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FOR IMMEDIATE RELEASE

NEWS RELEASE
TSX: JAG

Jaguar Mining Reports Updated 2019 Mineral Reserves and Mineral Resources for the Turmalina Mine, Brazil

Proven and Probable Reserves Increased 46% Year-over-Year

Toronto, Canada, April 20, 2020 – Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX: JAG) is pleased to report updated Mineral Resources and Mineral Reserves ("MRMR") estimates as at December 31, 2019 for the Turmalina Gold Mine located in Minas Gerais, Brazil.

Highlights

- Turmalina Proven and Probable Mineral Reserves ("2P") as at December 31st 2019 were 332,000 oz's of gold contained within 2.40 Mt at a weighted average grade of 4.31 g/t Au. This reflects an ounce increase of 63% year on year before mined depletion and an increase of 46% year-over-year, net of 2019 mined depletion of 39,000 oz's of gold. A gold price of \$1300/oz and BRL\$3.7:US\$1 was used in both years.
- 2P Mineral Reserves now support an estimated six years of production at current mining rates.
- Orebody C 2P Mineral Reserves increased by 72,000 ounces of gold over 2018 Mineral Reserves net of 2019 depletion. Targeted drilling down plunge of both the C-SE and C-Central payshoots was enabled by a more precise determination of the payshoot orientation.
- Orebody A 2P Mineral Reserves increased by 32,000 ounces of gold over 2018 Mineral Reserves net of 2019 depletion.
- Proven Mineral Reserves increased 16% to 118,000 oz's of gold at a weighted average grade of 4.88 g/t Au
- Probable Mineral Reserves increased 69% to 213,000 oz's of gold at a weighted average grade of 4.04 g/t Au

Mineral Reserves and Resources have been prepared in accordance with CIM definitions (2014) as in National Instrument 43-101 ("NI 43-101"). Turmalina Mineral Reserves and Mineral Resources update will be reported in the company's Annual Information Form (AIF) along with an updated Technical Report on the 29th April 2020.

Pilar Mineral Reserves and Mineral Resources are expected to be updated mid 2020, once geological data collected from infill drilling and development completed in 2019 and ongoing growth exploration drilling programmes have been incorporated into the Pilar Geological and Resource Models. Pilar Reserves and Resources as at December 31, 2019 reflecting depletion of the 2018 model with 2019 mined production, will be published in Jaguar's Annual Information Form on 29th April 2020.

Vern Baker, CEO of Jaguar Mining stated; "Our geologic team did an excellent job in 2019. At Turmalina, the team focused on replacing reserves in the A Orebody, and then on understanding and delineating ore in our C Orebody. With very limited resources in 2019 the team was quite successful in both objectives. They maintained and even increased our reserve base in A orebody, and also significantly grew our reserve and resource base in C orebody. This is an outstanding achievement in a year where the Company faced multiple challenges. The hard work of our geologic team was rewarded with a significant increase in our overall ounce inventory, and they also provided Jaguar with some excellent targets to continue expanding our exploration success. At Pilar, we are currently limiting our update to a depletion calculation and expect to update the Pilar Mineral Reserves and Resources later this year now that work has been completed on Turmalina. In 2020, with the addition of two contract diamond drills operating at our mines, we look forward to delivering more positive news from our operations."

Year- End 2019 Turmalina Gold Mine Mineral Reserves and Mineral Resources

Table 1

Turmalina Gold Mine Mineral Reserves Summary as at December 31, 2019, compared to December 31, 2018:

Turmalina Gold Mine - Change in Mineral Reserves						
Gold Ounces (000's)				Gold Grade (g/t)		
As at December 31	2019	2018	Change (%)	2019	2018	Change (%)
Proven Reserves	118	102	16%	4.88	4.33	13%
Probable Reserves	213	126	69%	4.04	5.82	-31%
Total	332	228	46%	4.31	5.05	-15%

Table 2

Turmalina Gold Mine Mineral Reserves as at December 31, 2019, by Orebody:

Turmalina Gold Mine - Mineral Reserves, December 31, 2019									
Ore Body	Proven Reserves			Probable Reserves			Proven and Probable Reserves		
	ROM (t)	Au	Oz	ROM (t)	Au	Oz	ROM (t)	Au	Oz
	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)
Orebody A	408	5.75	75	398	4.91	63	806	5.34	138
Orebody C	347	3.85	43	1244	3.77	151	1591	3.79	194
Total	755	4.88	118	1642	4.04	213	2397	4.31	332

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves
 2. Mineral Reserves were estimated at a break-even cut-off grade of 2.5 g/t Au
 3. Mineral Reserves are estimated using an average long-term gold price of US \$1,300 per ounce
 4. Mineral Reserves are estimated using an average long-term foreign exchange rate of 3.7 Brazilian Reais: 1 US Dollar
 5. A minimum mining width of 2 m was used
 6. Numbers may not add due to rounding
 7. There are no known environmental, permitting, legal, title, socio-economic, political or other risk factors which could materially affect the Mineral Reserve estimates.
- For the December 31, 2019, estimates, the Company has prepared an updated geological and block model and a supporting Technical Report.
 - For comparison purposes, Gold Price and Cut-Off Grade assumptions used in this press release are the same as those previously reported in Jaguar's 43-101 Technical Report published in March 2019 (SEDAR).
 - Infill Drilling and Secondary Development completed in 2019 successfully replaced 2019 mined depletion of 39,000 oz's Au and added significantly to the Mineral Reserves which are now equivalent to more than six years of production at current production rates.
 - Total 2P Mineral Reserves are 332,000 ounces of gold (2,40Mt at a weighted average grade of 4.31 g/t Au) (net of 2019 depletion of 39,000 ounces) which are 46% higher compared to 2P Reserves of 228,000 ounces at a weighted grade of 5.05 g/t Au as at December 31, 2018.
 - Total Proven Mineral Reserves increased 16% to 118,000 oz's of gold, at a weighted average grade of 4.88 g/t Au.
 - Orebody A Proven Mineral Reserves increased 29% to 75,000 ounces of gold at a weighted average grade of 5.75 g/t Au which reflects a 10% increase in grade year on year.

- Orebody C Proven Mineral Reserves decreased 2% to 43,000 ounces of gold at a weighted average grade of 3.85 g/t Au which reflects a 9% increase in grade year on year.
- Total Probable Mineral Reserves increased 69% to 213,000 oz's of gold, at a weighted average grade of 4.04 g/t Au which reflects a 31% decrease in weighted average grade year on year which is offset by an overall 143% increase in tonnage primarily added from Orebody C.
- Orebody A Probable Mineral Reserves increased 34% to 63,000 ounces of gold at a weighted average grade of 4.91 g/t Au which reflects a 15% decrease in grade year on year.
- Orebody C Probable Mineral Reserves increased 91%% to 151,000 ounces of gold at a weighted average grade of 3.77 g/t Au which reflects a 36% decrease in grade year on year offset by a 198% increase in additional tonnage year on year.
- Detailed mapping of primary and secondary underground development by Jaguar's geological team has allowed detailed structural kinematic indicator measurements which defined a more precise orientation of both the C-Central and C-SE (southeast) mineralized payshoots.
- The more accurate plunge direction allowed the 2019 drilling program to target and trace these main payshoots down their structural plunge. The C Central and C-SE payshoots remain open down plunge and these depth extensions remain the primary target for ongoing drill programs.
- At C-Central, exploration drilling first defined the high grade payshoot in March 2019 which was followed by targeted drilling down plunge, resource definition and estimation and underground access development. Initial stopping activities commenced in September 2019. Inclusion of Orebody C-Central Mineral Reserve into inventory for the first time was completed by year end. C-Central provides a new production area for Turmalina.
- At C-SE the definition of a more precise mineralization plunge direction allowed targeted drilling down plunge, increasing the mineralized extension from level 5 to level 8.
- All orebodies remain open down plunge for future drilling targets.
- The database used to prepare the estimates, with a cut-off date of December 16th, 2019, comprises 4,218 drill holes and 17,282 samples. The estimate was generated from a block model constrained by three-dimensional (3D) wireframe models. A capping value of 50 g/t Au was applied for all three orebodies. The wireframe models of the mineralization, block model, and excavated material for Turmalina were constructed by Jaguar. Separate wireframes were built for each mineralized lens for each orebody and were used to constrain the grade estimates into the block model.
- The Mineral Resources and Mineral Reserves for 2019 will be presented in the companies AIF and Technical Reports to be published by the end of April 2020.

Table 3.

Turmalina Gold Mine Mineral Resources Summary as at December 31, 2019, compared to December 31, 2018:

Turmalina Gold Mine - Change in Mineral Resources						
	Gold Ounces (000's)			Gold Grade (g/t)		
As at December 31	2019	2018	Change (%)	2019	2018	Change (%)
Measured Resources	333	305	9%	5.14	5.37	-4%
Indicated Resources	331	272	22%	4.66	5.70	-18%
Total - M&I	664	577	15%	4.89	5.52	-11%
Inferred Resources	248	148	68%	4.23	4.31	-2%

Table 4.

Turmalina Gold Mine Mineral Resources Summary as at December 31, 2019, by Orebody:

Turmalina Gold Mine - Mineral Resources, December 31, 2019												
Area	Measured Resources			Indicated Resources			Total Measured & Indicated Resources			Inferred Resources		
	Tonnes	Au	Oz	Tonnes	Au	Oz	Tonnes	Au	Oz	Tonnes	Au	Oz
	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)
Ore Body A	1,020	6.40	210	473	5.90	90	1,493	6.24	300	364	4.65	54
Ore Body B	353	3.34	38	192	4.26	26	545	3.66	64	18	6.46	4
Ore Body C	641	4.13	85	1,548	4.33	215	2,189	4.27	301	1,436	4.10	189
Total	2,014	5.14	333	2,213	4.66	331	4,227	4.89	664	1,818	4.23	248

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
 2. Mineral Resources are estimated at a cut-off grade of 2.10 g/t Au.
 3. Mineral Resources are estimated using a long-term gold price of \$1,500 per ounce.
 4. Mineral Resources are estimated using an average long-term foreign exchange rate of 3.70 Brazilian Reais: 1 US Dollar.
 5. A minimum mining width of approximately 2 m was used.
 6. Bulk density is 2.83 t/m³ for Orebodies A and B and 2.91 t/m³ for Orebody C.
 7. Gold grades are estimated by the Ordinary Kriging (OK) interpolation algorithm using capped composite samples.
 8. Mineral Resources are inclusive of Mineral Reserves.
 9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
 10. Numbers may not add due to rounding.
- Measured and Indicated Mineral Resources at Turmalina at a cut-off grade of 2.1 g/t Au comprise 4.23 Mt at a weighted average grade of 4.89 g/t Au - containing 664,000 oz. of gold.
 - This reflects an increase of 15% in gold ounces year on year at 11% lower grade offset by a 30% increase in tonnage.
 - The Inferred Mineral Resource at Turmalina is 1.82 Mt at an average grade of 4.23 g/t Au - containing 248,000 oz. of gold.
 - Orebody A Measured Mineral Resources increased by 7% year on year to 210,000 ounces of gold at an average grade of 6.40 g/t Au, which reflects a decrease in grade of 7% offset by an increase in tonnage of 14%.
 - Orebody A Indicated Mineral Resources increased by 8% year on year to 85,000 ounces of gold at an average grade of 5.90 g/t Au which reflects a decrease in grade of 22% offset by an increase in tonnage of 40%.
 - Orebody A Inferred Mineral Resources decreased by 7% year on year to 54,000 ounces of gold at an average grade of 4.65 g/t Au.
 - Orebody C Measured Mineral Resources increased by 21% year on year to 85,000 ounces of gold at a grade of 4.13 g/t Au which reflects a decrease in grade of 2% offset by an increase in tonnage by 23%.
 - Orebody C Indicated Mineral Resources increased by 32% year on year to 215,000 ounces at an average grade of 4.33 g/t which reflects a 18% decrease in grade offset by a 62% increase in tonnage.
 - Orebody C Inferred Mineral Resources increased by 120% year on year to 189,000 ounces of gold at an average grade of 4.10 g/t Au which reflects an increase in grade of 3% and an increase in tonnage of 112%.
 - Orebody B Mineral Resources remained the same for all resource categories year on year.

Figure 1.

The distribution of Mineral Reserves at Turmalina Gold Mine as at December 31, 2019, (left) and December 31, 2018, (right) seen from the hanging wall looking towards the south west.

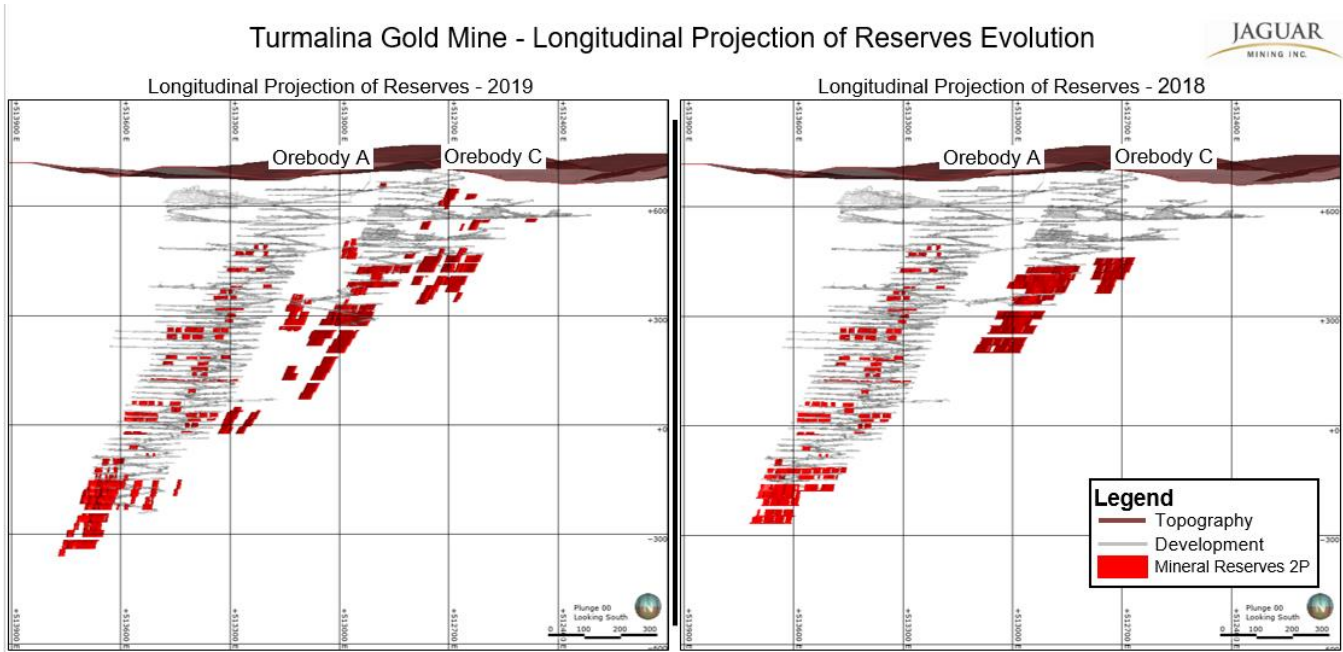
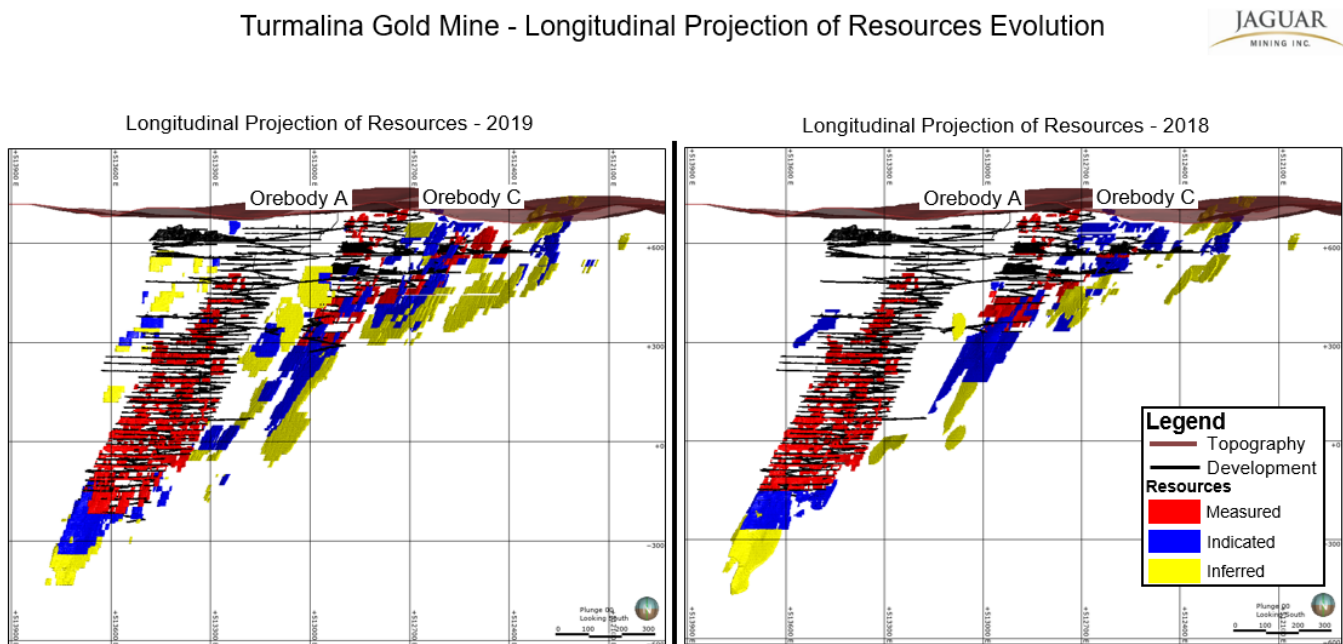


Figure 2.

The distribution of Mineral Resources at Turmalina Gold Mine as at December 31, 2019, (left) and December 31, 2018, (right) seen from the hanging wall looking towards the south west.



Qualified Persons

Jaguar Mining prepared the Mineral Resource and Reserve estimates under the supervision of Jonathan Victor Hill (FAUSIMM) and Bruno Tomaselli (Deswick Brasil and FAUSIMM) who are Qualified Persons within the definition of NI 43-101 for resources and reserves respectively. The effective date of the estimates is December 31, 2019.

Quality Control

All sampling and samples utilized at Jaguar for Mineral Resource and or Mineral Reserves estimation uses a quality-control program that includes insertion of blanks and commercial standards in order to ensure best practice in sampling and analysis.

HQ, NQ, and BQ size drill core is sawn in half with a diamond saw. Samples are selected for analysis in standard intervals according to geological characteristics such as lithology and hydrothermal alteration. Rock channel sampling of the underground development follows the same standard intervals as for the drill core.

Half of the sawed sample is forwarded to the analytical laboratory for analysis while the remaining half of the core is stored in a secure location. The drill core and rock chip samples for resource-reserve conversion and grade control samples are transported for physical preparation and analysis in securely sealed bags to the Jaguar in-house laboratory located at the company's Caeté Complex, Caeté, Minas Gerais. Growth exploration samples are sent to the independent ALS Brazil (subsidiary of ALS Global) laboratory located in Vespasiano, Minas Gerais, Brazil. The analysis of these exploration samples is conducted at ALS Global's respective facilities (fire assay is conducted by ALS Global in Lima, Peru, and multi-elementary analysis is conducted by ALS Global in Vancouver, Canada). ALS has accreditation in a global management system that meets all requirements of international standards ISO/IEC 17025:2005 and ISO 9001:2015. All major ALS geochemistry analytical laboratories are accredited to ISO/IEC 17025:2005 for specific analytical procedures.

For a complete description of Jaguar's sample preparation, analytical methods and QA/QC procedures, please refer to *"Technical Report on the Roça Grande and Pilar Operations, Minas Gerais State, Brazil"*, a copy of which is available on the Company's SEDAR profile at www.sedar.com.

Mineralized material for each orebody was classified into the Measured, Indicated, or Inferred Mineral Resource categories based on the search ellipse ranges obtained from the variography study, the observed continuity of the mineralization, the drill hole and channel sample density, and previous production experience from these orebodies.

The Mineral Resources are inclusive of Mineral Reserves. For those portions of the Mineral Resources that comprise the Mineral Reserve, stope design wireframes were used to constrain the Mineral Resource reports.

The Iron Quadrangle

The Iron Quadrangle has been an area of mineral exploration dating back to the 16th century. The discovery in 1699-1701 of gold contaminated with iron and platinum-group metals in the southeastern corner of the Iron Quadrangle gave rise to the name of the town Ouro Preto (Black Gold). The Iron Quadrangle contains world-class multi-million-ounce gold deposits such as Morro Velho, Cuiabá, and São Bento. Jaguar Mining is the second largest operating gold company tenement holder in the Iron Quadrangle, holding just over 25,000 hectares.

About Jaguar Mining Inc.

Jaguar Mining Inc. is a Canadian-listed junior gold mining, development, and exploration company operating in Brazil with three gold mining complexes, and a large land package with significant upside exploration potential from mineral claims covering an area of approximately 64,000 hectares. The Company's principal operating assets are located in the Iron Quadrangle, a prolific greenstone belt in the state of Minas Gerais and include the Turmalina Gold Mine Complex and Caeté Gold Mine Complex. The Company also owns the Paciência Gold Mine Complex, which has been on care and maintenance since 2012. Additional information is available on the Company's website at www.jaguarmining.com.

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Forward-Looking Statements

Certain statements in this news release constitute "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking statements and information are provided for the purpose of providing information about management's expectations and plans relating to the future. All of the forward-looking information set forth in this news release is qualified by the cautionary statements below and those made in our other filings with the securities regulators in Canada. Forward-looking information contained in forward-looking statements can be identified by the use of words such as "are expected," "is forecast," "is targeted," "approximately," "plans," "anticipates," "projects," "continue," "estimate," "believe," 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. All statements, other than statements of historical fact, may be considered to be or include forward-looking information. These forward-looking statements are made as of the date of this news release and the dates of technical reports, as applicable. This news release contains forward-looking information regarding potential and, among other things, expected future mineral resources, potential mineral production opportunities, geological and mineral exploration statistics, ore grades, current and expected future assay results, and definition/delineation/exploration drilling at the Pilar Gold Mine and the Turmalina Gold Mine in Brazil, as well as forward-looking information regarding costs of production, capital expenditures, costs and timing of the development of projects and new deposits, success of exploration, development and mining activities, capital requirements, project studies, mine life extensions, and continuous improvement initiatives. The Company has made numerous assumptions with respect to forward-looking information contained herein, including, among other things, assumptions about the estimated timeline and for the development of the drill program at the Pilar Gold Mine (and its expanded exploration footprint) and the Turmalina Gold Mine; its mineral properties; the supply and demand for, and the level and volatility of the price of, gold; the accuracy of reserve and resource estimates and the assumptions on which the reserve and resource estimates are based; the receipt of necessary permits; market competition; ongoing relations with employees and impacted communities; and political and legal developments in any jurisdiction in which the Company operates being consistent with its current expectations including, without limitation, the impact of any potential power rationing, tailings facility regulation, exploration and mine operating licenses and permits being obtained and renewed and/or there being adverse amendments to mining or other laws in Brazil and any changes to general business and economic conditions. Forward-looking information involves a number of known and unknown risks and uncertainties, including among others: the risk of Jaguar not meeting its plans regarding its operations and financial performance; uncertainties with respect to the price of gold, labour disruptions, mechanical failures, increase in costs, environmental compliance and change in environmental legislation and regulation, weather delays and increased costs or production delays due to natural disasters, power disruptions, procurement and delivery of parts and supplies to the operations; uncertainties inherent to capital markets in general (including the sometimes volatile valuation of securities and an uncertain ability to raise new capital) and other risks inherent to the gold exploration, development and production industry, which, if incorrect, may cause actual results to differ materially from those anticipated by the Company and described herein. In addition, there are risks and hazards associated with the business of gold exploration, development, mining and production, including without limitation environmental hazards, tailings dam failures, industrial accidents and workplace safety problems, unusual or unexpected geological formations, pressures, cave-ins, flooding, chemical spills, and gold bullion thefts and losses (and the risk of inadequate insurance, or the inability to obtain insurance, to cover these risks). Although we have attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information.