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Golden Minerals Company.

Golden Minerals Reports Promising Bio-Oxidation Test Results

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GOLDEN, Colo., Jan. 17, 2020 (GLOBE NEWSWIRE) -- Golden Minerals Company (NYSE American and TSX: AUMN) ("Golden Minerals", "Golden" or "the Company") is pleased to announce it has received promising results from metallurgical test work conducted on pyrite-arsenopyrite flotation concentrates from its Velardeña Properties located in Durango, Mexico.

Gold and silver recoveries of 91% and 92%, respectively, were obtained from cyanide leaching of the bio-oxidized concentrate samples. BIOX* achieved 93% oxidation on the concentrate sample in batch tests, which the Company believes should translate to a 5 to 6-day retention time in a commercial bio-oxidation plant.

Warren Rehn, President & Chief Executive Officer of Golden Minerals, commented, "These results confirm the previous indications we had that bio-oxidation processing of the pyrite-arsenopyrite concentrates from Velardeña and subsequent cyanide leaching of the oxidized product may be the key to obtaining high payable gold recoveries from Velardeña. This could be a potential game-changer for the project. These confirmed gold and silver recoveries from the pyrite-arsenopyrite concentrates will be included in the Preliminary Economic Assessment update that is underway on the project. The results of this PEA are expected to be available in the first quarter of 2020."

Metallurgical Test Work

A pyrite-arsenopyrite flotation concentrate sample was prepared from vein material that is representative of the primary veins exposed in the current deepest accessible stopes in the San Mateo and Santa Juana mines of Golden's Velardeña Properties. The concentrate sample was processed at Outotec's laboratory in South Africa using their patented BIOX process to oxidize the sample. After oxidation, the sample was leached using a cyanide solution. The results indicate that the Velardeña flotation concentrate tested is suitable for treatment using the BIOX process and subsequent cyanide leaching, yielding recoveries for gold and silver of 91% and 92%, respectively.

*BIOX is a trademark of Outotec, referring to their proprietary bio-oxidation process for pre-treating sulfide material.

About Velardeña

The Velardeña Properties are comprised of two underground mines and two processing plants in northeast Durango State, Mexico, approximately 65 kilometers southwest of the city of Torreón. Of the two underground mines comprising the Velardeña Properties, the Velardeña mine includes five different major vein systems including the Terneras, Roca Negra, San Mateo, Santa Juana and San Juanes systems. During 2015 the Company mined from the San Mateo, Terneras and Roca Negra vein systems as well as the Santa Juana vein system.

Golden Minerals owns two mills at Velardeña, a 300 tonne per day flotation sulfide mill and a conventional 550 tonne per day cyanide leach oxide mill with a Merrill-Crowe precipitation circuit and flotation circuit. In July 2015, Golden leased the oxide plant to Hecla Mining Company to process its own material through the plant. The lease with Hecla has since been extended through December 31, 2020.

The Company has contracted with Tetra Tech to complete an independent study to update the 2015 PEA on Velardeña using the results from these recent metallurgical studies. The PEA update is expected to be complete in the first quarter of 2020.

Review by Qualified Person and Quality Control

The technical contents of this press release have been reviewed by Warren M. Rehn, M.Sc., a Qualified Person for the purposes of Canadian National Instrument 43?101. Mr. Rehn has over 33 years of mineral exploration experience and is a QP member of the Mining and Metallurgical Society of America.

To ensure reliable sample results, Golden Minerals uses a quality assurance/quality control program that monitors the chain?of?custody of samples and includes the insertion of blanks, duplicates and reference standards in each batch of samples. Core is photographed and sawn in half with one half retained in a secured facility for verification purposes. Sample preparation (crushing and pulverizing) is performed at an independent ISO 9001:2001 certified laboratory in Chihuahua or Zacatecas, Mexico. Prepared samples are direct? shipped to an ISO 9001:2001 certified laboratory in Canada.

About Golden Minerals

Golden Minerals is a Delaware corporation based in Golden, Colorado. The Company is primarily focused on advancing its Velardeña Properties in Mexico and its El Quevar silver property in Argentina, as well as acquiring and advancing mining properties in Mexico and Nevada.

Forward?Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended, and applicable Canadian securities legislation, including statements relating to the contents and timing of a preliminary economic assessment for the Velardeña project. These statements are subject to risks and uncertainties, including unanticipated delays in completing the PEA or the results of any further metallurgical work or analysis completed in connection with the PEA. Additional risks relating to Golden Minerals may be found in the periodic and current reports filed with the Securities and Exchange Commission by Golden Minerals, including the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

For additional information please visit http://www.goldenminerals.com/ or contact:

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