

Pan American Silver Corporation Mineral Reserves as of June 30, 2019 ^(1,2)

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Contained Cu (kt)	Pb (%)	Contained Pb (kt)	Zn (%)	Contained Zn (kt)
Silver Segment													
Huaron	Peru	Proven	6.2	168	33.5	-	-	0.69	43.0	1.44	89.5	3.02	188.1
		Probable	3.7	170	20.1	-	-	0.33	12.3	1.55	57.1	3.00	110.2
Morococha (92.3%) ⁽³⁾	Peru	Proven	4.1	147	19.5	-	-	0.38	15.5	1.38	57.1	4.03	166.7
		Probable	2.2	173	12.3	-	-	0.31	6.9	1.20	26.5	3.26	72.2
La Colorada	Mexico	Proven	4.0	395	50.8	0.33	42.0	-	-	1.72	68.9	3.11	124.4
		Probable	5.4	287	49.6	0.26	44.4	-	-	1.35	72.4	2.44	131.4
Dolores	Mexico	Proven	35.9	26	29.8	0.84	967.4	-	-	-	-	-	-
		Probable	7.8	28	6.9	0.84	210.7	-	-	-	-	-	-
Manantial Espejo	Argentina	Proven	0.8	170	4.6	1.35	36.2	-	-	-	-	-	-
		Probable	0.1	204	0.9	3.64	16.0	-	-	-	-	-	-
San Vicente (95%) ⁽³⁾	Bolivia	Proven	1.4	414	18.6	-	-	0.43	6.0	0.35	4.9	3.06	42.9
		Probable	0.5	345	6.0	-	-	0.32	1.7	0.42	2.3	2.71	14.5
Joaquin	Argentina	Probable	0.5	721	11.0	0.41	6.2	-	-	-	-	-	-
COSE	Argentina	Probable	0.1	918	2.2	17.7	43.3	-	-	-	-	-	-
Escobal	Guatemala	Proven	2.5	486	39.5	0.42	34.2	-	-	1.02	25.7	1.75	44.4
		Probable	22.1	316	225.0	0.34	243.8	-	-	0.77	169.9	1.25	275.7
Total Silver Segment⁽⁴⁾			97.5	169	530.4	0.64	1,644.1	0.47	85.4	1.10	574.1	2.24	1,170.6
Gold Segment													
La Arena	Peru	Proven	27.4	-	-	0.36	319.4	-	-	-	-	-	-
		Probable	9.5	-	-	0.30	90.9	-	-	-	-	-	-
Shahuindo	Peru	Proven	69.8	6	14.4	0.51	1,133.2	-	-	-	-	-	-
		Probable	42.8	6	7.8	0.46	629.9	-	-	-	-	-	-
Timmins	Canada	Proven	2.7	-	-	3.06	269.1	-	-	-	-	-	-
		Probable	7.2	-	-	3.10	718.6	-	-	-	-	-	-
La Bolsa	Mexico	Proven	9.5	10	3.1	0.67	202.9	-	-	-	-	-	-
		Probable	6.2	7	1.4	0.57	113.1	-	-	-	-	-	-
Total Gold Segment⁽⁴⁾			175.0	6	26.8	0.62	3,476.9	-	-	-	-	-	-
Total Gold and Silver Segments⁽⁴⁾		Proven + Probable	272.5	77	557.2	0.63	5,121.1	0.47	85.4	1.10	574.1	2.24	1,170.6

⁽¹⁾ See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2019".

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

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

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

Pan American Silver Corporation Measured and Indicated Mineral Resources as of June 30, 2019 ^(1,2)

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Silver Segment										
Huaron	Peru	Measured	2.2	157	11.0	-	-	0.59	1.50	2.80
		Indicated	2.4	155	12.0	-	-	0.61	1.64	3.03
Morococha (92.3%) ⁽³⁾	Peru	Measured	0.3	138	1.2	-	-	0.29	0.86	2.14
		Indicated	0.3	143	1.6	-	-	0.20	0.83	2.09
La Colorada	Mexico	Measured	0.5	229	3.8	0.24	4.0	-	0.65	1.16
		Indicated	1.6	185	9.6	0.15	7.8	-	0.56	1.16
Dolores	Mexico	Measured	2.0	21	1.3	0.35	22.0	-	-	-
		Indicated	1.5	28	1.4	0.56	27.1	-	-	-
Manantial Espejo	Argentina	Measured	0.1	164	0.7	1.65	7.1	-	-	-
		Indicated	0.2	241	1.4	2.86	16.5	-	-	-
San Vicente (95%) ⁽³⁾	Bolivia	Measured	0.9	161	4.4	-	-	0.22	0.20	2.27
		Indicated	0.3	158	1.4	-	-	0.27	0.21	1.73
Navidad	Argentina	Measured	15.4	137	67.8	-	-	0.10	1.44	-
		Indicated	139.8	126	564.5	-	-	0.04	0.79	-
Joaquin	Argentina	Indicated	0.1	385	0.7	0.58	1.1	-	-	-
Escobal	Guatemala	Measured	2.3	251	18.6	0.23	16.7	-	0.31	0.59
		Indicated	14.2	201	91.6	0.20	93.0	-	0.38	0.66
Total Silver Segment⁽⁴⁾			184.0	134	792.9	0.27	195.3	0.06	0.82	1.21
Gold Segment										
La Bolsa	Mexico	Measured	1.4	11	0.5	0.90	39.9	-	-	-
		Indicated	4.5	9	1.3	0.50	71.2	-	-	-
Pico Machay	Peru	Measured	4.7	-	-	0.91	137.5	-	-	-
		Indicated	5.9	-	-	0.67	127.1	-	-	-
La Arena	Peru	Measured	1.3	-	-	0.41	17.5	-	-	-
		Indicated	1.7	-	-	0.38	20.6	-	-	-
Shahuindo	Peru	Measured	3.7	7	0.8	0.53	63.2	-	-	-
		Indicated	8.4	5	1.5	0.46	123.6	-	-	-
Timmins	Canada	Measured	1.7	-	-	3.89	212.4	-	-	-
		Indicated	5.4	-	-	3.41	587.8	-	-	-
La Arena II	Peru	Measured	155.7	-	-	0.25	1,265.2	0.37	-	-
		Indicated	586.7	-	-	0.23	4,371.9	0.35	-	-
Fenn-Gib	Canada	Indicated	40.8	-	-	0.99	1,298.6	-	-	-
Whitney	Canada	Measured	1.0	-	-	7.02	218.1	-	-	-
		Indicated	2.3	-	-	6.77	490.5	-	-	-
Gold River	Canada	Indicated	0.7	-	-	5.29	117.4	-	-	-
Juby	Canada	Indicated	26.6	-	-	1.28	1,094.7	-	-	-
Marlhill	Canada	Indicated	0.4	-	-	4.52	57.4	-	-	-
Vogel	Canada	Indicated	2.2	-	-	1.75	125.0	-	-	-

Total Gold Segment⁽⁴⁾			854.9	7	4.1	0.38	10,439.6	0.35	-	-
Total Gold and Silver Segments⁽⁴⁾		Measured + Indicated	1,038.8	122.8	797.0	0.38	10,634.9	0.30	0.82	1.21

⁽¹⁾ See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2019".

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

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

Pan American Silver Corporation Inferred Mineral Resources as of June 30, 2019 ^(1,2)

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Silver Segment										
Huaron	Peru	Inferred	6.2	155	30.8	-	-	0.41	1.45	2.77
Morococha (92.3%) ⁽³⁾	Peru	Inferred	4.5	138	19.9	-	-	0.37	1.02	3.26
La Colorada	Mexico	Inferred	8.1	133	34.5	0.12	31.6	-	2.03	4.01
Dolores	Mexico	Inferred	4.0	47	6.0	1.22	156.3	-	-	-
Manantial Espejo	Argentina	Inferred	0.5	194	3.0	2.71	41.4	-	-	-
San Vicente (95%) ⁽³⁾	Bolivia	Inferred	3.0	289	27.9	-	-	0.24	0.38	3.32
Navidad	Argentina	Inferred	45.9	81	119.4	-	-	0.02	0.57	-
Joaquin	Argentina	Inferred	0.01	389	0.1	1.29	0.2	-	-	-
COSE	Argentina	Inferred	0.03	382	0.3	7.10	6.3	-	-	-
Escobal	Guatemala	Inferred	1.9	180	10.7	0.90	53.7	-	0.22	0.42
Total Silver Segment⁽⁴⁾			74.0	106	252.5	0.62	289.5	0.10	0.83	3.17
Gold Segment										
La Bolsa	Mexico	Inferred	13.7	8	3.3	0.51	224.6	-	-	-
Pico Machay	Peru	Inferred	23.9	-	-	0.58	445.7	-	-	-
La Arena	Peru	Inferred	1.1	-	-	0.30	10.7	-	-	-
Shahuindo	Peru	Inferred	10.0	5	1.6	0.44	140.6	-	-	-
Shahuindo Sulphide	Peru	Inferred	97.4	14	45.1	0.74	2,323.3	-	-	-
Timmins	Canada	Inferred	3.7	-	-	3.74	443.8	-	-	-
La Arena II	Canada	Inferred	91.6	-	-	0.23	683.1	0.17	-	-
Fenn-Gib	Canada	Inferred	24.5	-	-	0.95	750.0	-	-	-
Whitney	Canada	Inferred	1.0	-	-	5.34	170.7	-	-	-
Gold River	Canada	Inferred	5.3	-	-	6.06	1,027.4	-	-	-
Juby	Canada	Inferred	96.2	-	-	0.94	2,908.8	-	-	-
Vogel	Canada	Inferred	1.5	-	-	3.60	168.8	-	-	-
Total Gold Segment⁽⁴⁾			369.8	13	50.0	0.78	9,297.6	0.17	-	-
Total Gold and Silver Segments⁽⁴⁾		Inferred	443.8	48	302.5	0.78	9,587.1	0.14	0.83	3.17

⁽¹⁾ See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2019".

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

Metal Price Assumptions Used to Estimate Mineral Reserves and Resources as of June 30, 2019

Mine	Category	Ag US\$/oz	Au US\$/oz	Cu US\$/t	Pb US\$/t	Zn US\$/t
Huaron	All categories	17.00	1,300	6,000	2,100	2,500
Morococha	All categories	17.00	1,300	6,000	2,100	2,500
La Colorada	All categories	17.00	1,300	6,000	2,100	2,500
Dolores	Reserves	17.00	1,300			
	Resources	22.00	1,400			
La Bolsa	All categories	14.00	825			
Manantial Espejo	All categories	16.00	1,300			
San Vicente	All categories	17.00	1,300	6,000	2,100	2,500
Navidad	All categories	12.52			1,100	
Pico Machay	All categories		700			
Joaquin	All categories	16.00	1,300			
COSE	All categories	16.00	1,300			
Escobal	All categories	20.00	1,300		2,204	2,424
Shahuindo	Reserves	17.00	1,300			
	Resources	22.00	1,400			
Shahuindo Sulphide	Inferred Resource	15.00	1,400			
La Arena	Reserves	17.00	1,400			
	Resources	22.00	1,500			
La Arena II	All categories		1,500	8,816		
Timmins - Bell Creek	All categories		1,300			
Fenn-Gib	Inside pit		1,190			
	Below pit		1,190			
Whitney	All categories		1,200			
Gold River	All categories		1,200			
Juby ⁽¹⁾	All categories					
Marlhill	All categories		1,125			
Vogel	Inside pit		1,150			
	Below pit		1,150			

⁽¹⁾ Estimation used a cut-off grade of 0.40% g/t Au

General Notes Applicable to the Foregoing Tables:

Mineral reserves and resources are as defined by the Canadian Institute of Mining, Metallurgy and Petroleum.

Pan American reports mineral resources and mineral reserves separately. Reported mineral resources do not include amounts identified as mineral reserves. Mineral resources that are not mineral reserves have no demonstrated economic viability.

Pan American does not expect these mineral reserve and resource estimates to be materially affected by metallurgical, environmental, permitting, legal, taxation, socio-economic, political, and marketing or other relevant issues.

See the Company's Annual Information Form dated March 12, 2019, available at www.sedar.com for further information on the Company's material mineral properties, including information concerning associated QA/QC and data verification matters, the key assumptions, parameters and methods used by the Company to estimate mineral reserves and mineral resources, and for a detailed description of known legal, political, environmental, and other risks that could materially affect the Company's business and the potential development of the Company's mineral reserves and resources.

Grades are shown as contained metal before mill recoveries are applied.

Disclosure of Mineral Technical Information and Cautionary Note to United States Investors

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

Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the “SEC”), and information concerning mineralization, deposits, and mineral resource information contained or referred to herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, estimates included on this website have been based upon “measured resources”, “indicated resources” and “inferred resources”. U.S. investors are advised that, while such terms are recognized and required by Canadian securities laws, the SEC does not recognize them. Under U.S. standards, mineralization may not be classified as a “reserve” unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that any part of an “indicated resource” will ever be converted into a “reserve”. U.S. investors should also understand that “inferred resources” have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of “inferred resources” exist, are economically or legally mineable or will ever be upgraded to a higher category. Under Canadian securities laws, estimated “inferred resources” may not form the basis of feasibility or pre-feasibility studies except in rare cases. Disclosure of “contained ounces” in a mineral resource is permitted disclosure under Canadian securities laws. However, the SEC normally only permits issuers to report mineralization that does not constitute “reserves” by SEC standards as in place tonnage and grade, without reference to unit measures. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.