility. The PLP is expected to add production of approximately one million ounces of gold and 44 million ounces of silver over the current LOM. As part of the PLP, a carbon pre-flotation facility has been constructed and began operation in the second quarter of 2018.

### ***Markets / Contracts***

Goldcorp has an operative refining agreement with Met Mex Peñoles for refining of doré produced from the Peñasquito mine. Goldcorp's bullion is sold on the spot market by its marketing experts retained in-house. The terms contained within the sales contracts are typical and consistent with standard industry practice, and are similar to contracts for the supply of doré elsewhere in the world. A portion of the silver production is forward-sold to the Company (25%) as part of the streaming arrangement.

The markets for the lead and zinc concentrates from the Peñasquito mine are worldwide with smelters located in Mexico, Canada, United States, Asia and Europe. Metals prices are quoted for lead and zinc on the London Metals Exchange and for gold and silver by the London Bullion Market Association. The metal payable terms and smelter treatment and refining charges for both lead and zinc concentrate represent typical terms for the market and qualities produced by the Peñasquito mine.

### ***Infrastructure, Permitting and Compliance Activities***

As of August 2015, the Peñasquito mine uses power sourced from a subsidiary of InterGen Servicios Mexico who operates a 182 megawatt gas-fired combined cycle power plant. The annual power consumption ranges from 130–145 megawatts per day, with the majority (>85%) of the consumption in the processing facility.

Process and potable water for the Peñasquito mine is sourced from the Torres-Vergel well field located six kilometres west of the Peñasquito mine and an additional groundwater source within the Cedros basin named the Northern Well Field.

There is sufficient suitable land available within Goldcorp's mineral tenure for tailings disposal, mine waste disposal, and mining-related infrastructure, such as the open pit, process plant, workshops and offices. A skilled labour force is available in the region where the Peñasquito mine is located and in the surrounding mining areas of Mexico. Accommodation comprises a 3,421-bed camp with full dining, laundry and recreational facilities. Fuel and supplies are sourced from nearby regional centres such as Monterrey, Monclova, Saltillo and Zacatecas and imports from the United States via Laredo.

Various baseline studies, with respect to water, air, noise, wildlife, forest resources and waste and materials have been completed. Environmental permits are required by various Mexican Federal, state and municipal agencies, and are in place for project operations. The initial project environmental impact assessment was authorized on December 18, 2006. This initial document was prepared based on a production rate of 50,000 tonnes per day. Additional impact assessments for extensions or modifications to increase permitted capacity to 150,000 tonnes per day have been filed and approved since 2008. Reviews of the environmental permitting, legal, title, taxation, socio-economic, marketing and political factors and constraints for the Peñasquito mine support the declaration of Mineral Reserves.

### ***Capital and Operating Costs***

Capital cost estimates are based on the latest mine construction data and budgetary figures and quotes provided by suppliers. Capital cost estimates include funding for infrastructure, mobile equipment, development and permitting, and miscellaneous costs. Infrastructure requirements were incorporated into the estimates as needed. Sustaining capital costs reflect current price trends.

The PLP project received Board approval in 2016 and commenced construction. The data below is updated to LOM from 2018-2029.

<b>Area</b>	<b>Life-of-Mine (\$ million)</b>
Mine Pre Stripping	\$818.30
General Sustaining	\$1,087.79
Growth (Pyrite Leach Plant)	\$191.75
<b>Total</b>	<b>\$2,097.84</b>

Operating costs were estimated by Goldcorp's workforce and are based on the 2017 LOM budget. Labour cost estimation is based on Goldcorp's 2016 salary scale and fringe benefits in force. Mining consumables are based on 2018 costs and contracts and the costs for future operation consumables, such as mill reagents and grinding media are based on recent supplier quotations.

<b>Area</b>	<b>Life-of-Mine (\$ per tonne)</b>
Process Plant (with Pyrite Leach)	\$9.09 per tonne milled
Process Plant (without Pyrite Leach)	\$7.46 per tonne milled
G&A	\$1.88 per tonne milled
Mining	\$1.87 per tonne of material mined

### **Exploration, Development and Production**

In 2019, exploration at the Peñasquito mine will continue to focus on defining near pit Mineral Resources and selected regional targets. The skarn geological target below the current Peñasquito open pit is on hold and remains a lower priority within the list of local and regional targets. There are currently 29 regional targets identified from Geochemical and Geophysical works, these targets are being prioritised in order to further test and develop their potential.

At the Peñasquito mine, gold production for 2019 is expected to be in the range of 370,000 to 400,000 ounces.

### **Production Information**

The following table summarizes 2011 to 2018 silver production (100% basis) from the Peñasquito mine:

<b>Oxides</b>	<b>Units</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Produced Payable Gold	(oz)	55,800	42,669	62,300	36,600	27,600	14,300	-	
Produced Payable Silver	(oz)	1,891,000	1,420,300	1,684,100	931,600	642,200	274,600	-	
<b>Sulphides</b>									
Produced Payable Gold	(oz)	198,300	368,594	341,500	531,200	832,700	449,900	476,000	272,000
Produced Payable Silver	(oz)	17,154,500	22,284,558	20,763,300	24,875,500	25,284,300	17,627,700	21,505,000	18,292,000

#### **SALOBO MINE, BRAZIL** {TC "SALOBO MINE, BRAZIL" \F C \L 2}

The Company has filed a technical report in accordance with NI 43-101 entitled "Salobo Copper-Gold Mine Carajás, Pará State, Brazil – Technical Report" with an effective date of December 31, 2017 (the "Salobo Report"). The Salobo Report was authored by Neil Burns, P.Geo, Vice President, Technical Services, Wheaton, Christopher Davis, M.Sc., P.Geo, Head of Geology and Mine Design, Vale Base Metals, Cassio Diedrich, AusIMM-CP(Min), Head of Strategy and Long-Term Planning, Vale Base Metals, and Maurice Tagami, P.Eng., Technical Ambassador (formerly Vice President, Mining Operations) each of whom is a qualified person under NI 43-101. A copy of the Salobo Report is available under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

The following description of the Salobo mine has been prepared by the Company QPs, based, in part, upon information summarized from the Salobo Report and updated where appropriate. Readers should consult the Salobo Report to obtain further particulars regarding the Salobo mine. The Company QPs have approved the disclosure of scientific and technical information in respect of the Salobo mine in this annual information form, including Salobo mine site updates since the time of filing of the Salobo Report.

### **Property Description, Location and Access**

The Salobo mine is a copper-gold deposit located approximately 90 kilometres northwest of Carajás, Pará State in northern Brazil. Geographic coordinates for the property are 5°47'25" S latitude and 50°32'5" W longitude.

The Salobo mine comprises a single claim and is permitted for mining copper and gold under National Department of Mineral Production ("DNPM") 807.426/74. The area of the property is 9,180.61 hectares, as defined by Exploration Permit no. 1121, dated 14 July, 1987. Brazilian legislation separates the ownership of the surface rights from mineral ownership. A mining company can operate a mine even if does not own the surface, provided it owns the minerals. In this case, it is necessary to pay a royalty to the surface owner. The royalty is calculated as 50% of the CFEM (Compensation for Financial Exploitation of Mineral Resources), which is paid to the government. The mining concessions are updated every year on presentation by Vale of the annual report of mining production to the DNPM.

Operating Licence No. 1096/2012 for the current operations of 24Mt/a were granted by the Brazilian Institute for Environment and Renewable Resources (IBAMA) in November, 2012. Vale maintains that it holds clear mineral title to the deposit areas and has the necessary permits for operation of the mine.

The actual operating licence was renewed in October 19, 2018 and is valid for 6 years.

Salobo has also other Operating Licences regarding light and heavy vehicle fueling stations (No. 1035/2011 and 1081/2011, respectively) and the Parauapebas copper storage railroad station (No. 6999/2012). The heavy vehicle fueling station Operating Licence is valid until November 5, 2021. The light vehicle fueling stations (valid until June 20, 2016) and the Parauapebas copper storage railroad station (valid until August 9, 2016) were renewed within the validity period.

Salobo has the Installation Licence for the heightening of the Salobo Dam up to the level 255m (No. 1157/2017 ) which is valid until August 17, 2020.

The surface water capture and discharge concession (No. 1896/2017) was granted on October 9, 2017 and is valid until October 9, 2027. The underground water capture concession for explosive fabrication (No. 2519/2016) was granted on June 17, 2016, and valid until May 16, 2020.

The administrative process for the Installation Licence, vegetation removal, and authorization to capture, collect and transport biological material for the expansion of the Salobo processing plant to 36 Mt/yr (No. 02018.005131/92-11) were requested from IBAMA on March 23, April 03, and March 28, 2018 respectively. All licenses have been issued.

The Salobo mine currently holds all required permits to operate. The Salobo mine operations have a robust control and monitoring system to ensure that permits remain current, and to ensure that the requirements of each permit are monitored to comply with the relevant regulatory conditions imposed.

The mine site is connected via an all-weather road network to the cities of Parauapebas (90 kilometre), Marabá (240 kilometre), and the commercial airport at Carajás. The Carajás airport is capable of accommodating large aircraft and is served by daily flights to Belém (Pará State major's city) and other major Brazilian cities. Railroads link Carajás with the port city of São Luis.

#### ***Accessibility, Climate, Local Resources, Infrastructure and Physiography***

The operations are located in the Carajás mountain range in the eastern Amazon humid tropical rainforest. Temperatures range from 20.8°C to 37.8°C with an average relative humidity of 80.5%. Mean annual rainfall is 1,920 milimetre and evaporation is 1,500 milimetres. Winds are predominantly from the north and west. Mining operations are conducted year-round.

Mining is the primary industry of the area. As well as Salobo, Vale also operates the established Sossego copper mine, located 136 kilometres by road to the south of Salobo. Vale operates a very large iron ore mine at Carajás located 50 kilometres south east of the mine.

Local housing is available for employees within the communities surrounding the mine. There are adequate schools, medical services and businesses to support the work force. The mine site has medical facilities to handle emergencies. In addition, medical facilities are available in Carajás to support the mine's needs.

Vale has invested significantly in infrastructure in Carajás, building a 130 kilometre paved road to Parauapebas and a 20 kilometre sewage system, together with a school, hospital, and day care centre.

Salobo is in the northwest of the Carajás Reserve within the 190,000 ha Flona de Tapirapé–Aquiri forest. The area is heavily forested and dominated by relatively dense trees with substantial underbrush.

In the mine area the topography is fairly steep, varying between 190 to 520 metres in elevation. The ridge where the Salobo deposit is located has a nominal slope of 2.5H:1.0V. The site is lower than the Carajás Ridge, which is 850 metres above sea level.

The two drainages on either side of the Salobo Ridge are the Cinzento and Salobo Rivers which flow into the Itacaiúnas River. The Itacaiúnas River flows into the Tocantins River close to Marabá City.

Concentrate produced at the mine is hauled by 40 tonne (gross weight) highway trucks 85 kilometres on the highway to a rail-loading site located approximately ten kilometres north of the town of Parauapebas. From there, it is transported by train 870 kilometres to Itaquí port located near the coastal city of São Luís in the State of Maranhão.

Electrical energy is supplied from Tucuruí, a 8,370 megawatt hydroelectric generating station on the Tocantins River, 200 kilometres north of Marabá, and 250 kilometres due north of Parauapebas. An 87 kilometre overhead transmission line (230 kilovolts) supplies the Salobo site. There is no ring feed.

Process make-up water comprises runoff, direct precipitation and contribution from Igarape Mirim within the tailings storage basin.

The Salobo tailings storage facility (“TSF”), comprising an earth dam and concrete-lined spillway, was designed for Vale by Brazilian engineering company BVP Engenharia to withstand a one in 10,000 year event. The TSF, when completed to a height of 285 metres, will have sufficient capacity to store tailings resulting from the planned production. During 2017, the dam was raised from 220 metre elevation to an intermediate design height of 245 metre elevation. During 2019 the second raise will be constructed to reach the 255 m level.

### *Environmental*

Environmental and social baseline study areas were defined to characterize the current conditions in the areas potentially affected by mine components or activities.

The project lies in part of Salobo Creek and the Cinzento River basins which are tributary to the Itacaiúnas River. The long-term average unit runoff for the project site is 13.5 L/s/kilometre<sup>2</sup>.

The Tapirapé–Aquiri National Forest has a registered area of 190,000 ha. The Tapirapé Biological Reserve, which covers an area of 103,000 ha, borders the National Forest (and mine area) to the north. The mine site is within the Tapirapé–Aquiri National Forest and the access road crosses the Carajás National Forest and lies adjacent to the Igarapé Gelado Protected Area.

As a requirement of the mine installation licence, an agreement was signed between the Chico Mendes Biodiversity Conservation Institute and the Salobo mine operations to provide payment and support towards management of the Tapirapé–Aquiri National Forest (ICMBio, 2007).

The protected areas have distinct management categories that were established by Decree N° 97,720 dated 5 May 1989. Within these areas, a regular polygon outlining the mining zone Special Use Area was defined by the National Department of Mineral Production of Brazil. The polygon encompasses the mine area, roads, and supporting infrastructure, and incorporates a 100 metre buffer zone. A second 10 kilometre buffer surrounds the Special Use Area polygon.

Within the Special Use Area, Vale controls access to the area and the mine site, and access to the Tapirapé–Aquiri National Forest along the eastern boundary of the Special Use Area with the forest.

To the northwest of the Special Use Area is the Lindoeste settlement, developed on land in the São Felix do Xingu region, which currently covers about 120 ha; the mine site has no influence over forest access by this community.

The Salobo mine operations also have a commitment to offset effects by planting seedlings in the Igarapé Gelado Protected Area (National Press, 2007).

### *Social*

The Salobo mine’s area of influence is located in the southeast Paraense mesoregion, in the municipalities of Marabá and Parauapebas. These regions are considered to have moderate human development indices for the level of health, education and living conditions, based on data from 2000. The extractive industry accounts for 23.5% of the economic activity in the state of Pará, with 17.9% other industrial activities, 52.0% services and 6.6% farming and ranching based on 2010 data (IBGE, 2013).

The Project is not located on indigenous lands. The nearest indigenous lands include the river Tapirapé Tuere, Trincheira Bacaja and Xicrin do Cateté, all located 25 kilometre or more from the Project. The Xikrin indigenous peoples traditionally use the Project area for food collection.

CVRD (a predecessor company to Vale) signed an agreement with the Xicrin do Cateté indigenous community in 1989 (Convenio No. 453/89; FUNAI, 1989).

In 2001, a forest management program was implemented between the indigenous communities and government associations to sustainably harvest the forest in the Salobo mine area in a manner that benefitted the indigenous community in capacity building and financial resources.

Vale currently maintains a Communication Plan that commits to continued communication with the local indigenous to maintain community health and safety, cultural preservation, transparency of activities and harmony between the workers and the indigenous community.

There are a number of social management plans carried out by the Social Communications Department. The Environmental Compensation and Social Inclusion plan objectives are to support sustainable development by capitalizing on the positive effects of project development and minimizing the potential negative effects. In addition, this plan is supported by a Social Communications program that facilitates information exchange and works to improve relations between the Salobo mine and the diverse social segments of the surrounding communities.

An Environmental Education program was developed between the Department of Environment and Sustainable Development (DIAM), Vale Education and the municipality of Parauapebas. The program seeks to spread the principles of sustainability recognized as environmental, social and economic responsibility through educational activities geared towards Vale's employees and contractors and the surrounding community. The program aims to strengthen and expand environmental education in the municipal education program and the community.

### **History**

- 1974 - CVRD (Companhia Vale do Rio Doce, a predecessor company to Vale) discovered copper mineralization in the Igarapé Salobo region, and commenced detailed exploration in 1977. Work completed included stream sediment sampling, reconnaissance exploration, and ground induced polarization (IP) and magnetometer geophysical surveys. As a result, various targets were identified.
- 1978 - The 1974 Salobo exploration targets were revisited and the presence of copper sulphides in an outcrop of magnetite schists at the Salobo 3 Alfa target was noted. Drilling of this target followed in conjunction with the development of two exploration adits. The Salobo 3 Alfa target is now referred to as Salobo.
- 1978 to 1983 - Drilling was initially conducted on a 400 metre by 200 metre drill grid, subsequently reduced to 200 metre by 200 metre, and then to 200 metre by 100 metre. A total of 65 core drill holes (29,322 m) were drilled between March 1978 and May 1983.
- 1981 - A preliminary assessment of potential Project economics was performed in 1981, based on an initial resource estimate. The findings were encouraging, and the Carajás Copper Project team submitted an Exploitation Economical Plan for the Salobo deposit to the DNPM in June 1981.
- 1985 – 1987 - A pilot-scale study was carried out from 1985 to 1987 to further define the mineralization style and geometry. This included additional drilling and an additional 1 kilometre of exploration adits. A second drill campaign ran from January 1986 to June 1987. The grid spacing in the core of the deposit was reduced to 100 metre by 100 metre. Additional drilling was undertaken in the southeast of the deposit from the G-3 adit. This phase included 9,033 metres of diamond drilling from 60 drill holes.
- 1987 - The MME granted CVRD mining rights through Ordinance No. 1121.
- 1988 - A prefeasibility study was completed by Bechtel.
- 1993 - Salobo Metais S.A. was incorporated on 29 June 1993 as a joint-venture vehicle between CVRD and Morro Velho Mining (a subsidiary of Anglo American Brasil Ltda. AABL). A third drill campaign was initiated. The primary objective was to investigate the best probable location in the deposit in which to commence mining and to optimize the first five years of production, as well as to investigate mineralized continuity at depth.
- 1993 to 1994 - A total of 64 drill holes (14,585 m) were completed.
- 1997 - A fourth drilling campaign was conducted, resulting in 25,491 metres in 88 holes. Mineral Resources Development Inc. (MRDI) audited the drilling information that year.

- 1998 - A feasibility study was undertaken by Minorco.
- 2001 – The feasibility study was revised and updated by Kvaerner in 2001.
- 2002 - AMEC audited the drilling, sampling, assaying and databases that supported the Kvaerner study.
  - Changes were made to the Exploitation Economic Plan allowing Salobo Metais to extract silver and gold were approved by DNPM. The original authorization had been for copper only.
  - In June 2002, the Brazilian Council for Economic Defense (Conselho Administrativo de Defesa Econômica) approved the acquisition by CVRD of the 50% of Salobo Metais that was held by AABL. CVRD thus became the largest shareholder in Salobo Metais.
  - A fifth drilling campaign drilled 133 drill holes (66,243 m)
- 2003 - A further 2,047 metres of drilling was completed and some areas were drilled at a closer spacing of 50 metre x 50 metre, including the area around the G3 adit.
- 2006 – Final Pre-Feasibility Study and Installation Licence Granting.
- 2007 – Final Feasibility Study and construction start-up of Salobo I (12Mt/a).
- 2009 - Commenced pre-stripping.
- 2010 – Construction start-up of Salobo II (24Mt/a).
- 2012 - Project ramp-up for Phase I of the Salobo mine operations was completed and the first concentrate was shipped in September 2012.
- 2013 – The first Wheaton streaming deal was completed for 25% of the life of mine gold production
  - December 2013, the plant processed 898,000 tonnes of ore, which represented 90% of the Phase I nameplate capacity (1 Mt run-of-mine (ROM) per month).
- 2014 - Phase II, intended to double the nameplate capacity and was completed.
- 2015 – The second Wheaton stream deal completed for an additional 25% of the life of mine gold production, increasing the total stream to 50%.
- 2016 – The third Wheaton stream deal completed for an additional 25% of the life of mine gold production, increasing the total stream to 75%.
- 2017 - During 2017, the following important changes occurred at the Salobo Operations:
  - The production data reconciliation process was revised and updated.
  - A medium range definition diamond drilling campaign was started.
  - A deep exploration drill hole was started to investigate the orebody below the final pit design.
  - The mine and plant quality control (sampling, etc.) process was externally audited.
  - A short-term deleterious estimation process for carbon, uranium, fluorine, sulphur and chlorine was started.
  - The phases/pushback design were modified together with the mining plan revision, changing from seven to eight phases.
- 2018 - During 2018, the following important changes occurred at the Salobo Operations:
  - The infill drilling program for long-range planning ramped up and approximately 25,000 metre has been drilled in the past two years. Three deep exploration drill holes were drilled to investigate the orebody below the final pit design.
  - The GDMS database system was implemented at Salobo to improve the drill core logging process and database security.
  - Vale board approved the Salobo III expansion.
  - Collectors and frother flotation reagents were changed to improve the copper recovery.
  - Aeration system improvement in the flotation columns to increase recoveries.
  - Improvement in the feed system of the secondary crusher, increasing the productivity and feed rate.
  - Replacement of the mill cyclones, reducing the circulating load and increasing the milling rate.
  - Improvement in the power system of the thickeners, allowing handling of the high-grade ores without losses due to overload.
  - Implementation of an in-house system for monitoring the plant feed and geometallurgical performance in real time.
  - Expansion of the Salobo Operations geometallurgical laboratory and acquisition of the new equipment, improving the turnaround time.
  - Start of the long-range geometallurgical model through the metallurgical analysis and characterization of samples from the current long-range drilling campaign.

## ***Geological Setting and Mineralization***

### *Regional Geology*

The Carajás Mining District, located in the southeast of Pará State, lies between the Xingu and Tocantins/Araguaia Rivers and covers an area of about 300 kilometres x 100 kilometres. It is hosted in the Carajás Province, forming a sigmoidal-shaped, west–northwest–east–southeast-trending late Archean basin.

The Archean basin contains a basement assemblage that is dominated by granite–tonalitic ortho-gneisses of the Pium Complex, and amphibolite, gneisses and migmatites of the Xingu Complex. The basement assemblage defines a broad, steeply dipping, east–west-trending ductile shear zone (Itacaiúnas shear zone) that experienced multiple episodes of reactivation during the Archean and Paleoproterozoic.

The metamorphic rocks are cut by Archean-age intrusions, including the calc-alkaline Plaquê Suite (2.73 Ga), and the alkaline Salobo and Estrela granites (2.57 Ga and 2.76 Ga respectively).

The basement rocks are overlain by volcanic and sedimentary rocks of the Itacaiúnas Supergroup (2.56 Ga to 2.77 Ga). The Itacaiúnas Supergroup is informally sub-divided as follows (oldest to youngest):

- The Igarapé Salobo Group: iron-rich sediments, quartzites and gneisses, metamorphosed to amphibolite facies; associated with copper–gold and copper–gold–silver mineralization, e.g. Salobo
- Igarapé Pojuca Group: basic to intermediate volcanic rocks (frequently with cordierite–anthophyllite alteration), amphibolites, gneisses and chemical sediments (cherts), banded iron formation (BIF), and chert; associated with copper–zinc deposits, e.g. Pojuca.
- Grão Pará Group: basal Parauapebas Formation, comprising bimodal volcanic rocks with various degrees of hydrothermal alteration, metamorphism and deformation; upper Carajás Formation, associated with various iron deposits, including all of the Carajás deposits.
- Igarapé Bahia Group: mafic volcanics (lavas, tuffs and breccias), meta-sediments and BIF, associated with copper, copper–iron, copper–gold–silver deposits, e.g. Igarapé Bahia, Alemão/Bahia and Serra Pelada.

The Itacaiúnas Supergroup hosts all the Carajás iron ore–copper–gold (IOCG) deposits, including Salobo and Sossego, and is thought to have been deposited in a marine rift environment. The metamorphism and deformation has been attributed to the development of a sinistral strike-slip ductile shear zone (the 2.7 Ga Itacaiúnas Shear Zone) and to sinistral, ductile–brittle to brittle transcurrent fault systems.

The Itacaiúnas Supergroup is overlain by an extensive succession of Archean marine to fluvial sandstones and siltstones known as the Rio Fresco Group or the Águas Claras Formation (2.68 Ga to 2.78 Ga). The non-deformed, Proterozoic Gorotire Formation, consisting of coarse arkoses and conglomerates with quartz, BIF, and basic rock clasts, overlies the older lithological units (Matos da Costa, 2012).

A Proterozoic suite (1.88 Ga) of anorogenic, alkaline granites, the Serra dos Carajás, the Cigano and the Pojuca granites, as well as several generations of younger mafic dykes, cross-cut the entire sequence.

### *Property Geology*

Mineralization at the Salobo deposit is hosted by upper-greenschist-to-lower-amphibolite-metamorphosed rocks of the Igarapé Salobo Group. The group thickness varies from 300–600 metres in the Project area and may be weathered to depths of 30–100 metres. The rocks strike approximately N70°W and have a subvertical dip.

The major host units are biotite (BDX) and magnetite schists (XMT). Granitic intrusions (GR) occur adjacent to the north and southern sides of the BDX and XMT, and a series of much younger diorite dykes (DB) cross-cut the mineralization forming barren zones (Figure 7-4). Lithological descriptions of the major units are as follows:

### Magnetite Schist (XMT)

XMT is represented by massive, foliated and banded rocks, with predominant magnetite, fayalite, grunerite, almandine and secondary biotite. Granoblastic textures with polygonal contacts in magnetite and fayalite are common. The presence of fayalite is marked by the replacement of grunerite and greenalite and transformation into magnetite and other sulphides. Iron-potassic alteration is common, creating schistosity in biotite units.

The southeast portion of the deposit hosts hastingsite, replaced partially by actinolite, grunerite and sulphide minerals. Fluorite, apatite, graphite and uranium oxides are associated with this assemblage, Fe-silicate minerals and alteration products of fayalite.

### Garnet-Grunerite Schist (DGRX)

These are massive rocks with local development of schistosity. The rocks with significant almandine and grunerite content have isotropic texture or very few schistosity structures, with nematoblastic and granoblastic texture. The main mineralogical composition consists of almandine and cummingtonite-grunerite, with magnetite, hematite, ilmenite, biotite, quartz, chlorite, tourmaline and subordinate allanite. Fluorite and uraninite generally occur in veinlets related to stilpnomelane, calcite and grunerite.

### Biotite Schist (BDX)

This unit is the most common lithology at Salobo and consists of medium to coarse-grained material with anastomosed foliation. The mineral assembly is characterized by biotite (responsible for the foliation observed within the rocks), garnet, quartz, magnetite and chlorite. The assemblage with garnet, magnetite, grunerite and biotite is partially replaced by a second generation of biotite and magnetite with chlorite, K feldspar, quartz, hematite and sulphides. Tourmaline, apatite, allanite, graphite and fluorite generally occur throughout this unit.

### Feldspar-Chlorite Mylonite (ML)

The feldspar-chlorite-quartz mylonite is characterized by mylonitic foliation, produced by the orientation of rims of chloritized deformed biotite, hastingsite, elongated quartz and saussuritized plagioclase (K-feldspar, epidote and muscovite alteration). Porphyroblastic garnet is partially or totally replaced by chlorite and epidote. Allanite and apatite generally occur throughout this lithology.

### Metavolcanic Basic (MTB)

This group of massive coarse-grained rocks is characterized by Fe-hastingsite and/or hornblende and plagioclase with chlorite alteration. It occurs irregularly in the system, but is concordant with other lithotypes in abrupt contacts, probably hydrothermally altered intrusive basic relicts within the package of volcanic rocks.

### Quartz Mylonites (QML)

Quartz mylonites are grey or white in colour, passing through green to red. Where present, Fe-oxides are medium to fine grained, foliated and composed predominantly of quartz, muscovite, sericite, sillimanite and chlorite. Accessories, such as biotite, feldspar, magnetite, almandine, tourmaline, zircon and allanite are common. It is possible to differentiate: (a) red quartz-feldspathic rocks formed by K-feldspar and quartz and which may be a product of shearing between the gneissic basement and the supracrustal rocks; and (b) chlorite schists, mainly composed of chlorite and quartz, that represent intense hydrothermal alteration. This unit is found near the southern border of the deposits, close to important brittle shear zones, which may be interpreted as conduits for hydrothermal fluids.

### Old Salobo Granite (GR)

The Old Salobo Granite occurs as a stockwork of approximately 2,573 ±2 million years old. The rocks appear colorless-pink to grey, coarse grained and with mylonitization in some areas. The main mineralogy is composed of K-feldspar (orthoclase-microcline), oligoclase, quartz, augite, hornblende, chlorite and, rarely, magnetite. There is no evidence of contact metamorphism with the host rocks. The mylonitic aspects that appear both in granite and host rocks are likely to have formed during the deformation phase.

## Young Salobo Granite (GR)

The Young Salobo Granite occurs as small northwest-trending sills, hosted by the supracrustal sequence and by the basement gneisses. It corresponds to the youngest granitic intrusion detected by drilling in the Salobo area. In some porphyritic portions, the matrix is aphanitic, containing a porphyry of red albite (Fe-oxide in micro-fractures) and chlorite pseudomorphed by biotite. This mineral assemblage is composed of fine to medium grained, equigranular, hypidiomorphic grains of albite/oligoclase, orthoclase, quartz, chlorite, with minor epidote, zircon, fluorite, magnetite, chalcopyrite and pyrite. Deformation was not observed and the structure is isotropic. Age dating indicates an age of  $1,880 \pm 80$  million years old.

## Diabase (DB)

Diabase is located in southeast of the deposit, striking at approximately N70°E, while in the northwest of the deposit striking near to N20°W. The predominant minerals comprising the rock type are augite, plagioclase, magnetite, ilmenite and quartz. The fine grained diabase has an age of  $553 \pm 32$  million years old, while the more granular margins are dated at  $561 \pm 16$  million years old. This unit represent the last magmatic event of the area. The dykes are set within shear/fault lateral geometries to (N70°E) and frontal geometries (N20°W), probably developed before the intrusions, in a compressional regime modified by an extensive regime.

## Rhyolite (RIO)

Rhyolite dykes are grey-reddish in colour, porphyritic in texture within an aphanitic matrix. The majority are composed of K-feldspars, plagioclase, quartz, amphibole in a matrix cut by quartz veinlets. In drill holes the occurrence is rare or an ultimate phase.

## *Tectonic Setting*

The Salobo deposit is situated within the Cinzento strike-slip system which has been described as a set of Archean alignments that forms the Salobo transpressive duplex (or Salobo sidewall rip-out). This system post-dates the formation of the Itacaiúnas shear zone and was developed under ductile–brittle to brittle conditions.

The tectonic evolution of the Salobo area includes sinistral, transpressive, ductile deformation that developed under upper-amphibolite-facies conditions, followed by sinistral, transtensive, ductile–brittle-to-brittle shear deformation.

Shear zones are characterized by a mylonitic, penetrative foliation that generates a compositional banding. Where deformation is more intense, S-C foliations are parallel, and a lenticular pattern develops.

The ductile deformation along the Itacaiúnas shear zone, which has affected the basement rocks and rocks of the Salobo Group, produced widespread, subvertical, northwest–southeast schistosity, which affects all lithologies in the deposit, except the Young Salobo Granite and the diabase dykes.

The transtensive deformation along the Cinzento strike-slip fault system reactivated old structures, and formed a subparallel ductile–brittle shear zone in the northern part of the deposit and a brittle shear zone in the south.

Brittle–ductile shear zone deformation has resulted in lenticular-shaped ore shoots that characteristically show close associations between copper mineralization and magnetite content.

## *Metamorphism*

Two phases of metamorphism have been recognized in the Project area:

- Initial phase: associated with progressive amphibolite-facies metamorphism developed under ductile conditions of high temperature (650°C), low pressure (2–3 kbar), and oxygen fugacities of -20 and -18. This caused partial substitution of chalcopyrite by bornite and chalcocite, accompanied by intense K-metasomatism
- Retrograde phase: developed under greenschist facies, with an average temperature of 340°C; characterized by intense chloritization and partial substitution of bornite by chalcocite.

## *Alteration*

The Salobo hydrothermal system has a core of massive magnetite that is surrounded by less intensely altered rocks. Within the massive magnetite body, there are small veins and irregular masses of secondary biotite. Garnet is completely replaced by magnetite, forming pseudomorphs. Away from the massive magnetite, the magnetite content gradually diminishes, giving way to biotite–garnet schist and/or garnet–grunerite schist. Alkali-metasomatism of the amphibolite facies rocks is expressed by weak sodium with intense, superimposed potassium alteration ( $\leq 4.6$  wt% of  $K_2O$ ).

K-feldspar, biotite and oligoclase are the main alteration minerals. A significant increase in the FeO content ( $\leq 35$  wt%) accompanied the potassium alteration in amphibolite and was marked by the replacement of calcium-amphibole (mostly magnesium-hornblende and hastingsite) by iron–magnesium amphibole (cummingtonite), and by the formation of biotite and magnetite.

The chemistry of the meta-graywackes at the deposit indicates that they also underwent significant iron and potassium alteration. Alteration assemblages are characterized by almandine, garnet, biotite and grunerite, subordinate tourmaline and minor magnetite. The better-mineralized zones, located in the central part of the deposit, correspond to the most altered areas.

## *Mineralization*

The Salobo deposit extends over an area of approximately four kilometres along strike (west–northwest), is 100–600 metre wide and has been recognized to depths of 750 metres below the surface.

The sulphide mineralization typically consists of assemblages of magnetite–chalcopyrite–bornite and magnetite–bornite–chalcocite. Accessory minerals include hematite, molybdenite, ilmenite, uraninite, graphite, digenite, covellite, and sulphosalts.

The mineral assemblages can be found in a number of styles: forming disseminations, stringers, stockworks, massive accumulations, filling fractures, or in veins associated with local concentrations of magnetite and/or garnet filling the cleavages of amphiboles and platy minerals and remobilized in shear zones.

There is a positive relationship between copper minerals and magnetite. Copper content is typically  $>0.8\%$  in XMT and BIF, whereas in gneisses and schists it is  $<0.8\%$ . A positive correlation between copper content and uranium contents has also been established.

Chalcopyrite, bornite, and chalcocite occur interstitially to silicate minerals. These sulphide minerals are commonly found filling cleavage planes of biotite and grunerite. Hematite is rare, but in places it can reach as much as 4% by volume. It exhibits tabular textures (specularite), with infilling bornite, and partial replacement by magnetite.

Native Au occurs as grains smaller than 10  $\mu\text{m}$  in cobaltite, safflorite, magnetite and copper sulphides, or interstitial to magnetite and chalcopyrite grains. Native Au grains contain up to 10 wt% Cu, with subordinate silver, arsenic, and iron.

Molybdenite occurs interstitial to magnetite and shows cleavage planes filled with chalcopyrite and bornite. In mylonitic samples, molybdenite forms kinked stringers.

Magnetite occurs mainly as idiomorphic to sub-idiomorphic grains, interstitial to silicate minerals or in fractures, or forms bands in mylonitic rocks.

The gangue minerals are almandine garnet, grunerite, and tourmaline, reflecting the intense iron-metasomatism. Minor amounts of fayalite and hastingsite are pseudomorphed by grunerite and magnetite. Tourmaline, with a dominant schörlitic (black-tourmaline) composition, occurs as idiomorphic crystals preferentially oriented parallel to mylonitic foliation, in association with biotite, garnet and grunerite. Ilmenite, uraninite, allanite, fluorite and apatite occur as accessory minerals.

Biotite sub-idiomorphic crystals, commonly kinked, are associated with potassic alteration, and spatially related to the copper–gold mineralization. Uraninite and zircon inclusions may be locally abundant in biotite.

Quartz is associated with biotite in ore-grade samples and forms concordant veins within the host rocks.

Textural relationships indicate that mineralization was developed firstly as an oxide stage, with a second, subsequent, sulphide stage.

### **Exploration**

The discovery of the Salobo copper deposit occurred during a systematic program of geochemical, geophysical and geological exploration in the Carajás region, initiated by CVRD/Docegeo in 1974. Since then, the area has been the subject of exploration and development activities and a considerable information database has developed as a result of both exploration and mining activities.

In 1977 a program of detailed geological and geochemical work explored magnetic anomalies existing in the basin of Igarapé Salobo (Salobo stream). Anomalies of up to 2,700 parts per million copper were detected in stream sediments collected from tributaries of Igarapé Salobo. These anomalies lead to the development of detailed work in the area, involving geological, geochemical and geophysical prospecting. In 1978, exploration revealed the presence of copper sulphides associated with magnetic schist and the first phase of several drilling programs was initiated.

No exploration occurred at Salobo between 2003 and 2011. In 2012, a regional airborne gravity survey was completed. The survey identified a potential continuation of the Salobo orebody at depth. In 2017, a deep drilling campaign was initiated exploring the deep extension and potential for underground mining.

The primary method employed in the exploration and evaluation of the Salobo deposit is diamond core drilling, details of which are presented below.

### **Drilling**

Diamond drill hole core is the majority sample type for geological modelling and mineral resource estimation at Salobo. Blast holes have been drilled since 2009 but are used only for grade control, short-term planning and to update the long-range geological model contours in the mined out zone.

Core drilling commenced in 1978 and was conducted through to 2003 in five different drilling campaigns, for a total of 420 holes (148,311 metres) completed for exploration purposes, and an additional 15 drill holes (8,042 metres) for geotechnical purposes. Most drill holes were vertical or oriented to the south–southwest, the latter with dips usually ranging from 60° to 70°. However, one campaign included holes with a north–northwest orientation and similar dips. Various holes were also drilled from an adit. In 2010, two infill drill holes were drilled and in 2017, an infill drill program was initiated at the Salobo mine. The following table summarizes the drilling campaigns completed on the Salobo mine.

Campaign/Period	Purpose	Drill Hole ID	Total Meterage Drilled (m)	Percentage of Total Exploration Drilling (%)
1978 - 1983	Exploration	SAL-2ALF-FD001 to SAL-3ALF-FD 065	29,275	16
1986 - 1987	Exploration	SAL-SALF-FD066 to SAL-3ALF-FD 125	9,051	5
1993 - 1994	Exploration	SAL-3ALF-FD126 to SAL-3ALF-FD 189	14,585	8
1997	Exploration	SAL-3ALF-FD190 to SAL-3ALF-FD 277	25,491	14
2002 - 2003	Exploration	SAL-3ALF-FD278 to SAL-3ALF-FD 420	69,908	38
2010	Infill	SAL-3ALF-FD421 to SAL-3ALF-FD 422	361	0.2

Campaign/Period	Purpose	Drill Hole ID	Total Meterage Drilled (m)	Percentage of Total Exploration Drilling (%)
2017	Infill	S3A-FD00423 to S3A-FD00464	13,264	7
2018	Infill	S3A-FD00465 to S3A-FD00505	12,674	7
Total exploration		505	174,609	
1997	Geotechnical	SAL-3ALF-FG001 to SAL-3ALF-FG 007	3,847	
2003	Geotechnical	SAL-3ALF-FG 08 to SAL-3ALF-FG 014	4,194	
Total geotechnical		15	8,042	
Total drilling		520	182,651	

Note: There is a geotechnical Drill Hole SAL-3ALF-FG011A, hence 15 geotechnical drill holes.

Surface drilling was typically initiated with HQ diameter (63.5 mm) core and reduced to NQ diameter (47.6 mm). The minimum diameters were BX (36.6 mm) and BQ (36.5 mm). The underground drilling utilized BX diameter rods.

The drill core was collected, placed in boxes, and delivered by the drilling contractor to the core logging/storage area, where geological and geotechnical logging was carried out. Geologists recorded the major code for lithology, alteration, mineralization, and textural characteristic of each one metre interval, with 3 meters as the definition unit for modelling purposes. Geological contacts were logged with higher precision.

Drill collar coordinates were recorded. Collar verification was completed by plotting drill hole locations on plan and in cross-section and comparing with the topographic surface. Current collar surveying of grade-control holes is conducted by company surveyors using high-precision, differential global positioning system (GPS) equipment. Downhole surveys were performed at three metre intervals downhole, using Reflex DDI (dip and direction pointer), Maxibor Reflex, Reflex Gyro and gyroscopic instruments.

Due to the sub-vertical orientation of the mineralized zones, the drill holes intersected them at low angles. As a result, the mineralized thickness observed in drill holes does not correspond to the true thickness, which should be determined on a case-by-case basis. The true thickness is significantly smaller than the intersected thickness in most cases.

The quantity and quality of the lithological, geotechnical, collar and downhole survey data collected in the exploration and infill drill programs during the 1997 and later campaigns are sufficient to support Mineral Resource and Mineral Reserve estimation.

Exploration core sample intervals averaged one metre in mineralized zones, and between two metres and four metres in barren zones. One half was bagged and submitted to the mine laboratory for analysis, and the remaining half was retained as backup in the same original boxes.

Blastholes are currently drilled on a five metre x five metre (or five metre x seven metre) grid with a hole diameter of 12¼ inches and are channel sampled. All blastholes located in ore zones are sampled; however, as the blasthole reaches the barren zones, the proportion of sampled holes decreases to include only those holes in the mineralized envelope.

The density determination methodology consisted of the water-displacement method. Specific gravity (SG) was measured on approximately 95% of the samples collected across the entire deposit. Values for weathered waste rock and unweathered bedrock were categorized separately due to differences in permeability and porosity caused by weathering.

## ***Sample Preparation, Analysis and Security***

### *Exploration*

Sample preparation details prior to 2002 are unknown. During 2002 – 2003, sample preparation was conducted by Lakefield / GEOSOL laboratory at a local facility built at the Salobo mine site.

During the 1978 campaign, samples were assayed at the Docegeo laboratory in Belém, Pará, and at the SUTEC laboratory in Santa Luzia, Minas Gerais. Copper was assayed on 0.5 g aliquots by multi-acid digestion and atomic absorption spectroscopy (AAS). Iron, molybdenum, and silver were also determined using this method. Gold was assayed by aqua regia leaching, with solvent extraction (MIBX) and AAS determination.

During the 1986 campaign, CVRD assayed the samples at the Docegeo laboratory in Belém and at the pilot plant laboratory on the mine site, using the same analytical methods as in the previous campaign.

During the 1993 campaign, SML used the Mineração Morro Velho (MMV) laboratory. Copper was again assayed with multi-acid digestion and AAS reading on 0.5 g aliquots (0.002% detection limit), and gold was determined using the fire-assay method with gravimetric finish on 100 g aliquots (0.05 g/t detection limit). In addition, samples were assayed for sulphur and carbon by LECO, and fluorine by alkaline fusion with sodium carbonate and potassium nitrate, followed by ion-selective electrode determination. SMSA used the same analytical procedures during the 1997 campaign.

In the early stages of the exploration program platinum, palladium, nickel, molybdenum and uranium were also analyzed; however, these elements were later excluded from the analytical package.

### *Grade Control*

Blast-hole samples are prepared and assayed at the Salobo mine operations laboratory which has separate areas for the preparation of concentrate, tailings and blast-hole samples to avoid contamination. The preparation laboratory is well organized, and has modern equipment including ESSA jaw crushers, rotary splitters, puck-and-bowl pulverizers and Mettler-Toledo precision scales. A special, separated, scale room is used only for gold assays. The dust-extraction system is in place to reduce the chances of sample contamination.

- The preparation procedure implemented for blast-hole samples is as follows:
- Drying in an electric oven at 105°C
- Jaw-crushing to >95% passing -3 milimetre size; granulometric tests are carried to check particle size on one in 20 samples
- Homogenization and splitting using rotary splitters to obtain 500 g splits
- Pulverization using puck-and-bowl pulverizers to >95% passing 0.105 mm; granulometric and mass-loss checks are carried out on one in 20 samples on 100 g subsamples that are later discarded
- The pulverized material is bagged and submitted for chemical assay.

Blast-hole samples are assayed at the Salobo mine operations analytical laboratory for copper, gold, silver iron, carbon, sulphur, fluorine, chlorine and soluble copper.

Precision scales and assay instruments are linked to a laboratory information management system (LIMS) to ensure the assay data are digitally transferred into the mine database. The LIMS is programmed to determine when readings comply with the required quality-control thresholds. Turnaround time is usually less than 24 hours for most elements, and four to five days for fluorine and chlorine.

Assay batches are usually organized in 25 samples, not including the internal control samples. The lab's quality control (QC) protocol includes the insertion of one reference material, one reactive blank (consisting of pure solution or flux in the case of FA), one coarse duplicate, and one pulp duplicate per batch.

### *Quality Assurance and Quality Control*

The quality control (QC) program implemented at the Salobo mine varied considerably over time, depending on the primary analytical laboratory used for assaying.

- 1986 – A total of 402 samples were resubmitted to alternative laboratories for external checks with GEOSOL acting as secondary laboratory for the Docegeo laboratory for copper and gold assays, the pilot plant laboratory as secondary laboratory for Docegeo on copper assays and Docegeo as secondary laboratory for the pilot plant laboratory for gold assays.
  - Results on copper assays indicated good correlation between the three laboratories; however, poor correlation was obtained between GEOSOL and Docegeo on the gold assays.
- 1993 - The QC program included external checks of 5% of the samples at the Nomos laboratory (for Cu) and at Fazenda Brasileira (for Au), using the FA method. In total, copper checks were conducted on 664 samples, and gold checks on 2,168 samples. For both elements, the correlation between laboratories was assessed as good.
- 1997 - SMSA implemented a QC program consisting of the insertion of 574 coarse duplicates and 14 reference materials, and the submission of 750 check samples to the Label laboratory for external checks.
- 2002 - Due to the lack of appropriate QC results for the drilling campaigns prior to 2002, a re-assay campaign was initiated to validate the available analytical data, thus a total of 51,768 of the original 75,577 samples drilled prior to 2002 were re-assayed to corroborate the original results.
- Vale concluded that the external assay check review revealed bias for copper and gold assay results obtained by Nomos and Gamik laboratories. Based on the results obtained, Vale applied an adjustment factor to original sample grades.
- 2002-2003 - In-house Standard Reference Material (SRMs) samples used during the 2002–2003 campaign (a total of nine) were derived from both the sulphide and oxide mineralization and incorporate a significant spread in the copper and gold grades. The recommended values for SRMs were established from a set of analytical results provided by three laboratories (the former Bondar Clegg laboratory, Gamik and Lakefield / GEOSOL). Each laboratory analyzed 10 aliquots of each SRM.
  - Two internal SRM samples were also prepared; however, they became available only at the end of the drilling program. As a result, a total of 1,500 samples from the 2002–2003 drilling program were selected for re-assaying in order to validate the 2002–2003 assay data. A total of 76 samples of two internal, project-derived SRMs were randomly inserted in the batch (5% frequency).
- AMEC Foster Wheeler reviewed the QC data reported by CVRD (2003) and concluded that copper and gold check assays did not reveal significant biases, and that precision was within acceptable limits. Bongarcon (2003) also reviewed the 2002–2003 QC data and concluded similarly that the special lot assays validated the 2002–2003 data for use in Mineral Resource estimation.
- The sample preparation for the infill drilling program is executed at the Salobo laboratory and the analyzes are externally executed by ALS, with one standard, one pulp duplicate, one coarse duplicate and one blank sample inserted for every 40 samples. There is also a twin sample with 1% frequency.

### *Sample Security*

All drill core was brought from the drill site at the end of shift and stored in a purpose-built logging and storage facility. All drill core is stored in wooden boxes with proper numbering to indicate the drill hole number and meterage. The core storage and logging facility is kept locked when unoccupied. Unshipped samples are also stored in a secure facility at the same location.

Since August 2010, the evaluation of drilling and mine information has been uploaded to a Geovia Gems SQL database. This provides the geologists and mine engineers with a secure and more efficient access to information.

In 2019, all short-range and long-range dataset will be transferred to the GDMS database system, which is being used for drill core logging.

### *Mineral Reserve and Mineral Resource Estimates*

See “*Technical Information – Summary of Mineral Reserves and Mineral Resources*” for the estimated Mineral Reserves and Mineral Resources (gold only, 75% attributable) for the Salobo mine as of December 31, 2018.

Mineral Resource estimation is completed by João Dirk, a Vale employee. The estimates are prepared according to the 2014 CIM Definitions Standards and the 2003 CIM Best Practice Guidelines.

Mineral resources that are not Mineral Reserves do not have demonstrated economic viability.

There has been insufficient exploration to classify the Inferred Mineral Resources as an Indicated or Measured Mineral Resource. The extent to which further exploration may result in upgrading them to an Indicated or Measured Mineral Resource category is uncertain at this time. Infill drilling was completed in 2017 and continued in 2018, targeting areas of lower density drilling with the intent of upgrading Inferred resources.

A long-range diamond drilling program started in 2017 and completed approximately 25,000 m by the end of 2018. Since Salobo has not had a drill program since 2003, it took some time to ramp up the processes required to manage the core. The core shed was cleaned and prepared to receive the equipment. Saw machines, weighing scales and other equipment was purchased and the Salobo Operations laboratory had to build a separate preparation line to prepare the new core.

Approximately 6,000 metres of the 25,000 metres of core had been analyzed by the end of 2018. However, none of these analyses were available for the 2018 resource update. The new drilling information is planned to be incorporated in the 2019 updates. Updates of the long-range Mineral Resource model are based on the short-range production reconciliation results. Blasthole information is used to update long-range geological model contours in the mined-out zone.

Mineral Resource modeling for Salobo utilizes drilling data, enhanced knowledge of metallurgical processing, geology and mineralization, and refined interpolation parameters. The geologic and Mineral Resource models were constructed using GEMS™ and Isatis® software. The estimated Mineral Resources are then converted to Mineral Reserves using long term mine planning techniques and quoted above a cutoff grade of 0.253% Cu equivalent (CuEq).

Only diamond drill hole composites form the database and are considered in building the Mineral Resource model for the Salobo deposit.

Mineral resources were classified as Measured, Indicated and Inferred in accordance with 2014 CIM Definition Standards. Vale's geologic and block models have been peer reviewed via external audits. No inferred resources are converted to Mineral Reserves.

## ***Mining Operations***

The Salobo mine utilizes standard open pit methods, developed in 15 metre benches, with trucks and shovels. After drilling and blasting the material, cable shovels, large front-end loaders and hydraulic excavators are used to load this material. A fleet of 240 tonne and 360 tonne trucks are used to haul the waste material to waste dumps proximal to the pit or ore material to the primary crusher. Lower grade ore is stockpiled for later processing.

The mine planning objective is to mine the ore sequentially in mining phases, considering the largest possible vertical spacing between phases. The plan is to provide an approximately steady annual production of 24.0 million tonnes to the mill.

The ultimate pit was designed in 2017 based on the 2016 Whittle pit optimization results and incorporating the revised pit wall designs.

After estimating Mineral Reserves, a practical and executable production schedule is developed by short and long term mine planning teams. The ultimate pit has been subdivided into eight phases two of which have been mined out the remaining six phases form the basis of the LOM.

In general, the phases have been sequentially scheduled with a maximum ore plus waste production rate of 126 million tonnes per year feeding 24.0 million tonnes of ore to the processing plant.

The open pit mine life is approximately 26 years, ending in 2044. However, the process plant will continue to operate by reclaiming stockpiled material until 2067. Phasing of the open pit development and application of the cutoff grade strategy allows higher grade ore (above 0.90% Cu) to be processed in the initial years of the operation.

## ***Recovery Methods***

The process flowsheet has evolved through the various study phases of the Salobo mine, incorporating the additional knowledge gained from metallurgical testwork and the relative importance of the identified lithologies in the Mineral Resource and Mineral Reserve estimates. In particular, the following stages of the Salobo mine development contributed to the evolution of the retained flowsheet.

- The CVRD and Anglo American testwork program, from 1986–1987, provided the basis for a prefeasibility study completed by Bechtel in 1988. At this stage, fluorine contamination of the concentrate was recognized.
- The SMSA testwork program, culminating in a pilot plant campaign at the CRC, performed between 1993 and 1998, provided additional data for a final feasibility study completed by Bechtel.
- Locked-cycle flotation tests, flotation variability, and grinding studies, completed in 2003 and 2004, were used by Fluor Daniel to complete a second feasibility study in 2004, which evaluated production scenarios at 12 Mt/a and 24 Mt/a.
- A trade-off study using high-pressure grinding rolls (HPGR) for tertiary crushing as an alternative to conventional semi-autogenous grinding (SAG), conducted from 2005–2006. The data thus collected were used by Kvaerner to prepare a trade-off study, from which the HPGR approach was adopted.

HPGR were retained instead of SAG mills because of the high magnetite (and copper) content of critical-size pebbles that would have been removed with the magnet protecting the pebble crushers, and therefore requiring additional re-handling (per Vale's experience at Sossego). In addition, the relatively high ore hardness and its expected variability as different mixtures of ore lithologies are introduced as plant feed, would have caused high-frequency variability in plant throughput in a typical SAG mill–ball mill–pebble crusher (SABC) circuit.

Phase I of the Salobo plant (Salobo I) was designed to process 12 Mt/a of ore, to produce approximately 100 kilotonnes of copper-in-concentrate annually. Production commenced in June, 2012.

The Salobo II plant permitted a doubling of the nominal plant throughput, to 24 Mt/a, with an annualized copper-in-concentrate production of approximately 200 kilotonnes. The Salobo II plant was commissioned in June 2014 and is basically a mirror-image of Salobo I, i.e. essentially two identical, parallel, production lines.

Salobo I and II are designed to operate 365 days per year, 24 hours per day and with a targeted 90% of actual operating time, accounting for availability and utilization.

Apart from the inclusion of HPGR for tertiary crushing duty, ahead of ball milling, the circuit is conventional, but with the flotation cleaning circuit making extensive use of flotation columns, to reduce entrainment of F-bearing non-sulphide gangue minerals such as fluorite and biotite.

The whole plant is extensively instrumented. All signals are provided to a distributed control system, allowing for the remote activation and stoppage of equipment, as well as the monitoring of the status of process equipment and of the metallurgical performance of the plant. A manned control room is used to implement changes to the circuit, with the instructions relayed from floor supervisors via radio.

Run-of-mine ore at 2.5 metre top size is hauled in 240 tonne trucks and crushed in one of two 60" x 89" primary gyratory crushers (600 kW motor), rated for 1,826 t/h each, to a product size distribution with 80% of the mass passing 152 milimetres while operated with an open-side setting (OSS) of 140 milimetres. The dump pocket capacity is equivalent to the volume of 2.5 trucks. Primary crushed ore is conveyed to a common crushed ore stockpile which has a live capacity of approximately 24,800 tonnes and a total capacity of 73,400 tonnes.

Four coarse ore stockpile reclaim feeders are used to feed onto the primary screen feed conveyor which feeds two operating double-deck vibrating screens. The screens have a 100 milimetre aperture top deck and 55 milimetre aperture bottom deck to yield and underflow product sizing of 80% passing 38 milimetres. Screen oversize is crushed in two MP-1000 cone crushers (746 kW motors) in a standard closed circuit. A third screen and crusher were added to the original two units with the Salobo II plant. These units are typically on stand-by.

Secondary-crushed product is then conveyed in a two kilometre long pipe conveyor running at a speed of 2.5 m/s to the secondary crushed ore stockpile. This stockpile has a total capacity of approximately 171,000 tonnes and a live capacity of about 75,000 tonnes.

Two parallel lines of four operating reclaim feeders each are then used to reclaim the crushed ore and deliver it to the HPGR circuit via the two stockpile reclaim conveyors merging into a single line of transfer conveyors leading to the HPGR silos feed conveyor, equipped with a shuttle head. This unit delivers ore into one of four concrete silos, providing approximately 20 min of surge at nominal capacity. A reversible feed belt conveyor and feed belt feeders then feed each of the four HPGR units.

Each HPGR unit has a two metre diameter drum by 1.5 metre wide. The maximum feed size is 55 milimetres and the HPGR product is exhibiting 80% passing 17 milimetres while operating with a 40 milimetre gap and at 150 bars of hydraulic pressure applied to the floating roll. The crushed HPGR product is discharged via the product collection conveyor and is then screened at eight milimetres on the bottom deck of banana screens, with the top deck aperture set at 15 milimetres. There are a total of eight operating screens, with half dedicated to the HPGR of either Salobo I or Salobo II. The screen undersize, at 80% passing six milimetres, discharges directly into one dedicated ball mill discharge sump. The screen oversize is recirculated back via the screen oversize collection conveyor to the HPGR silos feed conveyor for further crushing. The circulating load is typically 110% around this circuit.

Slurry in the ball mill discharge sump is pumped to a battery of ten 660 milimetre hydrocyclones, of which seven are typically operating. Hydrocyclone underflow is fed by gravity to an overflow ball mill of 7.9 metres diameter by 12.2 metres long, equipped with a 17 MW gearless motor. There are four ball mills operating in closed circuit, each with a dedicated hydrocyclone cluster. Ball mill discharge feeds into the discharge sump for recirculation to the hydrocyclones. The design grinding circuit product is set at 80% passing 106 µm. Hydrocyclone overflow advances to the Rougher 1 flotation circuit at 45% solids by weight. The ball mills were designed to operate at a 30–35% ball charge using 76 milimetre diameter steel balls and with a circulating load of approximately 300%. These conditions were adjusted by the operations, now showing use of a 30% ball charge. Under these conditions, 15 MW are drawn from the mill motors. A higher ball charge would reportedly require the addition of a retainer ring at the mill discharge. The circulating load is about 200%.

The flotation circuit is of conventional design but the cleaning circuit is making extensive use of column flotation, in order to improve rejection of gangue contaminants carrying fluorine values. Lime is added at the front end of the circuit to raise the pH to about 10. Addition of NaHS previously was made ahead of roughing so as to clean the surfaces of the bornite and increase its recovery. PAX and a dithiophosphate are used as the primary and secondary collectors, respectively. Frothing is provided by propylene glycol and methyl isobutyl carbinol (MIBC).

Rougher 1 (e.g. rougher) flotation is carried out in four parallel lines (one for each ball mill) of two cells each. The cells are mechanically agitated units of 200 m<sup>3</sup> capacity, providing six minutes of design retention time. The Rougher 1 concentrate advances to the cleaning circuit. The Rougher 1 tailings advance to the Rougher 2 (scavenger) circuit consisting of four lines, with each line containing six mechanically-agitated 200 m<sup>3</sup> cells, for a nominal retention time of 39 min. Staged Flotation Reactors (SFR's) have been installed on the rougher tailings. The concentrate from the SFR's reports to concentrate regrinding. SFR tailings gravitate to the tailings storage facility (TSF), while the concentrate advances to the regrinding circuit. The cleaning circuit is divided into three upgrading stages and closed by a cleaner-scavenger bank of conventional agitated cells. The arrangement of each upgrading stage is typical, whereas the concentrate of one stage advances to the next one and the tailings are moved back to the previous stage. Exceptions are found with the Cleaner 1 tailings, proceeding to the cleaner-scavenger and Cleaner 3 concentrate, which is the final concentrate.

The Cleaner 1 circuit consists of 16 column cells, each six metres diameter x 14 metres height, arranged in four lines of four cells each. Design residence time is 39 min. The Cleaner 1 columns are fitted with a Microcel sparging system, introducing flotation air to recirculated slurry pumped through static mixers. All of the other columns only use more standard air spargers.

The concentrate from the Cleaner 1 circuit advances to the Cleaner 2 circuit, consisting of eight cells, in four lines of two columns each, of 4.3 metres diameter x 14 metres height, for a design retention time of 34 min. Concentrate from the Cleaner 2 circuit advances to the Cleaner 3 circuit, consisting of four cells, in four lines of one cell each, each column 4.3 metres diameter x 14 metres height for a design retention time of 39 min.

The tailings of Cleaner 1 are fed into the cleaner-scavenger section, made of four lines of four 200 m<sup>3</sup> agitated cells each. The tailings of this stage join the Rougher 2 tailings to form the complete plant tailings stream, directed by gravity to the TSF. The cleaner-scavenger concentrate is combined with the Rougher 2 concentrate and undergoes regrinding in one of four vertical mills fitted with 1.1 MW motors. These mills, filled with 20 milometre diameter steel grinding media, are operated in closed-circuit with one dedicated cyclone cluster per mill, ensuring a regrinding circuit product at 80% passing 20 µm.

The final concentrate exiting Cleaner 3 is pumped to one of two 15 metre diameter high-capacity thickeners, producing an underflow slurry at 65% solids. This slurry is transferred to a surge tank ahead of the concentrate filters.

The concentrate is dewatered further through the use of four pressure filters, each with a horizontal frame holding 50 plates of 1,500 milometre x 1,500 milometre. A typical filtration cycle lasts 18 minutes. The filtered concentrate has a residual moisture content of about 11%. It is stockpiled below the filters in a covered concentrate storage area holding 6,000 tonnes.

Concentrate is reclaimed by front-end loader and loaded into trucks at a nominal rate of 1,500 wet metric tonnes per day. The concentrate is weighed to about 27 wmt in the trucks using a static scale and delivered to a rail spur storage area at the town of Parauapebas, some 94 kilometres away. The warehouse can hold 16 kilotonnes of concentrate, allowing for blending when required. The concentrate is reclaimed by front-end loader and loaded into 80-90 wmt railcars carrying it to the port of Itaqui, in São Luís, in trains of 100 railcars. The concentrate is stored there in an enclosure with a capacity of 50 kilotonnes, while awaiting loading into boats at a rate of 1,100 wmt/h. Sampling of the concentrate is carried out at the Port of Itaqui, in lots of 500 wmt, when the material is reclaimed by loader and placed on the conveyor system feeding it into ships. Shipment weights can vary from 13 kilotonnes to 45 kilotonnes, with two to three shipments completed per month.

The combined flotation circuit tailings (Rougher 2 and cleaner-scavenger tailings) flow by gravity from the plant to the TSF, located directly north of the processing plant. Tailings are dumped from a single-point discharge and create a beach on the south side of the dam. Over the mine life, several phases of dam raising with mine waste will be required to provide the required storage volume. Vertical pumps installed on pontoons pump recycled tailings water back to the process plant, accounting for over 95% of the total process water requirements.

## ***Production Information***

### *Capital and Operating Costs*

A total of \$575 million will be invested in sustaining capital in the five year plan for mine and processing plant improvement and upgrades (equipment, materials, spare parts, etc.), health, safety, and environmental sustaining expenditures relating to dam works. The operating cost estimation is performed in conjunction with the mobile equipment fleet selection and mine planning. In addition to the equipment direct operating costs, the other key factors include labour, salaries, energy, and fuel costs.

Annual mining operating costs dropped from \$2.56 / tonne to \$2.30/tonne between 2017 and 2018, mainly due to the FX impact of the Brazilian Real.

### *Gold Production*

The following table summarizes 2012 to 2018 gold production (100% basis) from the Salobo mine.

Year	Tonnage (kt)	Feed Grades		Concentrate		
		Cu (%)	Au (g/t)	Tonnage (t)	Cu (%)	Au (g/t)
2012	1,816	1.13	0.74	32,231	40.8	20.44
2013	7,366	1.09	0.76	165,471	39.4	21.92
2014	12,474	0.97	0.62	255,511	38.5	19.51
2015	20,288	0.88	0.57	402,592	38.6	19.41
2016	21,401	0.94	0.67	445,238	39.5	22.18
2017	23,650	0.95	0.67	498,172	38.8	21.63
2018	23,657	0.95	0.66	509,811	37.8	22.05

**ANTAMINA MINE, PERU**  
{TC “ANTAMINA MINE, PERU” \F C \L 2}

The Antamina mine is indirectly owned by Glencore plc (33.75%), BHP Billiton plc (33.75%), Teck Resources Ltd. (22.5%), and Mitsubishi Corporation (10%). The Antamina mine is an open pit mining operation located in the Central Andes of northern Peru. The following description of the Antamina mine is based on the information disclosed in the annual information form of Teck Resources Ltd. filed on February 25, 2019 and information contained in Glencore’s annual report for the year ended December 31, 2018. The Company QP’s have approved the disclosure of scientific and technical information in respect of the Antamina mine in this document.

***Property Description and Location***

The Antamina mine is jointly owned by Glencore plc (33.75%), BHP Billiton plc (33.75%), Teck Resources Ltd. (22.5%) and Mitsubishi Corporation (10%). The participants’ interests are represented by shares of Compañía Minera Antamina S.A. (“CMA”), the Peruvian company that owns and operates the project.

The Antamina mine property consists of numerous mining concessions and mining claims covering an area of approximately 82,200 hectares and an area of approximately 15,000 hectares of surface rights. These rights concessions and claims can be held indefinitely, contingent upon the payment of annual license fees and provision of certain production and investment information. CMA also owns a port facility located at Huarney and an electrical substation located at Huallanca. In addition, CMA holds title to all easements and rights of way for the 302 kilometre concentrate pipeline from the mine to CMA’s port at Huarney.

The deposit is located at an average elevation of 4,200 metres, 385 kilometres by road and 270 kilometres by air north of Lima, Peru. The Antamina mine lies on the eastern side of the Western Cordillera in the upper part of the Rio Marañon basin.

***Accessibility, Climate, Local Resources, Infrastructure and Physiography***

Antamina mine personnel live in a camp facility while at work and commute from both local communities and larger population centres, including Lima. The Antamina mine is an open-pit, truck/shovel operation. The ore is crushed within the pit and conveyed through a 2.7 kilometre tunnel to a coarse ore stockpile at the mill. It is then processed utilizing two SAG mills, followed by ball mill grinding and flotation to produce separate copper, zinc, molybdenum and lead/bismuth concentrates. The mill has the capacity to process approximately 145,000 tonnes per day, depending on ore hardness. A 302 kilometre-long slurry concentrate pipeline, approximately 22 centimetres in diameter with a single pump station at the mine site, transports copper and zinc concentrates to the port where they are dewatered and stored prior to loading onto vessels for shipment to smelters and refineries world-wide.

Access to the mine site is by an all-weather chip sealed road maintained by CMA. The mine road connects at the Peruvian National Highway 14 at Conococha Lake. Highway 14 connects to the Pan American highway with the city of Huaraz via Peruvian National Highway 3N. The closest town to the mine site is San Marcos, 38 kilometres by dirt road. Huaraz is the closest city to the mine site, 200 kilometres by paved road or 156 kilometres by partial dirt road. Power for the mine is taken from the Peru national energy grid through an electrical substation constructed at Huallanca. Fresh water requirements are sourced from a dam-created reservoir upstream from the tailings impoundment facility. The tailings impoundment facility is located next to the mill. Water reclaimed from the tailings impoundment is used as process water in the mill operation. The operation is subject to water and air permits issued by the Government of Peru and is in material compliance with those permits. The operation holds all of the permits that are material to its current operations.

The Antamina site ambient air temperatures range from an hourly maximum of 15.3°C to an hourly minimum of minus 0.1°C and the rainfall averages 1,870 milimetres per year. These conditions are appropriate to conduct mining operation through the year. Occasional interruptions in the mining activities may be due to strong lightning storms.

## ***History***

### *Early History*

The Antamina valley has seen limited mineral production by indigenous peoples for centuries. The first recorded owner and operator at Antamina was Leopold Pflucker in 1850. He built a small copper and lead smelter at Juproc using coal from nearby outcrops. The Italian naturalist Antonio Raymondi visited the area in November 1860 and found the smelter to be producing lead ingots of 35 kg containing 20 to 25 ounces of silver.

In 1903 Vicente Lezameta mined at Antamina and produced copper matte at a grade of 32%. Mining was stopped and then resumed in 1912 to 1914 with an unsuccessful attempt to leach copper.

With the start of the World War I in 1914, there was a search for new copper deposits and several geologists visited Antamina, including E. Diez Canseco, D. J. McLaughlin, J. L. Gilden, and A. H. Means.

In 1925 A. H. Means visited Antamina for Northern Perú Copper and recommended a diamond drill program. Eight holes (totaling 780 m) were drilled looking for a porphyry copper deposit and Northern Perú Copper dropped the property after failing to obtain favorable results.

### *Cerro de Pasco 1952–1971*

The Cerro de Pasco Corporation was the first company to carry out exploratory work of any magnitude. Its work was confined to the steep slopes on the East side of the deposit where the topography allowed easy underground access by means of adits, at several levels.

Some 32 diamond drill holes totaling 3,200 metres, were completed, 18 from surface and 14 from underground. In addition, Cerro drifted and crosscut 4,300 metres within the eastern zone and drove raises totaling 220 metres in the heart of the zone. The objective was to prove up a high grade copper deposit and to this end; Cerro defined over one million tonnes averaging better than 3.0% copper and a lower grade reserve of 10 million tonnes.

On October 30, 1970, all of the mining assets owned by Cerro were transferred to the Government of Perú.

### *Minero Perú and Geomin 1971–1981*

Following expropriation, 2,200 hectares of mining rights were passed to Minero Perú, the mining administration agency of the Government of Perú, which in 1974 formed the Empresa Minera Especial (EME) in partnership with the Government of Romania mining agency called Geomin.

EME carried out a careful and methodical program of work on the property culminating in a full feasibility study. The caliber of the work done is high and although much of it required updating, the resulting database provided a firm base to build on.

EME completed a series of full feasibility studies of Antamina based on the proven and probable reserves determined from the drilling and underground sampling. The studies included full engineering appraisals of all aspects, including open pit design, mine equipment selection, concentrator design, all surface facilities, local social impact, geotechnical studies, marketing and economic analysis, etc. Bench and pilot plant metallurgical work was done in the period 1975 to 1978 in Romania.

Several studies were completed at different mining rates. The basic mining plan involved an initial open pit producing 10,000 tonnes per day of ore for seven years then 20,000 tonnes per day for 13 years. EME update the initial study in 1978, 1979 and 1982. Lower rates of production were addressed from 2,500 to 5,000 tonnes per day, with the objective of limiting the capital investment.

### *1981 - Present Day*

Due to its failure to finance the project, EME was disbanded in the 1981-82 period. In the ensuing years, Minero Perú continued its studies to the extent that there were over 100 reports on the project.

In 1992, Minero Perú used the above studies as a basis for an attempt to market Antamina and produced an Investment Compendium that was not widely circulated, and the sales effort failed.

Then as socio-economic conditions improved under President Fujimori, the Antamina mine property was transferred to Centromin and became part of its sale package in 1993.

In 1995 and 1996 Rio Algom Limited and Inmet Mining Corporation, both of Canada, conducted extensive reviews of the project culminating in the formation of a partnership to bid on Antamina and the subsequent successful bid in early 1996. Shortly afterward Rio Algom and Inmet formed Compañía Minera Antamina S.A. as a 50:50 owned company.

In 1998 Inmet sold its interest in Compañía Minera Antamina S.A. to two other Canadian companies and Compañía Minera Antamina S.A. was restructured under an ownership of 37.5% Rio Algom, 37.5% Noranda Inc., and 25% Teck Corporation. In 1999, the ownership was further modified as each of the three partners sold 10% of their interest to Mitsubishi Corporation, resulting in the ownership of 33.75% Rio Algom, 33.75% Noranda, 22.50% Teck, and 10% Mitsubishi.

In 2000, Billiton Plc of Great Britain bought 100% of Rio Algom Limited thereby effectively becoming one of the partners. In 2001 BHP Limited merged with Billiton PLC forming BHP Billiton Group. Teck Corporation and Cominco Limited merged in 2001 forming Teck Cominco Limited (now Teck Resources Limited). In 2005 Noranda Inc. amalgamated with Falconbridge Limited with the resulting company called Falconbridge Limited. In November 2006 Xstrata acquired Falconbridge Limited became one of the owners. Currently ownership of Antamina is BHP Billiton Group (33.75%), Xstrata PLC (33.75%), Teck Resources Limited (22.50%), and Mitsubishi Corporation (10%).

### ***Mineralization and Deposit Types***

The Antamina mine polymetallic deposit is skarn-hosted. It is unusual in its persistent mineralization and predictable zonation and has a SW-NE strike length of more than 2,500 metres and a width of up to 1,000 metres. The skarn is well-zoned symmetrically on either side of the central intrusion with the zoning used as the basis for four major subdivisions being a brown garnet skarn, green garnet skarn, wollastonite/diopside/green garnet skarn and a marbled limestone with veins or mantos of wollastonite. Other types of skarn, including the massive sulphides, massive magnetite, and chlorite skarn, represent the remainder of the skarn and are randomly distributed throughout the deposit. The variability of ore types can result in significant changes in the relative proportions of copper and zinc produced in any given year.

### ***Exploration Drilling***

In 2018, 15 primary and 43 branch infill drillholes, as well as five primary and nine branch deep drillholes were completed within the Antamina pit, for a total of approximately 41,200 metres. For diamond core, three metre samples of half core (HQ or NQ) are collected and prepared for assay at an external laboratory. The remaining half of the core is retained for future reference. The assay program includes approximately 15% of quality-control samples, comprising reference materials, duplicates and blanks. The reference materials consist of matrix-matched material from Antamina, homogenized and certified in accordance with industry practice.

### ***Mineral Reserve and Mineral Resource Estimates***

See “*Technical Information – Summary of Mineral Reserves and Mineral Resources*” for the estimated Mineral Reserves and Mineral Resources (silver only, 33.75% attributable) for the Antamina mine as of December 31, 2018.

### ***Mining Operations***

The Antamina mine is a large open pit mining operation using standard mining equipment and methods. Drilling is done with large rotary drills and blasting uses bulk explosives. Electric cable shovels and haul trucks do the principal material movement mining in 15 metres benches.

Waste is hauled to final deposition on large waste dumps in areas outside the ultimate pit. Ore is either delivered directly to the Primary Crusher (located south of the pit in the Antamina valley) or to a stockpile for later feeding to the crusher. The long-term operational strategy is currently based on the use of a variable cut-off grade over time to improve the Net Present Value of the project. As a consequence of this strategy, large ore stockpiles are created and then reclaimed through the life of the operation. This strategy is reviewed annually.

## ***Production***

The Antamina mine's copper production (100% basis) in 2018 was 446,100 tonnes, compared to 422,500 tonnes in 2017, with the increase primarily as a result of higher copper grades and recovery, partially offset by processing less copper-only ore. Zinc production was 409,300 tonnes in 2018, an increase from 372,100 tonnes produced in 2017, primarily due to processing more copper-zinc ore. In 2018, molybdenum production was 10.2 million pounds, which was 17% higher than 2017.

The Antamina mine's 2019 production is expected to be in the range of 422,000 to 444,000 tonnes of copper, 289,000 to 311,000 tonnes of zinc and approximately nine million pounds of molybdenum in concentrate. The lower zinc production in 2019 is a result of mine sequencing and is expected to return to higher production levels after 2019 with higher grades and a higher proportion of copper-zinc ore to process. Copper production is expected to be between 400,000 and 422,000 per year tonnes from 2020 to 2022. Zinc production is anticipated to average between 444,000 and 489,000 tonnes per year from 2020 to 2022, although annual production will fluctuate due to feed grades and the amount of copper-zinc ore processed. Annual molybdenum production is expected to be between 9 and 13 million pounds between 2020 and 2022.

Antamina has entered into long-term off-take agreements with affiliates of the Antamina shareholders on market terms for copper, zinc and molybdenum concentrates.

## ***Taxation***

In Peru, the mining tax regime includes the Special Mining Tax and the Modified Mining Royalty which apply to CMA's operating margin based on a progressive sliding scale ranging from 3% to 20.4%. CMA is also subject to Peruvian income tax.

## ***Mine Life***

Based on current designed tailings storage capacity, the mine life is expected to continue until 2028. CMA is currently conducting engineering studies for additional tailings storage options and alternative mine plans that could result in significant mine life extensions.

## ***Capital and Operating Costs***

2019 projected capital costs for the Antamina mine is approximately \$342 million. The major components of the projected capital costs are:

<b>Component</b>	<b>2019 Forecast (\$M)</b>
Sustaining	298
Major Enhancement	44

2019 projected cash operating costs for the Antamina mine are approximately \$796 million. The major components of the projected cash operating costs are:

<b>Component</b>	<b>2019 Forecast (\$M)</b>
Labour	404
Supplies	418
Energy	200
Other (including general & administrative, inventory changes)	49
<u>Less amounts associated with projected capitalized stripping</u>	<u>(276)</u>
<b>Total</b>	<b>796</b>

The cash operating costs presented above do not include transportation or royalties.

The labour agreement at Antamina expired in the third quarter of 2018; negotiations for a new agreement are ongoing.

### ***Production Information***

The following table summarizes 2015 to 2018 production (100% basis) from the Antamina mine:

<b>Antamina Production</b>	<b>Units</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total Ore Processed	(mt)	56	54	51	51
Produced Copper	(kt)	391	431	423	446
Produced Zinc	(kt)	235	198	372	409
Produced Molybdenum	(mlbs)	4.4	10.3	8.7	10.2
Produced Silver	(moz)	17.7	20.1	19.5	15.9

### **CONSTANCIA MINE, PERU** {TC “CONSTANCIA MINE, PERU” \F C \L 2}

The Constancia mine is indirectly wholly-owned by Hudbay and is located in the Chumbivilcas province in southern Peru. The Constancia mine is an open pit mining operation. The following description of the Constancia mine is based on the information disclosed in the annual information form of Hudbay filed on March 29, 2019. The Company QP’s have approved the disclosure of scientific and technical information in respect of the Constancia mine in this document.

### ***Project Description, Location and Access***

Hudbay owns a 100% interest in the Constancia mine in southern Peru. The Constancia mine includes the Constancia and Pampacancha deposits and is located approximately 600 kilometres southeast of Lima at elevations of 4,000 to 4,500 metres above sea level. Geographic coordinates at the centre of the property are longitude 71° 47’ west and latitude 14° 27’ south.

Hudbay acquired the Constancia mine in March 2011 through Hudbay’s acquisition of all of the outstanding shares of Norsemont Mining Inc. (“Norsemont”). Hudbay owns a 100% interest in the 36 mining concessions (covering an area of 22,516 hectares) that comprise the Constancia mine, all of which are duly registered in the name of its wholly-owned subsidiary, HudBay Peru S.A.C.; HudBay Peru S.A.C. also has the required surface rights to operate the Constancia mine. Most of the known mineralization is located in the claims Katanga J, Katanga O, Katanga K, and Peta 7, though small mineralized outcrops are common throughout the area. All the mining concessions are currently in good standing. The annual concession fee payments of \$3.00 per hectare are due on June 30 each year.

The Constancia mine reached commercial production in the second quarter of 2015 and reached steady state design production in the second half of 2015.

The Constancia mine is subject to the following taxes, royalties and other agreements concerning mineral production:

1. *Peruvian Tax Regime* – the Constancia mine is subject to the Peruvian tax regime, which includes the mining tax, mining royalty, 8% labour participation, corporate tax and IGV/VAT. The Special Mining Tax (“SMT”) and the Mining Royalty (“MR”) were introduced in late-2011 for companies in the mineral extractive industries. Both the SMT and the MR are applicable to mining operating income based on a sliding scale with progressive marginal rates. The effective tax rate is calculated according to the operating profit margin of the Company. Based on the Constancia mine’s expected life of mine operating profit margin, the effective SMT and MR tax rates are projected to be 2.70% and 2.37% of operating income over the life of the mine. The MR is subject to a minimum of 1% of sales during a given month.
2. *Constancia PMPA* – 100% of Constancia’s silver production and 50% of its gold is subject to Wheaton’s agreement with Hudbay.
3. *Legacy NSR* – A net smelter return royalty (NSR) of 0.5% to a maximum of \$10.0 million is payable to the previous owners of the Constancia mine property.

#### ***Accessibility, Climate, Local Resources, Infrastructure and Physiography***

The Constancia mine is accessible from Lima by flying to either Arequipa or Cusco and then proceeding by paved and gravel highway to the mine site, which in each case takes approximately seven hours. The closest town is Yauri (population 23,000), which is approximately 80 kilometres by road from the Constancia mine site. Copper concentrate is transported via Yauri to the Matarani port, which is approximately 460 kilometres by road from the mine site.

The climate of the region is typical of the Peruvian altiplano in which the seasons are divided into the wet season between October and March with slightly higher temperatures and a dry season during April to September with colder temperatures. Temperatures can dip below -10° Celsius and rise to 20° Celsius. The sun can be very strong with high ultraviolet readings being common during the mid-day period. There is a climate monitoring station installed at the mine site.

Elevations on the property range from 4,000 to 4,500 metres above sea level with moderate relief and grass-covered altiplano terrain. Slopes are typically covered with grasses at lower elevations. At higher elevations, talus cover is common with very little vegetation. The grasslands are used as pasture for animals and at lower elevations for some limited subsistence agriculture. Water resources are readily available from a number of year-round streams near the mine site.

The Constancia mine’s maximum demand for electricity is estimated to be 96 MW with an average load of 85 to 90 MW in the first five years. Electricity is supplied via the 220 kV Tintaya substation located about 70 kilometres from the mine site and a dedicated transmission line from this substation to the Constancia mine.

Other operating infrastructure includes the tailings management facility, waste rock facility and water management systems.

Life-of-mine agreements have been entered into with the neighbouring communities of Chilloroya and Uchucarco. These agreements provide the surface rights required for operations and specify the commitments to these local communities over the course of the mine life. In particular, the community agreements contemplated cash payments for the land access rights, as well as funds for facilitation of development projects and investment for local enterprises. The agreements also outline ongoing annual investments in community development including medical, educational and agricultural services and contemplate a bi-annual review of certain of the social development terms. While Hudbay has entered into the life of mine agreements, additional surface rights are required in order to mine the Pampacancha deposit, and there can be no assurance that Hudbay will be able to secure the agreements required to do so.

The nearby communities can provide unskilled labourers, but access to skilled mining talent must be obtained through training or enlisting personnel from outside the area.

## ***History***

The original Constancia mine property, consisting of 13 concessions, was obtained by Norsemont pursuant to an option agreement with Rio Tinto Mining and Exploration Ltd. (“Rio Tinto”). Norsemont acquired an initial 51% interest in the property from Rio Tinto in November 2007. Pursuant to the option agreement, in March, 2008 Norsemont acquired the remaining 19% interest in the Constancia mine held by Rio Tinto. Norsemont acquired the remaining 30% interest in the project from Mitsui Mining and Smelting Company Limited Sucursal Del Peru (“Mitsui”) and 23 additional concessions were obtained by Norsemont in 2007 and 2008.

The San Jose prospect (which forms part of the Constancia deposit) was explored by Mitsui during the 1980s. Exploration consisted of detailed mapping, soil sampling, rock chip sampling, and ground magnetic and induced polarization surveys with several drill campaigns. Drilling was mainly focused on the western and southern sides of the prospect. Mitsui completed 24 drill holes (4,200 metres) and Minera Katanga completed 24 shallow close-spaced drill holes at San Jose (1,200 metres).

In 1995, reconnaissance prospecting by Rio Tinto identified evidence for porphyry style mineralization exposed over an area 1.4 x 0.7 kilometres, open in several directions, with some copper enrichment below a widespread leach cap developed in both porphyry and skarn.

In May 2003, Rio Tinto revisited the area and the presence of a leached cap and the potential for a significant copper porphyry deposit were confirmed. Negotiations with Mitsui, Minera Livitaca and Minera Katanga resulted in agreements being signed on October 31, 2003 with the underlying owners. Rio Tinto renamed the prospect “Constancia”.

The Rio Tinto exploration activities consisted of geological mapping, soil, and rock chip sampling, and surface geophysics (magnetics and induced polarization). Rio Tinto completed 24 diamond drill holes for a total of 7,500 metres.

## ***Geological Setting, Mineralization, and Deposit Types***

The Constancia deposit is a porphyry copper-molybdenum system which includes copper-bearing skarn mineralization. This type of mineralization is common in the Yauri-Andahuaylas metallogenic belt where several porphyry Cu-Mo-Au prospects have been described but not exploited. Multiple phases of monzonite and monzonite porphyry have intruded a sequence of sandstones, mudstones and micritic limestone of Cretaceous age. Structural deformation has played a significant role in preparing and localising the hydrothermal alteration and copper-molybdenum-silver-gold mineralization, including skarn formation.

The Pampacancha deposit is a porphyry related skarn system, with copper-bearing skarn mineralization. This type of mineralization is common in the Yauri-Andahuaylas metallogenic belt where several skarn deposits have been developed, including Corocohuayco in the Tintaya District and Las Bambas.

The Constancia porphyry copper-molybdenum system, including skarn, exhibits five distinct deposit types of mineralization:

1. Hypogene fracture-controlled and disseminated chalcopryite mineralization in the monzonite (volumetrically small);
2. Hypogene chalcopryite (rare bornite) mineralization in the skarns (significant);
3. Supergene digenite-covellite-chalcocite (rare native copper) in the monzonite (significant);
4. Mixed secondary sulphides/chalcopryite in the monzonite (significant); and
5. Oxide copper mineralization (volumetrically small).

Molybdenite, gold and silver occur within all these mineralization types.

Two areas of porphyry-style mineralization are known within the project area, Constancia and San José. At Constancia, mineralization is deeper than that observed at San José which occurs at surface. The mineralized zone extends about 1,200 metres in the north-south direction and 800 metres in the east- west direction.

The Pampacancha deposit is located approximately three kilometres southeast of the Constancia porphyry. The stratigraphy unit in the area is the massive, gray micritic limestone of Upper Cretaceous Ferrobamba Formation; this unit in contact with the dioritic porphyry generates a magnetite skarn, hosts economic mineralization of Cu-Au-Mo.

The intrusive rocks are Oligocene age unmineralized basement diorite. Diorite porphyry is recognized as the source for skarn mineralization, which in turn is cut by mineralized monzonite intrusions which provide minor local increases in Cu-Au mineralization. Skarn Cu-Au mineralization is best developed at the upper and lower margins of the limestone body.

Epithermal mineralization of the low sulphidation quartz-sulphides Au + Cu style, accounts for common supergene enriched Au anomalies, and along with other features such as hydrothermal alteration and veins typical of near porphyry settings.

### ***Exploration***

A geophysical Titan-24 survey was completed in July 2011 to the south of the Constancia deposit. In late 2013, an aeromag and radiometric helicopter geophysical survey was carried out over an area of 80 square kilometres near Constancia.

A mapping and geochemical sampling program was completed between 2007 to 2014, where 20,789 hectares were mapped. Of the 20,789 hectares, 8,905 were mapped on Hudbay mining concessions, which represent 80% of the mining rights in the area.

### ***Drilling***

Extensive drilling has been conducted at the Constancia and Pampacancha deposits since the early 2000s. The three most recent drilling programs were completed by Hudbay, with prior drilling programs conducted by Rio Tinto and Norsemont Mining. The drilling campaigns conducted at the Constancia and Pampacancha deposits totaled 207,000 metres of drilling with approximately 90% of the drilling being conducted by diamond drilling (coring) methods and only 10% by reverse circulation (RC).

Out of the total drilling completed over the two deposits, 418 holes (128,240m) at Constancia and 147 holes (39,696m) at Pampacancha were used to conduct grade estimation within the mineralized envelopes and to report the current mineral resource and mineral reserve estimates.

### ***Sampling and Analysis and Security of Samples***

The sample preparation, analysis, security procedures and data verification processes used in the exploration campaigns on the Constancia mine prior to Hudbay's acquisition were reviewed through the documentation available in previously filed technical reports and it was determined that the sampling methodology, analyses, security measures and data verification processes were adequate for the compilation of data at Constancia and Pampacancha deposits and such processes continue to be used by Hudbay.

1,247 and 633 bulk density measurements were respectively conducted at Constancia and Pampacancha deposits by ALS Chemex using the paraffin wax coat method. These measurements are representative of the different rock and mineralization domains recognized to date.

During the Hudbay drilling campaigns conducted between 2011 and 2015, blanks were inserted into the sample stream as per geologist instruction at approximate intervals of every 30 samples. Standard references were prepared with material obtained from the Constancia and Pampacancha deposits by Hudbay and were analyzed and certified by Acme labs. Duplicates were obtained by splitting half core samples, obtaining two quarter core sub-samples, one quarter representing the original sample and the other quarter representing the duplicate sample. Duplicates were inserted approximately every 30 samples.

As for the 2017 twin hole drilling program, 13% of blanks and 5% of standards were inserted at site, prior to dispatching the core boxes to Certimin and SGS laboratories. In addition, 10% of all the pulps samples and 10% of all the coarse reject samples were reclaimed. 50% were resent to the initial laboratory and the other 50% were sent to an umpire lab for duplicate analysis. 5% of blanks, 5% of standards and 5% of duplicates were added to the re-analysis streams.

## ***Data Validation***

Assay data was delivered in digital form by the laboratories. Checks for inconsistent values were made by the senior geologist before data was uploaded.

All lithological, alteration, geotechnical and mineralization data was logged on paper logs that were later entered in spreadsheets from where they were imported into the database. The data entry spreadsheets have a number of built-in logical checks to improve the validity of the database. Hudbay checked collar positions visually on plans and down-hole surveys were validated by examining significant deviations.

No significant discrepancies were found between the log data and the assay certificates and the drill hole database is accurate and suitable to estimate the mineral resources at both deposits.

In 2017, 17 holes representing over 4,167 metres of sampling previously drilled by Norsemont and Hudbay and covering the full extent of the Constancia reserve pit were twinned in order to further investigate the impact of suspected losses of fine material in the original drilling both on grade estimation and on the metallurgical model. The 2017 drilling was done with the greatest level of care using triple tube coring and lubricants to maximize core recovery. The new holes were located within two metres of the old holes for each pair. The 2017 twin hole has evidenced an under-estimation bias in the copper grade in the old drilling but only for the supergene portion of the Constancia deposit. In the hypogene part of the deposit, the improved recovery of fines has no material impact on the copper grade. A robust correction was developed to address the grade bias evidenced in the supergene samples.

## ***Mineral Processing and Metallurgical Testing***

The metallurgical responses of Constancia ore (ex: Hypogene, Supergene, Skarn, Mixed and High Zinc) is acceptable in terms of treatment rate, recovery and molybdenum and copper concentrate grades. For example, the copper grade in the final concentrate is higher than 26%, with low levels of zinc, lead, iron, etc. The molybdenum concentrate produced is over 47% molybdenum with low contents of copper, lead, iron, etc. Metallurgical test work performed at laboratory and plant levels with Hypogene, Skarn, Supergene, High Zinc and Mixed ore from different polygons have enabled the operator to identify different reagents which show better performance according to each type of ore treated.

Pampacancha testwork is still at the prefeasibility level, so there are still several assumptions that have been made for Pampacancha ore recovery and throughput in the Constancia mine plant.

For the production year 2018, the Constancia mine plant achieved a copper recovery of 82.6%. Copper recoveries over the remaining life of mine are expected to average 86%. The recoveries will vary based on ore type and processing plant flow sheet improvements currently in progress.

## ***Mineral Resource and Mineral Reserve Estimates***

See “*Technical Information – Summary of Mineral Reserves and Mineral Resources*” for the estimated Mineral Reserves and Mineral Resources (100% silver and 50% gold, attributable) for the Constancia mine as of December 31, 2018.

Resource estimations for the Constancia and Pampacancha deposits are based on the most up to date geological interpretations and geochemical results from the drilling data currently available. 418 holes totaling 128,241 metres were used for the resource model of Constancia while 140 holes totaling 38,240 metres were used to support the resource model of Pampacancha. Multi pass ordinary kriging interpolation setup was used to interpolate the grades in the block model while honoring the geology.

A thorough reconciliation exercise was conducted at the end of 2017 in order to diagnose the reasons for a persistent positive copper grade bias experienced at Constancia between the mill reported production and the reserve estimates over the past two years. By correcting the under-estimation bias in the previous drilling campaigns for the sampling of the supergene mineralization and by closely monitoring and correcting any over-smoothing in the kriging interpolation, a new resource model developed in 2017 provides much improved reconciliation results with past production and was used to estimate the current mineral resource and mineral reserve estimates presented in this document. In 2018, a reconciliation between the reserve model and the reported production from the mine credited by the mill showed that tonnes and quantity of copper were both within 5% of estimates.

At Pampacancha, the resource model was also updated in 2017, in order to improve the geological modeling and better control the smoothing in the grade interpolation but also and more significantly to properly weight grade interpolation by density as a strong positive correlation was recognized between density and the grade of the main metals of economic interest. As expected, properly weighting grade interpolation by density results in an improved average grade for copper but also for gold, molybdenum and silver.

The component of the mineralization within the block model that meets the requirements for reasonable prospects of economic extraction was based on the application of a Lerchs-Grossman cone pit algorithm.

The mine production plan contains 584 Mt of waste and 534 Mt of ore, yielding a waste to ore stripping ratio of 1.1 to 1.0. An average life of mine mining rate of 67.5 Mt/a, with a maximum of 74 Mt/a, will be required to provide the assumed nominal process feed rate of approximately 31.0 Mt/a. The ore production schedule for the life of mine shows average grades of 0.31% Cu, 0.009% Mo, 0.06 g/t Au and 3.0 g/t Ag.

### **Reconciliation of Reserves and Resources**

A year over year reconciliation of the estimated mineral reserves and resources at the Constancia mine is set out below. There has been no change in the resource model or in the mine plan in 2019. The changes in mineral reserve and mineral resource estimates are solely due to mining depletion and to the removal of certain mineral resources reported in 2018 that are no longer deemed to be amenable to concentration by the mill due to their high contaminant content. An (upward) adjustment to the silver and gold grade in the inferred mineral resource estimates of Constancia was also done to correct an immaterial reporting error in Hudbay's annual information form for the year ended December 31, 2017.

#### *Constancia*

<b>Mineral Reserve Reconciliation (Proven &amp; Probable)</b>	<b>Tonnes<sup>1</sup></b>	<b>Cu%</b>	<b>Mo (g/t)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>	<b>Tonnes Cu</b>
A 2018 Mineral Reserve	528,700,000	0.29	93	3.0	0.035	1,558,000
B 2018 Production (from Reserve)	31,300,000	0.47	134	4.1	0.051	148,000
C (A - B) = Depleted Reserve	497,400,000	-	-	-	-	1,410,000
D Mining Planning and Economics (Gain/Loss)	(3,600,000)	-	-	-	-	7,000
E 2019 Reserve (C - D)	493,800,000	0.29	91	2.9	0.035	1,417,000

<b>Mineral Resource Reconciliation (Measured &amp; Indicated)</b>	<b>Tonnes<sup>1</sup></b>	<b>Cu%</b>	<b>Mo (g/t)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>	<b>Tonnes Cu</b>
A 2018 Mineral Resource	356,000,000	0.20	54	2.1	0.030	701,000
B 2019 Mineral Resource	350,000,000	0.19	53	2.2	0.031	670,000
C (B-A) Gain <sup>(2)(3)</sup> /(Loss)	(6,000,000)	-	-	-	-	(31,000)

<b>Mineral Resource Reconciliation (Inferred)</b>	<b>Tonnes<sup>1</sup></b>	<b>Cu%</b>	<b>Mo (g/t)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>	<b>Tonnes Cu</b>
A 2018 Mineral Resource	54,100,000	0.24	43	2.4	0.046	127,000
B 2019 Mineral Resource	50,800,000	0.24	43	2.4	0.046	120,000
C (A - B) Gain <sup>(2)(3)</sup> /(Loss)	(3,300,000)	-	-	-	-	(7,000)

Notes:

1. Totals may not add up correctly due to rounding.
2. Re-evaluation of economic viability.
3. An immaterial reporting error in the precious metal grade of the inferred mineral resource estimates for the Constancia pit has been corrected in 2019.

## Pampacancha

<b>Mineral Reserve Reconciliation (Proven &amp; Probable)</b>	<b>Tonnes<sup>1</sup></b>	<b>Cu%</b>	<b>Mo (g/t)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>	<b>Tonnes Cu</b>
A 2018 Mineral Reserve	39,900,000	0.60	177	4.7	0.360	238,000
B 2017 Production (Depletion)	-	-	-	-	-	-
C (A - B)	39,900,000	0.60	177	4.7	0.360	238,000
F Geology (Gain/Loss)	-	-	-	-	-	-
G Mine Planning & Economics (Gain/Loss)	-	-	-	-	-	-
H 2019 Mineral Reserve (C + F + G)	39,900,000	0.6	177	4.7	0.36	238,000

<b>Mineral Resource Reconciliation (Measured &amp; Indicated)</b>	<b>Tonnes<sup>1</sup></b>	<b>Cu%</b>	<b>Mo (g/t)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>	<b>Tonnes Cu</b>
I 2018 Mineral Resource	17,400,000	0.39	95	5.0	0.258	69,000
J 2019 Mineral Resource	17,400,000	0.39	95	5.0	0.258	69,000
K (J - I) Gain <sup>(2)(3)</sup> /(Loss)	-	-	-	-	-	-

<b>Mineral Resource Reconciliation (Inferred)</b>	<b>Tonnes<sup>1</sup></b>	<b>Cu%</b>	<b>Mo (g/t)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>	<b>Tonnes Cu</b>
L 2018 Mineral Resource	10,100,000	0.14	143	3.9	0.233	14,000
M 2019 Mineral Resource	10,100,000	0.14	143	3.9	0.233	14,000
N (M - L) Gain <sup>(2)(3)</sup> /(Loss)	-	-	-	-	-	-

Notes:

1. Totals may not add up correctly due to number rounding.

## Mining Operations

The Constancia mine is a traditional open pit shovel/truck operation with two deposits, Constancia and Pampacancha. The operation consists of an open pit mining and flotation of sulphide minerals to produce commercial grade concentrates of copper and molybdenum. Silver and a small quantity of payable gold reports to the copper concentrate. The Pampacancha deposit exhibits higher grades of copper and gold and is scheduled to enter into production once Hudbay has acquired the necessary surface rights.

To match the production requirements, operations are conducted from 15 metre high benches using large-scale mine equipment, including: 10 5/8 inch diameter rotary blast hole drills, 27 m<sup>3</sup> class hydraulic shovels, 19 m<sup>3</sup> front-end loaders, and 240 ton off-highway haul trucks.

## Processing and Recovery Operations

The processing plant processes a nominal throughput of 90,000 tpd of ore (31 Mtpa at 94% plant availability). During 2018, it processed 31 Mt achieving the objective.

The primary crusher, belt conveyors, thickeners, tanks, flotation cells, mills and various other types of equipment are located outdoors and are not protected by buildings or enclosures. To facilitate the appropriate level of operation and maintenance, the molybdenum concentrate bagging plant, copper concentrate filters and concentrate storage are housed in clad structural steel buildings.

The processing plant has been laid out in accordance with established good engineering practice for traditional grinding and flotation plants. The major objective is to make the best possible use of the natural ground contours by using gravity flows to minimize pumping requirements and to reduce the height of steel structures.

An instrumentation plan will enhance the Processing Plant's performance with various initiatives implemented at different sub-process levels. These initiatives include video cameras at the apron feeder and belts, froth cameras at the flotation cells and a particle-size analyzer, all of which have been installed, with some commissioned. These initiatives are part of an overall automation plan integrated into the Processing Plant system.

### ***Infrastructure, Permitting, and Compliance Activities***

The infrastructure includes the waste rock facility, tailings management facility, water management system, electrical power supply and transmission and improvements to the roads and port. The primary road to the site consists of a 70 kilometre sealed road (National Route PE-3SG) from Yauri to the Livitaca turn-off and approximately 10 kilometres of unsealed road (CU-764) from the Livitaca turn-off to site. These roads (and bridges) have been upgraded, as necessary, to meet the needs for construction and life of mine use.

Copper concentrate is shipped from the Constancia Mine via road (~460 kilometre) and arrives at the Matarani port in trucks. These trucks are equipped with a hydraulically operated covered-box hinged at the rear, the front of which can be lifted to allow the concentrate to be deposited in the concentrate shed assigned to Hudbay by TISUR, the port operator. Pier C has been assigned to Hudbay and has a 75 Kt capacity. A chute from the shed will feed a conveyor system in a tunnel below. This feed conveyor has a 1,000 metric tonnes per hour capacity. The same conveyor and ship loading equipment will be shared with other copper concentrate exporters.

The Constancia Mine Environmental and Social Impact Assessment (ESIA) was approved by the Ministry of Energy and Mines (MINEM) in November 2010 and the first amendment to the ESIA (MOD I) was approved in August 2013. The purpose of the amendment was to increase the processing capacity and to match the Detailed Design Feasibility Study.

In April 2015, the second amendment to the ESIA (MOD II) was approved. This amendment allowed for the expansion of the Constancia Pit and inclusion of the Pampacancha deposit, resulting in an increase in reserves and the expansion of both the waste rock facility (WRF) and tailings management facility (TMF), among others. The corresponding Mine Closure Plan changes included on ESIA MOD I and ESIA MOD II was approved in June 2015.

Between 2015 and 2016 two environmental technical reports were approved by competent authorities to include auxiliary components required by the operation.

As a result, Hudbay has secured all necessary permits and authorizations to operate the mine and related facilities.

Hudbay has presented a third amendment to the ESIA (ESIA MOD III). If accepted, this amendment will provide the Constancia and Pampacancha deposits with an early discharge from the TMF supernatant, which is intended only as a contingency. Further it will allow for the optimization of the water balance and management plan, an alternate access road for transportation of the concentrate, improvements to the TMF dike design criteria and other benefits. Once the ESIA MOD III is approved, specific permitting processes and mine closure plan amendments will commence.

In addition, the permits required for the pre-stripping and operation of the Pampacancha Pit are in process. In December 2017, the first stage of the water license for pit dewatering was approved, the pumping wells are under construction and the pumping test for the hydrogeological model is underway as part of the permitting program.

### ***Capital and Operating Costs***

The LOM Sustaining CAPEX is estimated to be \$784 million (excluding capitalized stripping) and Pampacancha project capex is estimated to be \$19 million (excluding the cost of acquiring the surface rights). All capex items are reported in real 2018 \$USD.

The total includes capital required for major mining equipment acquisition, rebuilds, and major repair. The cost also includes site infrastructure expansion (Tailings Management Facility, Waste Rock Facility, etc.) and process plant infrastructure.

The operating costs are divided in three categories: mining, milling and G&A. The LOM operating costs are shown in the table below.

<b>Operating Costs<sup>(1)</sup></b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023-2036</b>	<b>LOM</b>
<b>Unit Costs</b>						
Mining	2.80	2.93	2.89	2.83	2.78	2.81
Milling	4.21	4.32	4.36	4.32	4.25	4.25
G&A	1.66	1.57	1.53	1.53	1.35	1.41
<b>Total Operating Costs (Before Capitalized Stripping)</b>	<b>8.67</b>	<b>8.82</b>	<b>8.78</b>	<b>8.68</b>	<b>8.38</b>	<b>8.48</b>
<b>Total Operating Costs (After Capitalized Stripping)</b>	<b>8.41</b>	<b>8.34</b>	<b>8.11</b>	<b>8.34</b>	<b>7.86</b>	<b>7.96</b>

Note:

(1) \$/tonne Milled.

### ***Exploration, Development and Production***

The Constancia mine commenced initial production in the fourth quarter of 2014 and achieved commercial production in the second quarter of 2015. Pampacancha is expected to be developed and mined commencing in 2019, subject to the acquisition of the required surface rights.

In addition, Hudbay recently acquired a large, contiguous block of mineral rights to explore for mineable deposits within trucking distance of the Constancia processing facility and Hudbay has commenced permitting, community relations and technical activities required to access and conduct drilling activities on these properties.

### ***Production Information***

The following table summarizes 2015 to 2018 production (100% basis) from the Constancia mine:

<b>Constancia Production</b>	<b>Units</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total Ore Processed	(mt)	23.5	27.0	28.7	31.3
Copper Grade	(%)	0.62	0.60	0.52	0.47
Gold Grade	(g/t)	0.07	0.06	0.04	0.05
Silver Grade	(g/t)	5.8	4.9	3.9	4.08
Copper Recovery	(%)	72.0	82.4	81.1	79.7
Gold Recovery*	(%)	36.0	48.4	47.4	47.4
Silver Recovery	(%)	45.1	64.9	65.5	66.5
Produced Copper	(mlbs)	231	295	267	269
Produced Gold*	(koz)	19	25	18	28
Produced Silver	(moz)	2.0	2.8	2.4	2.5

\*Wheaton's stream has a fixed gold recovery of 55% for Constancia and 70% for Pampacancha

## **DIVIDENDS { TC “DIVIDENDS” \f C \l “1” }**

Under the Company’s dividend policy, the quarterly dividend per Common Share is targeted to equal approximately 30% of the average cash generated by operating activities in the previous four quarters divided by the then outstanding number of Common Shares, all rounded to the nearest cent. To minimize volatility in quarterly dividends, the Company has set a minimum quarterly dividend of \$0.09 per Common Share for the duration of 2019.

The declaration, timing, amount and payment of dividends remains at the discretion of the Company’s Board of Directors and will depend on the Company’s cash requirements, future prospects and other factors deemed relevant by the Board of Directors.

A quarterly dividend of \$0.05 per share was paid to holders of record of the Common Shares as of the close of business on April 14, 2016 for the first quarter of 2016. A second quarterly dividend of \$0.05 per share was paid to holders of record of the Common Shares as of the close of business on June 2, 2016. A third quarterly dividend of \$0.05 per share was paid to holders of record of the Common Shares as of the close of business on September 7, 2016. A fourth quarterly dividend of \$0.06 per share was paid to holders of record of the Common Shares as of the close of business on December 7, 2016. The total of dividends paid during 2016 was \$0.21 per Common Share.

A quarterly dividend of \$0.07 per share was paid to holders of record of the Common Shares as of the close of business on April 21, 2017 for the first quarter of 2017. A second quarterly dividend of \$0.07 per share was paid to holders of record of the Common Shares as of the close of business on June 6, 2017. A third quarterly dividend of \$0.10 per share was paid to holders of record of the Common Shares as of the close of business on September 8, 2017. A fourth quarterly dividend of \$0.09 per share was paid to holders of record of the Common Shares as of the close of business on December 7, 2017. The total of dividends paid during 2017 was \$0.33 per Common Share.

Wheaton paid a total of \$0.36 per Common Share in dividends in 2018.

A quarterly dividend of \$0.09 per share was paid to holders of record of the Common Shares as of the close of business on April 6, 2018 for the first quarter of 2018. A second quarterly dividend of \$0.09 per share was paid to holders of record of the Common Shares as of the close of business on May 25, 2018. A third quarterly dividend of \$0.09 per share was paid to holders of record of the Common Shares as of the close of business on August 29, 2018. A fourth quarterly dividend of \$0.09 per share was paid to holders of record of the Common Shares as of the close of business on November 30, 2018. The total of dividends paid during 2018 was \$0.36 per Common Share.

Effective March 20, 2014, the Company adopted a Dividend Reinvestment Plan. The Dividend Reinvestment Plan was effective commencing with the second quarterly dividend of 2014. A total of 624,931 Common Shares were issued under the Dividend Reinvestment Plan during 2016, 1,175,517 Common Shares were issued under the Dividend Reinvestment Plan during 2017 and 1,461,074 Common Shares were issued under the Dividend Reinvestment Plan during 2018.

## **DESCRIPTION OF CAPITAL STRUCTURE { TC “DESCRIPTION OF CAPITAL STRUCTURE” \f C \l “1” }**

### **Authorized Capital**

The authorized share capital of the Company consists of an unlimited number of Common Shares and an unlimited number of preference shares (the “Preference Shares”), issuable in series. As of March 29, 2019, 445,219,261 Common Shares and no Preference Shares were issued and outstanding.

The Company has issued common share purchase warrants to Vale (the “Vale Warrants”), which are exercisable to acquire one Common Share until February 28, 2023. The exercise price for the Vale Warrants was reduced during 2016 from \$65.00 to \$43.75 in connection with the Second Amended Salobo PMPA. The exercise price and the number of Common Shares issuable upon exercise are both subject to adjustment in certain circumstances. No fractional Common Shares will be issuable upon the exercise of any Vale Warrants, and no cash or other consideration will be paid in lieu of fractional shares. Holders of Vale Warrants will not have any voting rights or any other rights which a holder of Common Shares would have. The Vale Warrants are authorized to be issued under a warrant indenture entered into between the Company and Canadian Stock Transfer Company dated February 28, 2013 and amended as of August 2, 2016. As of March 29, 2019, 10,000,000 Vale Warrants were issued and outstanding.

## **Common Shares**

Holders of Common Shares are entitled to receive notice of any meetings of shareholders of the Company, to attend and to cast one vote per Common Share at all such meetings. Holders of Common Shares do not have cumulative voting rights with respect to the election of directors and, accordingly, holders of a majority of the Common Shares entitled to vote in any election of directors may elect all directors standing for election. In 2014, the Company adopted advance notice provisions for the nomination of directors which apply in circumstances where director nominations are made by shareholders of the Company, other than in connection with (i) the requisition of a shareholders' meeting, or (ii) a shareholder proposal, in each case made pursuant to the Act. The advance notice provisions fix a deadline by which holders of record of Common Shares must submit director nominations to the Company prior to any annual or special meeting of shareholders and sets forth the information that a shareholder must include in the notice to the Company.

Holders of Common Shares are entitled to receive on a pro rata basis such dividends, if any, as and when declared by the Company's Board of Directors at its discretion from funds legally available therefor and upon the liquidation, dissolution or winding up of the Company are entitled to receive on a pro rata basis the net assets of the Company after payment of debts and other liabilities, in each case subject to the rights, privileges, restrictions and conditions attaching to any other series or class of shares ranking senior in priority to or on a pro rata basis with the holders of Common Shares with respect to dividends or liquidation. Although the articles of the Company provide for the potential issuance of Preference Shares, there is currently no other series or class of shares outstanding which ranks senior in priority to the Common Shares. The Common Shares do not carry any pre-emptive, subscription, redemption or conversion rights, nor do the Common Shares contain any sinking or purchase fund provisions.

## **Preference Shares**

The Preference Shares may, at any time or from time to time, be issued in one or more series. The Company's Board of Directors shall fix before issue, the number of, the consideration per share of, the designation of, and the provisions attaching to the shares of each series. Except as required by law or as otherwise determined by the Company's Board of Directors in respect of a series of shares, the holder of a Preference Share shall not be entitled to vote at meetings of shareholders. The Preference Shares of each series rank on a priority with the Preference Shares of every other series and are entitled to preference over the Common Shares and any other shares ranking subordinate to the Preference Shares with respect to priority and payment of dividends and distribution of assets in the event of liquidation, dissolution or winding-up of the Company.

## **Normal Course Issuer Bid**

On September 18, 2015, Wheaton announced that it had received approval from the TSX to purchase up to 20,229,671 Common Shares (representing 5% of the Company's 404,593,425 total issued and outstanding Common Shares as of September 11, 2015) over a period of twelve months commencing on September 23, 2015. The normal course issuer bid ("NCIB") expired September 22, 2016. On January 27, 2016, Wheaton entered into an automatic securities purchase plan (the "Plan") with a broker in order to facilitate repurchases of its Common Shares under the NCIB. Purchases under the Plan were made by Wheaton's broker based on the parameters prescribed by the TSX and the NYSE, applicable Canadian securities laws and the terms of the parties' written agreement. Under the Plan, the broker was permitted to purchase Common Shares under the NCIB when Wheaton would ordinarily not be permitted. The Plan commenced on January 27, 2016 but was terminated as a result of the 2016 Offering. Wheaton repurchased 3,060,454 common shares under the NCIB at an average price of \$13.81 per share, including 2,295,665 purchased during the year ended December 31, 2016.

## TRADING PRICE AND VOLUME{ TC “TRADING PRICE AND VOLUME” \f C \l “1” }

### Common Shares

The Common Shares are listed and posted for trading on the TSX and the NYSE under the symbol “WPM”. The following table sets forth information relating to the monthly high and low closing prices and volume of the Common Shares on the TSX for the most recently completed financial year.

Month	High (C\$)	Low (C\$)	Volume
January 2018	27.88	26.25	18,805,801
February 2018	26.55	23.96	20,699,440
March 2018	26.34	24.70	17,554,840
April 2018	27.46	26.01	12,547,917
May 2018	28.40	26.87	13,239,861
June 2018	29.31	28.05	13,380,370
July 2018	29.74	27.02	14,994,663
August 2018	27.54	22.36	17,351,966
September 2018	22.60	20.15	20,689,508
October 2018	23.41	21.23	24,511,565
November 2018	22.49	20.28	20,716,406
December 2018	26.70	21.34	26,761,690

The price of the Common Shares as quoted by the TSX at the close of business on December 28, 2018 (being the last trading day of 2018) was C\$26.46 and on March 29, 2019 was C\$31.81.

## DIRECTORS AND OFFICERS{ TC “DIRECTORS AND OFFICERS” \f C \l “1” }

The following table sets forth the name, province/state and country of residence, position(s) held with the Company and principal occupation of each person who is a director and/or an executive officer of the Company as of the date of this annual information form.

<b>Name, Province/State and Country of Residence</b>	<b>Position(s) with the Company</b>	<b>Principal Occupation</b>
Douglas M. Holtby British Columbia, Canada	Chairman of the Board and Director since April 2006 <sup>(4)</sup>	Corporate Director
George L. Brack <sup>(3)</sup> British Columbia, Canada	Director since November 2009 <sup>(4)</sup>	Corporate Director
John A. Brough <sup>(1)(3)</sup> Ontario, Canada	Director since October 2004 <sup>(4)</sup>	Corporate Director
R. Peter Gillin <sup>(2)</sup> Ontario, Canada	Director since October 2004 <sup>(4)</sup>	Corporate Director
Chantal Gosselin <sup>(1)(3)</sup> Ontario, Canada	Director since November 2013 <sup>(4)</sup>	Corporate Director
Charles A. Jeannes <sup>(2)</sup> Nevada, USA	Director since November 2016 <sup>(4)</sup>	Corporate Director
Eduardo Luna <sup>(2)</sup> Mexico City, Mexico	Director since December 2004 <sup>(4)</sup>	Corporate Director
Marilyn Schonberner <sup>(1)(2)</sup> Alberta, Canada	Director since February 2018 <sup>(4)</sup>	Corporate Director
Randy V. J. Smallwood British Columbia, Canada	President, Chief Executive Officer and Director Director since May 2011 <sup>(4)</sup>	President and Chief Executive Officer of Wheaton
Gary D. Brown British Columbia, Canada	Senior Vice President and Chief Financial Officer	Senior Vice President and Chief Financial Officer of Wheaton
Curt D. Bernardi British Columbia, Canada	Senior Vice President, Legal and Corporate Secretary	Senior Vice President, Legal and Corporate Secretary of Wheaton
Haytham H. Hodaly British Columbia, Canada	Senior Vice President, Corporate Development	Senior Vice President, Corporate Development of Wheaton
Patrick E. Drouin British Columbia, Canada	Senior Vice President, Investor Relations	Senior Vice President, Investor Relations of Wheaton

(1) Member of the Audit Committee. Mr. John A. Brough is the Chairman of the Audit Committee.

(2) Member of the Human Resources Committee. Mr. R. Peter Gillin is the Chairman of the Human Resources Committee.

(3) Member of the Governance and Nominating Committee. Mr. George Brack is the Chairman of the Governance and Nominating Committee.

(4) Directors are elected at each annual meeting of Wheaton's shareholders and serve as such until the next annual meeting or until their successors are elected or appointed. Ms. Schonberner was appointed to the Board February 26, 2018.

The principal occupations, businesses or employments of each of the Company's directors and executive officers within the past five years are disclosed in the brief biographies set forth below.

**Douglas M. Holtby – Chairman of the Board and Director.** Mr. Holtby is currently President and Chief Executive Officer of Holtby Capital Corporation, a private investment company. Mr. Holtby was a Director of Goldcorp from 2005 to April 2016 and during that time served as the Chair, Vice-Chair and Lead Director, as a member of the Governance Committee and the Audit Committee and as Chair of the Compensation Committee. From June 1989 to June 1996 Mr. Holtby was President, Chief Executive Officer and a director of WIC Western International Communications Ltd., from 1989 to 1996 he was Chairman of Canadian Satellite Communications Inc., from 1998 to 1999 he was a Trustee of ROB.TV and CKVU, from 1974 to 1989 he was President of Allarcom Limited and, from 1982 to 1989 he was President of Allarcom Pay Television Limited. Mr. Holtby is a Fellow Chartered Accountant, and a graduate of the Institute of Corporate Directors – Director Education Program at the University of Toronto, Rotman School of Management. Mr. Holtby is also a National Association of Corporate Directors Board Leadership Fellow.

**George L. Brack – Director.** Mr. Brack serves as the non-Executive Chair of Capstone Mining Corp. and as a director of Alio Gold Inc. In addition to his current board roles, during the past 18 years, Mr. Brack served as a director on the boards of directors of ValOro Resources Inc. (now Defiance Silver Corp. and formerly Geologix Explorations Inc.), Aurizon Mines Ltd., Newstrike Capital Inc., NovaGold Resources Inc., Red Back Mining Inc. and chaired the board of Alexco Resources Corp. He has served on audit committees and has been both a member and the chair of compensation/human resource committees, corporate governance committees and special committees responding to takeover offers (Aurizon, Red Back and NovaGold). Mr. Brack's 34 year career in the mining industry focused on exploration, corporate development and investment banking, specifically identifying, evaluating and executing strategic mergers and acquisitions, and raising equity capital. Until 2009, he was Managing Director and Industry Head, Mining at Scotia Capital. Prior to joining Scotia in 2006, Mr. Brack spent seven years as President of Macquarie North America Ltd. and lead its northern hemisphere mining industry mergers and acquisitions advisory business. Previously, Mr. Brack was Vice President, Corporate Development at Placer Dome Inc., Vice President in the mining investment banking group at CIBC Wood Gundy, and worked on the corporate development team at Rio Algom. Mr. Brack earned an MBA at York University, a B.A.Sc. in Geological Engineering at the University of Toronto and the CFA designation.

**John A. Brough – Director.** Mr. Brough had been President of both Torwest, Inc. and Wittington Properties Limited, real estate development companies, from 1998 to December 31, 2007, upon his retirement. Prior thereto, from 1996 to 1998, Mr. Brough was Executive Vice President and Chief Financial Officer of iSTAR Internet, Inc. Prior thereto, from 1974 to 1996, he held a number of positions with Markborough Properties, Inc., his final position being Senior Vice President and Chief Financial Officer which position he held from 1986 to 1996. Mr. Brough is an executive with over 40 years of experience in the real estate industry. He is currently a director and Chairman of the Audit and Risk Committee of Kinross Gold Corporation, a director and Chairman of the Audit Committee and Lead Director of First National Financial Corporation. Mr. Brough was formerly a director and Chairman of the Audit Committee of Canadian Real Estate Investment Trust from 2008-2018. He holds a Bachelor of Arts degree (Economics) from the University of Toronto and is a Chartered Professional Accountant and a Chartered Accountant. He is also a graduate of the Institute of Corporate Directors – Director Education Program at the University of Toronto, Rotman School of Management. Mr. Brough is a member of the Institute of Corporate Directors and Chartered Professional Accountants of Ontario and Chartered Professional Accountants of Canada.

**R. Peter Gillin – Director.** Mr. Gillin is a corporate director serving on the Boards of several public companies. Mr. Gillin has been a director of Turquoise Hill Resources Ltd. since May 2012 and was appointed Chairman in January 2017. He also has served as a director of Sherritt International Corporation since January 2010 (lead director since June 2017) and director of Dundee Precious Metals Inc. since December 2009 (lead director since May 2013). Mr. Gillin has been a director of TD Mutual Funds Corporate Class Ltd. since 2010 and since 2004 has been a member of the Independent Review Committee of TD Asset Management Inc. From December 2005 to September 2012, was a director of Trillium Health Care Products Inc. (a private company). From April 2008 to March 2009, Mr. Gillin was a director of HudBay Minerals Inc. and until 2009 was Chairman and Chief Executive Officer of Tahera Diamond Corporation, a diamond exploration, development and production company. Mr. Gillin was President and Chief Executive Officer of Zemex Corporation, an industrial minerals producer. Until 2002, Mr. Gillin was Vice Chairman and a director of N.M. Rothschild & Sons Canada Limited, an investment bank. He holds a HBA degree from the Richard Ivey School of Business at the University of Western Ontario and is a Chartered Financial Analyst. He is also a graduate of the Institute of Corporate Directors – Director Education Program at the University of Toronto, Rotman School of Management and has earned the designation of ICD.D from the Institute of Corporate Directors.

**Chantal Gosselin – Director.** Ms. Gosselin has over 25 years of combined experience in the mining industry and financial services. Ms. Gosselin most recently held the position of Vice President and Portfolio Manager at Goodman Investment Counsel. Prior to that, she served as a senior mining analyst at Sun Valley Gold LLP, a precious metals focused hedge fund. Between 2002 and 2008, Ms. Gosselin was the senior mining analyst and a partner of Genuity Capital Markets

(now Canaccord Genuity Group) and held mining positions with Haywood Securities Inc. and Dundee Securities Corporation. Prior to her financial services experience, she held various mine site management positions in Canada, Peru and Nicaragua. Ms. Gosselin received her Bachelor of Science Mine Engineering degree from Laval University and completed a Master in Business and Administration at Concordia University. She also completed the Chartered Investment Manager designation and the Director Education Program. Ms. Gosselin currently serves as a director of Lundin Gold Inc. and Reunion Gold Corporation and previously served as a director of Peregrine Diamonds Ltd. until its acquisition in 2018. Ms. Gosselin also serves as a director and member of the audit committee of Windiga Energy, a private alternative energy company. Ms. Gosselin formerly served as a director and a member of the audit, corporate governance and nominating (Chair) and technical committees of Capstone Mining Corp. from 2010 to November 2016.

**Charles A. Jeannes – Director.** Mr. Jeannes joined the Board of Wheaton in November 2016. Mr. Jeannes is a mining industry veteran with over 30 years of experience. As President and CEO of Goldcorp Inc. from December 2008 to April 2016, he led Goldcorp’s development into one of the world’s largest and most successful gold mining companies with mining operations and development projects located throughout the Americas. Mr. Jeannes formerly held the role of Executive Vice President, Corporate Development of Goldcorp where he managed a series of M&A transactions that contributed to the company’s significant growth. Prior to joining Goldcorp, Mr. Jeannes held senior positions with Glamis Gold Ltd. and Placer Dome Inc. Mr. Jeannes was formerly a director of Tahoe Resources Inc. until its acquisition by Pan American Silver Corp. in early 2019 and currently serves as a director of PAAS and Chair of Orla Mining Ltd. He holds a B.A. degree from the University of Nevada (1980) and graduated from the University of Arizona College of Law with honors in 1983. He practiced law for 11 years and has broad experience in capital markets, mergers and acquisitions, public and private financing and international operations. Mr. Jeannes has received numerous awards including British Columbia CEO of the Year for 2013, Canada’s Most Admired CEO for 2015, 2016 Alumnus of the Year for the University of Nevada and 2015 Alumnus of the Year for the University of Arizona College of Law.

**Eduardo Luna – Director.** Mr. Luna is currently a Director and Chairman of Rochester Resources Ltd. (“Rochester”), a junior natural resources company. In March 2017, Mr. Luna joined the board of DynaResource, Inc. which appointed him as special advisor to the president of its wholly owned Mexican subsidiary and in February 2018, Mr. Luna joined the board of Coeur Mining, Inc. Mr. Luna was previously Chief Executive Officer of Rochester from August 2007 to March 2018. Mr. Luna was Chairman of the Company from October 2004 to May 2009 (and was Interim Chief Executive Officer of the Company from October 2004 to April 2006), Executive Vice President of Wheaton River from June 2002 to April 2005, Executive Vice President of Goldcorp from March 2005 to September 2007 and President of Luismin, S.A. de C.V. from 1991 to 2007. Mr. Luna previously served as a Director of Primero from 2008 to 2016 and during that time held senior positions including Executive Vice President and President (Mexico), Co-Chair, and President and Chief Operating Officer. He holds a degree in Advanced Management from Harvard University, an MBA from Instituto Tecnológico de Estudios Superiores de Monterrey and a Bachelor of Science in Mining Engineering from Universidad de Guanajuato. He held various executive positions with Minera Autlan for seven years and with Industrias Peñoles for five years. He is the former President of the Mexican Mining Chamber and the former President of the Silver Institute. He serves as Chairman of the Advisory Board of the Faculty of Mines at the University of Guanajuato.

**Marilyn Schonberner – Director.** Ms. Schonberner served as the Chief Financial Officer and Senior Vice President, and an Executive Director, of Nexen Energy ULC from January 2016 until her retirement in June 2018. Ms. Schonberner joined Nexen in 1997 and over her 21 year career with the company held positions of increasing responsibility including General Manager of Human Resources Services; Director of Corporate Audit; Director of Business Services U.K.; and Treasurer and Vice President of Corporate Planning. Before joining Nexen, Ms. Schonberner spent over 15 years in Finance, Strategic Planning and Organization Development in the energy and consulting sectors. Ms. Schonberner currently serves on the board of directors of New Gold Inc. and is the Chair of the Audit Committee. She is also a member of the Executive Committee of the Calgary Chapter of the Institute of Corporate Directors. She obtained a Bachelor of Commerce from the University of Alberta and a Master of Business Administration from the University of Calgary. She is a Chartered Professional Accountant, Certified Management Accountant and Certified Internal Auditor. Ms. Schonberner completed the Senior Executive Development Programme at the London Business School and has obtained the ICD.D designation from the Institute of Corporate Directors.

**Randy V. J. Smallwood – President, Chief Executive Officer and Director.** Mr. Smallwood holds a geological engineering degree from the University of British Columbia. Mr. Smallwood was involved in the founding of Wheaton and in 2007, he joined Wheaton full time as Executive Vice President of Corporate Development, primarily focusing on growing the Company through the evaluation and acquisition of silver stream opportunities. In January 2010 he was appointed President, and in April 2011 he was appointed Wheaton’s Chief Executive Officer. Mr. Smallwood originally started as an exploration geologist with Wheaton River Minerals Ltd., and in 2001 was promoted to Director of Project

Development, his role through its 2005 merger with Goldcorp. Before joining the original Wheaton River group in 1993, Mr. Smallwood also worked with Homestake Mining Company, Teck Corp. and Westmin Resources. Mr. Smallwood was an instrumental part of the team that built Wheaton River / Goldcorp into one of the largest, and more importantly, one of the most profitable gold companies in the world, and he is now focused on continuing to add to the impressive growth profile of Wheaton. Mr. Smallwood has served on the board of Defiance Silver Corp. (formerly ValOro Resources Inc. and Geologix Explorations Inc.) since 2005. Mr. Smallwood formerly served on the board of Ventana Gold from 2008 to 2011, Castle Peak Resources from 2010 to 2012, and Tigray Resources Inc. from 2011 to May 2014. Mr. Smallwood is also the chairman of the board for Special Olympics BC, and a member of the boards of the BC Cancer Foundation, Minerals Ed BC, and Mining for Life. In 2015, Mr. Smallwood received the British Columbia Institute of Technology Distinguished Alumni Award.

**Gary D. Brown – Senior Vice President and Chief Financial Officer.** Mr. Brown is currently the Senior Vice President and Chief Financial Officer of Wheaton having joined the Company in June 2008. Prior to Wheaton, he was the Chief Financial Officer of TIR Systems Ltd. from September 2005 to July 2007. He has also held senior finance roles with CAE Inc., Westcoast Energy Inc., and Creo Inc. Mr. Brown brings over 28 years of experience as a finance professional and holds professional designations as a Chartered Professional Accountant and a Chartered Financial Analyst as well as having earned a Masters Degree in Accounting from the University of Waterloo. Mr. Brown has also been a director of Redzone Resources Ltd. since 2011.

**Curt D. Bernardi – Senior Vice President, Legal and Corporate Secretary.** Mr. Bernardi joined the Company in 2008 and has been practicing law since his call to the British Columbia bar in 1994. He worked for the law firm of Blake, Cassels & Graydon in the areas of corporate finance, mergers and acquisitions and general corporate law until leaving to join Westcoast Energy in 1998. Following the acquisition of Westcoast Energy by Duke Energy in 2002, Mr. Bernardi continued to work for Duke Energy Gas Transmission as in-house legal counsel, working primarily on reorganizations, mergers and acquisitions, joint ventures and general corporate/commercial work. In 2005, Mr. Bernardi joined Union Gas as their Director, Legal Affairs and was responsible for legal matters affecting Union Gas. Mr. Bernardi has served as a Director on the Board of the Lions Gate Hospital Foundation since September 2016. In 2015, Mr. Bernardi received the Western Canada General Counsel Award for Deal Making for outstanding performance in successfully completing complex transactions. He obtained his Bachelor of Commerce from the University of British Columbia and his Bachelor of Law from the University of Toronto.

**Haytham H. Hodaly– Senior Vice President, Corporate Development.** Mr. Hodaly joined Wheaton in 2012, bringing with him over 18 years of experience in the North American securities industry, most recently as Director and Mining Analyst, Global Mining Research, at RBC Capital Markets. In this role, he was responsible for providing, to a wide range of institutional clients around the globe, up-to-date and insightful research coverage of North American-listed precious metals companies. Prior to this, Mr. Hodaly held the position of Co-Director of Research and Senior Mining Analyst at Salman Partners Inc., in addition to holding the titles of Vice President and Director of the firm. During his tenure, he helped to establish Salman Partners Inc. as a leading independent, resource-focused and research-driven investment dealer. Mr. Hodaly has also been a director of Goldsource Mines Inc. since 2017 and a Director of the Denver Gold Group since 2019. Mr. Hodaly is an engineer with a B.A.Sc. in Mining and Mineral Processing Engineering and a Masters of Engineering, specializing in Mineral Economics.

**Patrick E. Drouin – Senior Vice President, Investor Relations.** Mr. Drouin joined the Company in 2012, bringing with him 12 years of experience in the financial industry. He worked for UBS Securities from 2001 to 2012 in institutional equity sales across North America and in Europe, most recently in London as Head of European Sales for UBS Canada. In this role, Mr. Drouin built a sales platform responsible for advising fund managers on Canadian equities. He was also a member of the UBS Canadian Executive Committee, which oversaw strategic decisions for the Canadian business. Prior to this, Mr. Drouin worked in both Toronto and San Francisco for UBS Canada, advising the largest US institutional investors on Canadian equities. Throughout his advisory career, he has focused on the resource sector. Prior to UBS, he served as a Project Geologist in the San Francisco Bay Area for William Lettis & Associates. Mr. Drouin has an MBA from the Rotman School of Management, University of Toronto, and a Masters in Geology from the University of Memphis.

As at December 31, 2018, the directors and executive officers of Wheaton, as a group, beneficially owned, directly and indirectly, or exercised control or direction over 695,517 Common Shares, representing less than one percent of the total number of Common Shares outstanding before giving effect to the exercise of options or warrants to purchase Common Shares held by such directors and executive officers. The statement as to the number of Common Shares beneficially owned, directly or indirectly, or over which control or direction is exercised by the directors and executive officers of Wheaton as a group is based upon information furnished by the directors and executive officers.

## Cease Trade Orders, Bankruptcies, Penalties or Sanctions

To the knowledge of the Company, no director or executive officer of the Company is, or within ten years prior to the date hereof has been, a director, chief executive officer or chief financial officer of any company (including the Company) that: (i) was subject to a 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, that was in effect for a period of more than 30 consecutive days, 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 a 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, that was in effect for a period of more than 30 consecutive days, 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, other than: Mr. Gillin who was a director of, and Chairman and Chief Executive Officer of Tahera Diamond Corporation (“Tahera”) from October 2003 to December 2008, a company that filed for protection under the *Companies’ Creditors Arrangement Act* (Canada) (“CCAA”) with the Ontario Superior Court of Justice on January 16, 2008. As a consequence of its financial difficulties, Tahera failed to file financial statements for the year ended December 31, 2007 and subsequent financial periods. As a result, Tahera was delisted from the TSX in November 2009 and issuer cease trade orders were issued in 2010 by the securities regulatory authorities of Ontario, Quebec, Alberta and British Columbia, which orders have not been revoked. Tahera subsequently sold its tax assets to Ag Growth International and certain properties, including the Jericho diamond mine, to Shear Minerals Ltd., and the monitoring process under CCAA concluded by order of the Superior Court of Justice in September, 2010. During 2011, the assets of Tahera were sold and the order is no longer in effect.

To the knowledge of the Company, no director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially control of the Company, is, or within ten years prior to the date hereof has been, a director or executive officer of any company (including the Company) 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, other than: Mr. Gillin who was a director of, and Chairman and Chief Executive Officer of Tahera from October 2003 to December 2008, a company that filed for protection under the CCAA with the Ontario Superior Court of Justice on January 16, 2008. Tahera subsequently sold its tax assets to Ag Growth International and certain properties, including the Jericho diamond mine, to Shear Minerals Ltd., and the monitoring process under CCAA concluded by order of the Superior Court of Justice in September, 2010. During 2011, the assets of Tahera were sold and the order is no longer in effect.

To the knowledge of the Company, no director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially control of the Company, has, within ten years prior to the date hereof, 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, executive officer or shareholder.

To the knowledge of the Company, no director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has been subject to: (i) 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 (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

## Conflicts of Interest

To the best of Wheaton's knowledge, and other than as disclosed in this annual information form, there are no known existing or potential material conflicts of interest between Wheaton and any director or officer of Wheaton, except that certain of the directors and officers serve as directors and officers of other public companies and therefore it is possible that a conflict may arise between their duties as a director or officer of Wheaton and their duties as a director or officer of such other companies. Certain of the directors and officers of the Company also serve as directors and/or officers of other companies involved in natural resource exploration, development and mining operations and consequently there exists the possibility for such directors and officers to be in a position of conflict. Any decision made by any of such directors and officers will be made in accordance with their duties and obligations to deal fairly and in good faith with a view to the best interests of the Company and its shareholders. In addition, each of the directors is required to declare and refrain from attending the portion of the meeting dedicated to discussing any matter in which such directors may have a conflict of interest or voting on such matter in accordance with the procedures set forth in the *Business Corporations Act* (Ontario) and other applicable laws. See "*Interest of Management and Others in Material Transactions*".

### LEGAL PROCEEDINGS AND REGULATORY ACTIONS{ TC "LEGAL PROCEEDINGS AND REGULATORY ACTIONS" \f C \l "1" }

Other than as set forth below, to the best of the Company's knowledge, the Company is not and was not, during the year ended December 31, 2018, a party to any legal proceedings, nor is any of its property, nor was any of its property during the year ended December 31, 2018, the subject of any legal proceedings. As at the date hereof, no such legal proceedings are known to be contemplated.

The Company is currently the subject of litigation in connection with a United States securities class action complaint *In re Silver Wheaton Securities Litigation*. See "*Risk Factors – Litigation*" and "*Description of the Business – U.S. Shareholder Class Action*". The Company is also the subject of litigation in a class action filed in Ontario, Canada *Suzan Poirier and Silver Wheaton Corp. et al.* See *Risk Factors – Litigation*" and "*Description of the Business – Canadian Shareholder Class Action*".

There have been no penalties or sanctions imposed against the Company by a court relating to securities legislation or by any securities regulatory authority during the year ended December 31, 2018, or any other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor making an investment decision, and the Company has not entered into any settlement agreements with a court relating to securities legislation or with a securities regulatory authority during the year ended December 31, 2018.

### INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS{ TC "INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS" \f C \l "1" }

Other than as described in this annual information form, since January 1, 2014, no director, executive officer or 10% shareholder of the Company or any associate or affiliate of any such person or company, has or had any material interest, direct or indirect, in any transaction that has materially affected or is reasonably expected to materially affect the Company or any of its subsidiaries.

### TRANSFER AGENT AND REGISTRAR{ TC "TRANSFER AGENT AND REGISTRAR" \f C \l "1" }

The transfer agent and registrar for the Common Shares is AST Trust Company at its principal offices in Vancouver, British Columbia and Toronto, Ontario.

### MATERIAL CONTRACTS{ TC "MATERIAL CONTRACTS" \f C \l "1" }

The only material contract entered into by the Company as of the date of this annual information form or before such time that are still in effect, other than in the ordinary course of business, is the Revolving Facility dated as of February 27, 2015, as amended, between the Company and the lenders. See "*Description of the Business – Amended Revolving Credit Facilities*." The Revolving Facility (and all amendments) is available on SEDAR at [www.sedar.com](http://www.sedar.com) under the Company's profile.

## INTERESTS OF EXPERTS{ TC “INTERESTS OF EXPERTS” \f C \ “1” }

The scientific and technical information for the Company’s mineral projects on a property material to the Company contained in this annual information form has been prepared in accordance with the exemption set forth in Section 9.2 of NI 43-101 and was sourced by the Company from the following SEDAR ([www.sedar.com](http://www.sedar.com)) filed documents:

- a. Peñasquito mine – Goldcorp’s annual information form filed on March 28, 2019;
- b. Salobo mine – Salobo Report;
- c. Antamina mine – (i) Glencore’s December 31, 2018 Resources and Reserves report (<http://www.glencore.com/investors/reports-results/reserves-and-resources>), (ii) Glencore’s annual report for the year ended December 31, 2018, and (iii) Teck Resources annual information form filed on February 25, 2019, and
- d. Constancia mine – Hudbay Minerals Inc. annual information form filed on March 29, 2019.

A summary of the information sourced from the annual information forms of each of Goldcorp, Glencore/Teck and Hudbay is contained in this annual information form under “*Technical Information — Further Disclosure Regarding Mineral Projects on Material Properties — Peñasquito Mine, Mexico,*” “*— Antamina Mine, Peru,*” “*— Constancia Mine, Peru,*” respectively.

The scientific and technical information for the Salobo mine was sourced by the Company from the Salobo Report and updated with information derived from the Salobo mine operations after the effective date of the Salobo Report. Neil Burns, P.Geo, Vice President, Technical Services, Wheaton, Christopher Davis, M.Sc., P.Geo, Head of Geology and Mine Design (former Director Resource Management Group), Vale Base Metals, Cassio Diedrich, AusIMM-CP(Min), Head of Strategy and Long-Term Planning, Vale Base Metals and Maurice Tagami, P.Eng., Technical Ambassador (formerly Vice President, Mining Operations), prepared the Salobo Report . A copy of the Salobo Report is available under Wheaton’s profile on SEDAR at [www.sedar.com](http://www.sedar.com) and on EDGAR at ([www.sec.gov](http://www.sec.gov)) and a summary of the Salobo Report is contained in this annual information form under the heading “*Technical Information — Further Disclosure Regarding Mineral Projects on Material Properties — Salobo Mine, Brazil*”. In respect of the Salobo Expansion, the Company has not included scientific or technical data as at the present time, Vale has not finalized its mine plan for the Salobo Expansion.

Neil Burns, M.Sc., P.Geo., Vice President, Technical Services, of the Company and Ryan Ulansky, M.A.Sc., P.Eng., Senior Director, Engineering, of the Company are the qualified persons as defined by NI 43-101 in connection with the mineral reserve and mineral resource estimates and the scientific and technical information, and have reviewed and approved the disclosure, for the Peñasquito mine, the Salobo mine, the Antamina mine and the Constancia mine contained in this annual information form.

The aforementioned firms or persons (including any designated professional of such firms or persons, as such term is defined in National Instrument 51-102) held no securities of the Company or of any associate or affiliate of the Company when they prepared the reports, the mineral reserve estimates or the mineral resource estimates referred to above, or following the preparation of such reports or estimates and did not receive any direct or indirect interest in any securities of the Company or of any associate or affiliate of the Company in connection with the preparation of such reports or estimates, other than the authors of the Salobo Report, Neil Burns and Ryan Ulansky, who together hold less than 1% of the Common Shares. None of the aforementioned persons are currently expected to be elected, appointed or employed as a director, officer or employee of the Company or of any associate or affiliate of the Company, other than Neil Burns and Ryan Ulansky who are employees of the Company.

Deloitte LLP is the independent registered public accounting firm of the Company and is independent of the Company 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 Act and the applicable rules and regulations thereunder adopted by the Securities and Exchange Commission and the Public Company Accounting Oversight Board (United States).

## AUDIT COMMITTEE{ TC “AUDIT COMMITTEE”\f C \ “1” }

The Company’s Audit Committee is responsible for monitoring the Company’s systems and procedures for financial reporting and internal control, reviewing certain public disclosure documents and monitoring the performance and independence of the Company’s external auditors. The Audit Committee is also responsible for reviewing the Company’s annual audited financial statements, unaudited quarterly financial statements and management’s discussion and analysis of financial results of operations for both annual and interim financial statements and review of related operations prior to their approval by the full Board of Directors of the Company. The Audit Committee also has oversight responsibility for significant business, political, financial and control risks that the Company is exposed to, including a review of management’s assessment of the likelihood and severity of those risks and any mitigation steps taken.

The Audit Committee’s charter sets out its responsibilities and duties, qualifications for membership, procedures for committee member removal and appointment and reporting to the Company’s Board of Directors. A copy of the Audit Committee charter is attached hereto as Schedule “A”.

The current members of the Company’s Audit Committee are John A. Brough (Chairman), Chantal Gosselin and Marilyn Schonberner. Peter Gillin was a member of the Audit Committee in 2018 until May 11, 2018, at which point Ms. Schonberner was appointed to the Audit Committee. Each of the members of Audit Committee are independent and financially literate within the meaning of National Instrument 52-110 *Audit Committees* (“NI 52-110”). In addition to being independent directors as described above, all members of the Audit Committee must meet an additional “independence” test under NI 52-110 in that their directors’ fees are the only compensation they, or their firms, receive from the Company and that they are not affiliated with the Company.

The Audit Committee met four times in 2018. Each of members of the Audit Committee who were directors of the Company and members of the Audit Committee at the time were present at all four meetings.

### **Relevant Education and Experience**

See “*Directors and Officers*” for a description of the education and experience of each Audit Committee member that is relevant to the performance of his responsibilities as an Audit Committee member.

### **Pre-Approval Policies and Procedures**

The Audit Committee’s charter sets out responsibilities regarding the provision of non-audit services by the Company’s external auditors. This policy requires consideration of whether the provision of services other than audit services is compatible with maintaining the auditor’s independence and requires Audit Committee pre-approval of permitted non-audit, audit and audit-related services.

### External Auditor Service Fees

Deloitte LLP, Independent Registered Public Accounting Firm, were the auditors of the Company for the year ended December 31, 2018. Fees billed by Deloitte LLP in respect of services for the years ended December 31, 2017 and December 31, 2018 are detailed below:

	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>
Audit Fees <sup>(2)</sup>	\$756,316	\$683,550
Audit-Related Fees <sup>(3)</sup>	81,922	20,314
Tax Fees <sup>(4)</sup>	25,040	19,438
All Other Fees <sup>(5)</sup>	8,891	158,558
<b>TOTAL</b>	<b>872,169</b>	<b>881,860</b>

- (1) Fees are paid in Canadian dollars and converted to United States dollars for reporting purposes in this table at the exchange rate of C\$1.00 = US\$0.7330 for the financial year ended December 31, 2018 and at the exchange rate of C\$1.00 = US\$0.7971 for the financial year ended December 31, 2017.
- (2) Audit fees were paid for professional services rendered by the auditors for the audit of the Company's annual financial statements or services provided in connection with statutory and regulatory filings or engagements.
- (3) Audit-related fees were paid for translation services rendered by the auditors in connection with the audit of the Company's annual financial statements.
- (4) Tax fees were paid for tax compliance and advisory services.
- (5) All Other Fees relate to other financial consultations in respect of an existing precious metal purchase agreement and reimbursement of certain costs incurred in connection with outstanding litigation.

### ADDITIONAL INFORMATION { TC "ADDITIONAL INFORMATION" \f C \l "1" }

Additional information relating to the Company can be found on SEDAR at [www.sedar.com](http://www.sedar.com) and on EDGAR at [www.sec.gov](http://www.sec.gov). Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans is contained in the management information circular of the Company dated March 21, 2018 prepared in connection with its annual and special meeting of shareholders held on May 11, 2018. The Company's management information circular for the year ended December 31, 2018 will be prepared in connection with the Company's annual meeting of shareholders scheduled to be held on May 9, 2019 which will be available on SEDAR at [www.sedar.com](http://www.sedar.com) and EDGAR at [www.sec.gov](http://www.sec.gov). Additional financial information is provided in the Company's audited consolidated financial statements and management's discussion and analysis for the year ended December 31, 2018.

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

#### I. PURPOSE

The Audit Committee is a committee of the Board of Directors (the "Board") of Wheaton Precious Metals Corp. (the "Company"). The primary function of the Audit Committee is to assist the Board in fulfilling its financial reporting and controls responsibilities to the shareholders of the Company and the investment community. The external auditors will report directly to the Audit Committee. The Audit Committee's primary duties and responsibilities are:

- A. overseeing the integrity of the Company's financial statements and reviewing the financial reports and other financial information provided by the Company to any governmental body or the public and other relevant documents;
- B. assisting the Board in oversight of the Company's compliance with legal and regulatory requirements;
- C. recommending the appointment and reviewing and appraising the audit efforts of the Company's independent auditor, overseeing the non-audit services provided by the independent auditor, overseeing the independent auditor's qualifications and independence and providing an open avenue of communication among the independent auditor, financial and senior management and the Board of Directors;
- D. assisting the Board in oversight of the performance of the Company's internal audit function;
- E. serving as an independent and objective party to oversee and monitor the Company's financial reporting process and internal controls, the Company's processes to manage business and financial risk, and its compliance with legal, tax, ethical and regulatory requirements;
- F. preparing Audit Committee report(s) as required by applicable regulators; and
- G. encouraging continuous improvement of, and fostering adherence to, the Company's policies, procedures and practices at all levels.

#### II. COMPOSITION AND MEETINGS

- A. The Committee shall operate under the guidelines applicable to all Board committees, which are located in Tab A-6, Board Guidelines.
- B. The Audit Committee shall be comprised of at least three directors, all of whom are "independent" as such term is defined in the Board Guidelines (Tab A-8, Appendix), and will satisfy such other applicable criteria for independence as may be contained in the laws, rules, regulations and listing requirements to which the Company is subject.
- C. In addition, unless otherwise authorized by the Board, no director shall be qualified to be a member of the Audit Committee if such director (i) is an "affiliated person", as defined in Appendix I, or (ii) receives (or his/her immediate family member or the entity for which such director is a director, member, partner or principal and which provides consulting, legal, investment banking, financial or other similar services to the Company), directly or indirectly, any consulting, advisory, or other compensation from the Company other than compensation for serving in his or her capacity as member of the Board and as a member of Board committees.

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

- D. All members shall, to the satisfaction of the Board of Directors, be "financially literate" as defined in Appendix I, and at least one member shall have accounting or related financial management expertise to qualify as a "financial expert" as defined in Appendix I, and will satisfy such other applicable criteria for financial expertise as may be contained in the laws, rules, regulations and listing requirements to which the Company is subject.
- E. If a Committee member simultaneously serves on the audit committees of more than three public companies, the Committee shall seek the Board's determination as to whether such simultaneous service would impair the ability of such member to effectively serve on the Company's audit committee and ensure that such determination is disclosed.
- F. The Committee shall meet at least four times annually, or more frequently as circumstances require. The Committee shall meet within 45 days following the end of each of the first three financial quarters to review and discuss the unaudited financial results for the preceding quarter and the related MD&A and shall meet within 90 days following the end of the fiscal year end to review and discuss the audited financial results for the year and related MD&A prior to their publishing.
- G. The Committee may ask members of management or others to attend meetings and provide pertinent information as necessary. For purposes of performing their audit related duties, members of the Committee shall have full access to all corporate information and shall be permitted to discuss such information and any other matters relating to the financial position of the Company with senior employees, officers and independent auditor of the Company.
- H. As part of its job to foster open communication, the Committee should meet at least quarterly with management and the independent auditor in in-camera sessions, and as determined in the discretion of the Committee with the head of internal audit, to discuss any matters that the Committee or each of these groups believe should be discussed privately. In addition, the Committee or at least its Chair should meet with the independent auditor and management quarterly to review the Company's financial statements.
- I. Each of the Chairman of the Committee, members of the Committee, Chairman of the Board, independent auditors, Chief Executive Officer, Chief Financial Officer or Secretary shall be entitled to request that the Chairman of the Audit Committee call a meeting which shall be held within 48 hours of receipt of such request.

### III. RESPONSIBILITIES AND DUTIES

To fulfill its responsibilities and duties the Audit Committee shall:

- A. Create an agenda for the ensuing year.
- B. Review and update this Charter at least annually, as conditions dictate.
- C. Describe briefly in the Company's Management Information Circular and/or the Company's Annual Information Form the Committee's composition and responsibilities and how they were discharged.

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

#### D. Documents/Reports Review

- i) Review with management and the independent auditor, the Company's interim and annual financial statements, management discussion and analysis, earnings releases and any other financial information to be publicly disclosed including any certification, report, opinion, or review rendered by the independent auditor for the purpose of recommending their approval to the Board prior to their filing, issue or publication. The Chair of the Committee may represent the entire Committee for purposes of this review in circumstances where time does not allow the full Committee to be available.
- ii) Review analyses prepared by management and/or the independent auditor setting forth significant financial reporting issues and judgments made in connection with the preparation of the financial statements, including analyses of the effects of alternative accounting principles methods on the financial statements.
- iii) Review the effect of regulatory and accounting initiatives, as well as off balance sheet structures, on the financial statements of the Company.
- iv) Review policies and procedures with respect to directors' and officers' expense accounts and management perquisites and benefits, including their use of corporate assets and expenditures related to executive travel and entertainment, and review the results of the procedures performed in these areas by the independent auditor, based on terms of reference agreed upon by the independent auditor and the Audit Committee.
- v) Review expenses of the Board Chair and CEO annually.
- vi) Ensure that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the issuer's financial statements, as well as review any financial information and earnings guidance provided to analysts and rating agencies, and periodically assess the adequacy of those procedures.

#### E. Independent Auditor

- i) Recommend to the Board and approve the selection of the independent auditor, consider the independence and effectiveness and approve the fees and other compensation to be paid to the independent auditor.
- ii) Review and approve the independent auditor's audit plan and engagement letter and discuss and approve the audit scope and approach, staffing, locations, reliance upon management and internal audit and general audit approach.
- iii) Monitor the relationship between management and the independent auditor including reviewing any management letters or other reports of the independent auditor and discussing any material differences of opinion between management and the independent auditor.
- iv) Review and discuss, on an annual basis, with the independent auditor all significant relationships they have with the Company to determine their independence and report to the Board of Directors.

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

- v) Review and approve requests for any non-audit services to be performed by the independent auditor and be advised of any other study undertaken at the request of management that is beyond the scope of the audit engagement letter and related fees. Pre-approval of non-audit services is satisfied if:
  - a) The aggregate amount of non-audit services not pre-approved expected to constitute no more than 5% of total fees paid by issuer and subsidiaries to external auditor during fiscal year in which the services are provided;
  - b) the Company or a subsidiary did not recognize services as non-audit at the time of the engagement; and
  - c) the services are promptly brought to Committee's attention and approved prior to completion of the audit.
- vi) Ensure disclosure of any specific policies or procedures adopted by the Committee to satisfy pre-approval requirements for non-audit services by the independent auditor.
- vii) Review the relationship of non-audit fees to audit fees paid to the independent auditor to ensure that auditor independence is maintained.
- viii) Ensure that both the audit and non-audit fees are disclosed to shareholders by category.
- ix) Conduct annual formal assessment of the independent auditor and review the performance of the independent auditor and approve any proposed discharge and replacement of the independent auditor when circumstances warrant. Consider with management and the independent auditor the rationale for employing accounting/auditing firms other than the principal independent auditor.

At least every five years, conduct a comprehensive review of the independent auditor. The comprehensive review is deeper and broader than an annual assessment. The comprehensive review focuses on the audit firm, its independence and the application of professional skepticism. The comprehensive review should include three key factors of audit quality for the Committee to consider and assess:

- (1) *Independence, objectivity and professional skepticism* — Do the independent auditors approach their work with objectivity to ensure they appropriately question and challenge management's assertions in preparing the financial statements?
- (2) *Quality of the engagement team* — Do the independent auditors' firm put forward team members with the appropriate industry and technical skills to carry out an effective audit?
- (3) *Quality of communications and interactions with the independent auditor* — Are the communications with the independent auditor (written and oral) clear, concise and free of boilerplate language? Is the independent auditor open and frank, particularly in areas of significant judgments and estimates or when initial views differ from management?

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

- x) At least annually, consult with the independent auditor out of the presence of management about significant risks or exposures, internal controls and other steps that management has taken to control such risks, and the fullness and accuracy of the organization's financial statements. Particular emphasis should be given to the adequacy of internal controls to expose any payments, transactions, or procedures that might be deemed illegal or otherwise improper.
- xi) Arrange for the independent auditor to be available to the Committee and the full Board as needed. Ensure that the auditors report directly to the Committee and are made accountable to the Board and the Committee, as representatives of the shareholders to whom the auditors are ultimately responsible.
- xii) Oversee the work of the independent auditor undertaken for the purpose of preparing or issuing an audit report or performing other audit, review or attest services.
- xiii) Ensure that the independent auditor is prohibited from providing the following non-audit services and determining which other non-audit services the independent auditor is prohibited from providing:
  - a) bookkeeping or other services related to the accounting records or financial statements of the Company;
  - b) financial information systems design and implementation;
  - c) appraisal or valuation services, fairness opinions, or contribution-in-kind reports;
  - d) actuarial services;
  - e) internal audit outsourcing services;
  - f) management functions or human resources;
  - g) broker or dealer, investment adviser or investment banking services;
  - h) legal services and expert services unrelated to the audit; and
  - i) any other services which the Public Company Accounting Oversight Board determines to be impermissible.
- xiv) Approve any permissible non-audit engagements of the independent auditor, in accordance with applicable legislation.

#### F. Internal Auditor

- i) Review the effectiveness and independence of the internal auditor function and ensure there are no unjustified restrictions or limitations on the functioning of the internal auditor;

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

- ii) Review and approve the scope of the proposed internal audit plan and ensure it addresses key areas of risk;
- iii) Periodically review:
  - a) progress on the internal audit plan, including any significant changes to it;
  - b) significant internal audit findings, including issues relating to the adequacy of internal control over financial reporting;
  - c) any significant internal fraud issues; and
- iv) Ensure the internal audit's significant findings and recommendations are received, discussed and appropriately acted upon by the Committee and management.

#### G. Financial Reporting Processes

- i) Periodically review the adequacy and effectiveness of the company's disclosure controls and procedures and the Company's internal control over financial reporting, including any significant deficiencies and significant changes in internal controls.
- ii) Understand the scope of the independent auditor's examination and report on the Company's assessment of internal control over financial reporting and review and discuss significant findings and recommendations, together with management's responses.
- iii) Consider the independent auditor's judgments about the quality, appropriateness and acceptability, of the Company's accounting principles and financial disclosure practices, as applied in its financial reporting, particularly about the degree of aggressiveness or conservatism of its accounting principles and underlying estimates and whether those principles are common practices or are minority practices.
- iv) Consider and approve, if appropriate, major changes to the Company's accounting principles and practices as suggested by management with the concurrence of the independent auditor and ensure that the accountants' reasoning is described in determining the appropriateness of changes in accounting principles and disclosure.

#### H. Process Improvement

- i) Discuss with the independent auditor (i) the auditor's internal quality-control procedures; and (ii) any material issues raised by the most recent internal quality-control review, or peer review, of the auditors, or by any inquiry of investigation by governmental or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the auditors, and any steps taken to deal with any such issues.

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

- ii) Reviewing and approving hiring policies for employees or former employees of the past and present independent auditors.
- iii) Establish regular and separate systems of reporting to the Audit Committee by each of management and the independent auditor regarding any significant judgments made in management's preparation of the financial statements and the view of each as to appropriateness of such judgments.
- iv) Review the scope and plans of the independent auditor's audit and reviews prior to the audit and reviews being conducted. The Committee may authorize the independent auditor to perform supplemental reviews or audits as the Committee may deem desirable.
- v) Following completion of the annual audit and quarterly reviews, review separately with each of management and the independent auditor any significant changes to planned procedures, any difficulties encountered during the course of the audit and reviews, including any restrictions on the scope of work or access to required information and the cooperation that the independent auditor received during the course of the audit and reviews.
- vi) Review any significant disagreements among management and the independent auditor in connection with the preparation of the financial statements.
- vii) Where there are significant unsettled issues the Committee shall ensure that there is an agreed course of action for the resolution of such matters.
- viii) Review with the independent auditor and management significant findings during the year and the extent to which changes or improvements in financial or accounting practices, as approved by the Audit Committee, have been implemented. This review should be conducted at an appropriate time subsequent to implementation of changes or improvements, as decided by the Committee.
- ix) Review activities, organizational structure, and qualifications of the CFO and the staff in the financial reporting area and see to it that matters related to succession planning within the Company are raised for consideration at the full Board.

#### I. Ethical and Legal Compliance

- i) Review management's monitoring of the Company's system in place to ensure that the Company's financial statements, reports and other financial information disseminated to governmental organizations, and the public satisfy legal requirements.
- ii) Review, with the Company's counsel, legal and regulatory compliance matters, including corporate securities trading policies, and matters that could have a significant impact on the organization's financial statements.
- iii) Review implementation of compliance with the Sarbanes-Oxley Act, Ontario Securities Commission requirements and other legal requirements.

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

- iv) Ensure that the CEO and CFO provide written certification with annual and interim financial statements and interim MD&A and the Annual Information Form.

#### J. Risk Management

- i) Make inquires of management and the independent auditor to identify significant business, political, financial and control risks and exposures and assess the steps management has taken to minimize such risk to the Company.
- ii) Ensure that the disclosure of the process followed by the Board and its committees, in the oversight of the Company's management of principal business risks, is complete and fairly presented.
- iii) Review management's program of risk assessment and steps taken to manage these risks and exposures, including insurance coverage, and including a more extensive review on an annual basis.

#### K. General

- i) Conduct or authorize investigations into any matters within the Committee's scope of responsibilities. The Committee shall be empowered to retain independent counsel, accountants and other professionals to assist it in the conduct of any investigation.
- ii) The Committee shall comply with the requirements set out in the Board Guidelines relating to the engagement of outside advisors.
- iii) The Company must provide funding for the Committee to pay ordinary administrative expenses that are necessary for the Committee to carry out its duties.
- iv) Establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters; and the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters and institute and oversee special investigations as needed.
- v) Review the findings of any examinations by regulatory agencies with respect to financial matters, and any external auditors observations made regarding those findings.
- vi) Ensure disclosure in the Annual Information Form if, at any time since the commencement of most recently completed financial year, the issuer has relied on any possible exemptions for Audit Committees.
- vii) Perform any other activities consistent with this Charter, the Company's Articles and By-laws and governing law, as the Committee or the Board deems necessary or appropriate.

## **SCHEDULE "A"**

### **TERMS OF REFERENCE FOR THE AUDIT COMMITTEE**

#### **IV. ACCOUNTABILITY**

- A.** The Committee Chair has the responsibility to make periodic reports to the Board, as requested, on audit and financial matters relative to the Company.
- B.** The Committee shall report its discussions to the Board by maintaining minutes of its meetings and providing an oral report at the next Board meeting.
- C.** The minutes of the Audit Committee should be filed with the Corporate Secretary.

#### **V. COMMITTEE TIMETABLE**

The timetable on the following pages outlines the Committee's schedule of activities during the year.

**SCHEDULE "A"**

**TERMS OF REFERENCE FOR THE AUDIT COMMITTEE**

	Q1	Q2	Q3	Q4
A. Create agenda for ensuing year.	✓			
B. Review and update Committee Charter	✓			
C. Describe briefly in the Company's Management Information Circular and/or the Company's Annual Information Form the Committee's composition and responsibilities and how they were discharged.	✓			
D. Documents/Reports Review				
i) Review with management and independent auditor, interim and annual financial statements, MD&A, earnings releases and any other financial information to be publicly disclosed and recommend approval to Board	✓	✓	✓	✓
ii) Review analyses prepared by management and/or independent auditor setting forth significant financial reporting issues and judgments made in connection with the preparation of the financial statements	✓	✓	✓	✓
iii) Review effect of regulatory and accounting initiatives, as well as off balance sheet structures, on the financial statements	✓	✓	✓	✓
iv) Review policies and procedures with respect to directors' and officers' expense accounts and management perquisites and benefits, and review results of procedures performed in these areas by the independent auditor	✓			
v) Review Board Chair & CEO expenses	✓			

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

	Q1	Q2	Q3	Q4
vi) Ensure adequate procedures are in place to review disclosure of financial information extracted or derived from financial statements, and review any financial information and earnings guidance provided to analysts and rating agencies, and periodically assess adequacy of those procedures	✓	✓	✓	✓
E. Independent Auditor				
i) Recommend independent auditor to Board and consider independence and effectiveness and approve compensation for independent auditor	✓			
ii) Review and approve the independent auditor's audit plan and engagement letter and approve the audit scope and approach, staffing, locations, reliance upon management and internal audit and general audit approach				✓
iii) Monitor relationship between management and independent auditor	✓	✓	✓	✓
iv) Review and discuss with independent auditor all significant relationships they have with the Company to determine their independence, and report to Board	✓	✓	✓	✓
v) Review and approve requests for non-audit services to be performed by independent auditor & be advised of any study undertaken at request of management beyond scope of audit engagement letter and related fees	As Required			
vi) Ensure disclosure of any specific policies or procedures adopted to satisfy pre-approval requirements for non-audit services by independent auditor	✓			

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

	Q1	Q2	Q3	Q4
vii) Review relationship of non-audit fees to audit fees paid to independent auditor	✓	✓	✓	✓
viii) Ensure audit and non-audit fees are disclosed by category	✓	✓	✓	✓
ix) Conduct annual formal assessment and review independent auditor performance and approve any proposed discharge and replacement of independent auditor. Consider with management and independent auditor the rationale for employing accounting/auditing firms other than the principal independent auditor. Once every five years, conduct a comprehensive review of the independent auditor (see item E(ix) in the Terms of Reference for further details of the comprehensive review).	✓			
x) Consult with independent auditor out of presence of management about significant risks or exposures, internal controls and other steps that management has taken to control such risks, and the fullness and accuracy of the organization's financial statements	✓	✓	✓	✓
xi) Arrange for independent auditor to be available to the Committee and Board. Ensure independent auditors report directly to the Committee and are made accountable to the Board and the Committee	✓	✓	✓	✓
xii) Oversee independent auditor	✓	✓	✓	✓
xiii) Ensure independent auditor is prohibited from providing certain non-audit services	✓	✓	✓	✓

**SCHEDULE "A"**

**TERMS OF REFERENCE FOR THE AUDIT COMMITTEE**

	Q1	Q2	Q3	Q4
F. Internal Auditor				
i) Review effectiveness and independence of the internal auditor function and ensure there are no unjustified restrictions or limitations on the functioning of the internal auditor	✓			
ii) Review and approve the scope of the proposed internal audit plan and ensure it addresses key areas of risk			✓	
iii) Periodically review:	✓		✓	✓
a) progress on the internal audit plan, including any significant changes to it;		✓		
b) significant internal audit findings, including issues relating to the adequacy of internal control over financial reporting; and	✓			
c) any significant internal fraud issues				
	✓	✓	✓	✓
iv) Ensure the internal audit's significant findings and recommendations are received, discussed and appropriately acted upon by the Committee and management.	✓	✓	✓	✓

**SCHEDULE "A"**

**TERMS OF REFERENCE FOR THE AUDIT COMMITTEE**

	Q1	Q2	Q3	Q4
G. Financial Reporting Processes				
i) Periodically review the adequacy and effectiveness of the Company's disclosure controls and procedures and the Company's internal control over financial reporting, including any significant deficiencies and significant changes in internal controls	✓			
ii) Understand the scope of the independent auditor's examination and report on the Company's assessment of internal control over financial reporting and review and discuss significant findings and recommendations, together with management's responses.	✓			
iii) Consider independent auditor's judgments about quality, appropriateness and acceptability of accounting principles and financial disclosure practices	✓	✓	✓	✓
iv) Consider and approve any major changes to accounting principles and practices	✓	✓	✓	✓
H. Process Improvement				
i) Discuss with independent auditor (i) auditors' internal quality-control procedures; and (ii) any material issues raised by the most recent internal quality-control review, or peer review, of the auditors, or by any inquiry of investigation by governmental or professional authorities, within the preceding 5 years, respecting independent audits carried out by auditors and steps taken to deal with such issues	✓			

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

	Q1	Q2	Q3	Q4
ii) Review and approve hiring policies for employees or former employees of the past and present independent auditors	As Required			
iii) Establish reporting system for management and independent auditor regarding significant judgments made in management's preparation of financial statements	✓	✓	✓	✓
iv) Review scope and plans of independent auditor's audit and reviews			✓	
v) Review with management and independent auditor significant changes to planned procedures, difficulties encountered during course of audit and reviews, and cooperation received by independent auditor during course of audit and reviews	✓	✓	✓	✓
vi) Review significant disagreements among management and independent auditor connected with financial statement preparation	✓	✓	✓	✓
vii) Ensure course of action for resolving significant unsettled issues	✓	✓	✓	✓
viii) Review with independent auditor and management significant findings and the extent to which changes or improvements in financial or accounting practices have been implemented	✓			
ix) Review activities, organizational structure, and qualifications of CFO and financial reporting staff and ensure matters related to succession planning are raised with Board	✓			

**SCHEDULE "A"**

**TERMS OF REFERENCE FOR THE AUDIT COMMITTEE**

	Q1	Q2	Q3	Q4
I. Ethical and Legal Compliance				
i) Review management's monitoring system for ensuring financial statements, reports and other financial information disseminated to governmental organizations, and the public satisfy legal requirements	✓	✓	✓	✓
ii) Review with counsel, legal and regulatory compliance matters and matters that could have significant impact on financial statements	✓	✓	✓	✓
iii) Review implementation of compliance with SOX and OSC requirements	✓	✓	✓	✓
iv) Ensure CEO and CFO certify annual and interim financial statements and interim and annual MD&A	✓	✓	✓	✓
J. Risk Management				
i) Inquire of management and independent auditor to identify significant business, political, financial and control risks and exposures and assess the steps management has taken to minimize such risk	✓	✓	✓	✓
ii) Ensure disclosure of process followed by Board and committees for oversight of management of principal business risks, is complete and fairly presented	✓			
iii) Review management's risk assessment program and steps taken to manage risks and exposures	✓	✓	✓	✓
iv) More extensive review of Enterprise Risk Management program				✓

**SCHEDULE "A"**

**TERMS OF REFERENCE FOR THE AUDIT COMMITTEE**

	Q1	Q2	Q3	Q4
<p>K. General</p> <p>i) Conduct or authorize investigations into matters within the Committee's scope of responsibilities</p>	As Required			
<p>ii) With the approval of the Board Chair and in consultation with the CEO where reasonably practical, each committee has the authority and responsibility to engage, set the terms of, compensate and oversee any outside advisor that it determines to be necessary to permit it to carry out its duties. In considering the selection of any outside advisor, the applicable committee shall conduct an independence assessment of such advisor, having regard to, among other matters, (A) the provision of other services provided by the advisor to the Company, (B) the amount of fees received by the advisor from the Company as a percentage of total revenue of the advisor, (C) policies of the advisor designed to prevent conflicts of interest, (D) any business or personal relationship of the advisor with a member of the committee, Board or executives of the Company, and (E) any shares or securities of the Company held by the advisor.</p>	As Required			
<p>iii) Acquire funding from the Company to pay for ordinary administrative expenses</p>	As Required			

## SCHEDULE "A"

### TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

	Q1	Q2	Q3	Q4
iv) Establish procedures for receipt, retention and treatment of complaints regarding accounting, internal accounting controls, or auditing matters; and for anonymous submission by employees of concerns regarding questionable accounting or auditing matters and institute and oversee special investigations as needed	✓	✓	✓	✓
v) Review the findings of any examinations by regulatory agencies with respect to financial matters, and any external auditors observations made regarding those findings	As Required			
vi) Ensure disclosure in AIF if any possible exemptions for Audit Committees have been used	✓			
vii) Assess adequacy of these terms of reference and recommend to Board	✓			
viii) Conduct annual self-evaluation and report to Board	✓			

## TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

### Appendix One: Definitions Related to Audit Committee Composition

#### Affiliated Person under SEC Rules

An “affiliated person”, in accordance with the rules of the United States Securities and Exchange Commission adopted pursuant to the *Sarbanes-Oxley Act*, means a person who directly or indirectly controls the Company, or a director, executive officer, partner, member, principal or designee of an entity that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the Company.

#### Financial Literacy Under Multilateral Instrument 52-110

“Financially literate”, in accordance with MI 52-110, means that the director has 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.

#### Financial Expert Under SEC Regulation S-K

A person will qualify as “financial expert” if he or she possesses the following attributes:

- a) an understanding of financial statements and generally accepted accounting principles;
- b) the ability to assess the general application of such principles in connection with the accounting for estimates, accruals and reserves;
- c) 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 complexity of issues that can reasonably be expected to be raised by the Company’s financial statements, or experience actively supervising one or more persons engaged in such activities;
- d) an understanding of internal controls and procedures for financial reporting; and
- e) an understanding of audit committee functions.

## TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

### Appendix One: Definitions Related to Audit Committee Composition

A person shall have acquired such attributes through:

- a) 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;
- b) experience actively supervising a principal financial officer, principal accounting officer, controller, public accountant, auditor or person performing similar functions;
- c) experience overseeing or assessing the performance of companies or public accountants with respect to the preparation, auditing or evaluation of financial statements; or
- d) other relevant experience.

## TERMS OF REFERENCE FOR THE AUDIT COMMITTEE

### Appendix Two: Disclosure Items Under Audit Committee Responsibility under CSA MI 52-110 and NYSE Rule 303A

Item		CSA*	NYSE**	
Ensure that the CEO's Terms of Reference include responsibility to make annual and interim written affirmations regarding the Audit Committee, and ensure that such written affirmations are submitted as required.			√	
Disclose the text of the Audit Committee's charter.		√		
Disclose names of committee members and state whether or not each is (i) independent and (ii) financially literate. Describe each member's education and experience relevant to responsibilities.		√		
Disclosure whether, at any time since the commencement of most recently completed financial year, the Company has relied on any possible exemptions for Audit Committees.		√		
If, at any time since the commencement of the issuer's most recently completed financial year, a recommendation of the audit committee to nominate or compensate an external auditor was not adopted by the board of directors, state that fact and why.		√		
Disclose by category how much the auditor is paid for consulting and other services.		√		
Disclose any specific policies or procedures adopted by the Audit Committee for pre-approval of non-audit services by the external auditor.		√		
Prepare and disclose any Audit Committee reports required by applicable regulators.		√		

