

**Pan American Silver Corporation Dolores Mineral Reserves as of June 30, 2019 <sup>(1,2)</sup>**

Location	Classification	Tonnes (Mt)	Ag ppm	Ag contained metal (Moz)	Au ppm	Au contained metal (koz)
Open Pit	Proven	28.6	24	22.5	0.92	843.8
	Probable	6.6	19	4.0	0.54	113.7
	Proven + Probable	35.2	23	26.5	0.85	957.5
Underground	Proven	1.6	81	4.1	1.64	82.5
	Probable	1.2	73	2.9	2.45	97.0
	Proven + Probable	2.8	78	7.0	2.00	179.5
Stockpiles	Proven	5.8	18	3.3	0.22	41.0
	Probable					
	Proven + Probable	5.8	18	3.3	0.22	41.0
All	Proven	35.9	26	29.8	0.84	967.4
	Probable	7.8	28	6.9	0.84	210.7
	Proven + Probable	43.7	26	36.7	0.84	1178.0

<sup>(1)</sup> Metal price assumptions used to estimate Dolores mineral reserves as at June 30, 2019 were US\$17.00 Ag/oz and US\$ 1,300 Au/oz.

<sup>(2)</sup> 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").

**Pan American Silver Corporation Dolores Mineral Resources as of June 30, 2019 <sup>(1,2)</sup>**

Location	Classification	Tonnes (Mt)	Ag ppm	Ag contained metal (Moz)	Au ppm	Au contained metal (koz)
Open Pit	Measured	1.2	9	0.4	0.21	8.3
	Indicated	0.6	9	0.2	0.21	3.9
	Measured + Indicated	1.8	9	0.5	0.21	12.2
	Inferred	2.0	18	1.2	0.44	28.6
Underground	Measured	0.5	51	0.8	0.77	12.8
	Indicated	0.9	40	1.2	0.77	23.3
	Measured + Indicated	1.5	44	2.1	0.77	36.0
	Inferred	2.0	77	4.8	2.04	127.7
Stockpiles	Measured	0.2	15	0.1	0.13	0.8
	Indicated					
	Measured + Indicated	0.2	15	0.1	0.13	0.8
	Inferred					
All	Measured	2.0	21	1.3	0.35	22.0
	Indicated	1.5	28	1.4	0.56	27.1
	Measured + Indicated	3.5	24	2.7	0.44	49.1
	Inferred	4.0	47	6.0	1.22	156.3

<sup>(1)</sup> Metal price assumptions used to estimate Dolores mineral resources as at June 30, 2019 were US\$22.00 Ag/oz and US\$ 1,400 Au/oz.

<sup>(2)</sup> 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").

**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](http://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.