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PRESS RELEASE

Jaguar Reports Majority of Convertible Debenture Holders Elect to Convert to Common Shares; Company Strengthens its Balance Sheet

Toronto, Canada, October 13, 2016 - Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX: JAG) is pleased to report that a majority of holders of senior secured Convertible Debentures (the "Debentures"), representing approximately 80% of the principal amount of total outstanding Debentures, have elected to convert their Debentures into common shares of the Company ("Common Shares"). The conversions of Debentures have resulted in an increase in the Company's outstanding Common Shares to 257,035,227, which will be reflected on the TSX in the coming days. This will also result in an increase in the Company's market capitalization to approximately C\$193 million (based on 257,035,227 shares valued at C\$0.75 per share). With the conversion of the majority of the Debentures, the Company has significantly strengthened its balance sheet with the reduction of its senior secured debt and savings of US\$645,000 per quarter (approximately US\$2.6 million per year) in interest payments, reflecting an immediate savings in the Company's annual cash outflow. The Company is now in a zero "net debt" position, considering the balance sheet at June 30, 2016. Net debt is defined as total debt, less cash.

On October 28, 2015, the Company announced the closing of a US\$21.5 million private placement of the Debentures with a maturity term of three years (refer to the news release dated October 28, 2015 for full details). The Debentures are convertible at the holder's option into Common Shares at a price of C\$0.15 per Common Share, being a ratio of approximately 8,781 Common Shares per US\$1,000 principal amount of Debentures, based on a fixed exchange rate of US\$0.7592 per C\$1.00.

Rodney Lamond, President and Chief Executive Officer of Jaguar commented, "With the majority of our Debenture holders electing to convert their holdings into Common Shares, Jaguar is well positioned to further strengthen its balance sheet with a significant reduction in debt. The voluntary and early conversion of the Debentures also reflects the strong confidence Debenture holders maintain in the potential of our operating assets and management's ability to create lasting shareholder value. We will continue to be financially prudent as we execute our operating and exploration growth strategy and re-invest funds, previously disbursed to paying the Debenture coupon, into our core operating assets for future growth." Mr. Lamond continued; "Lastly, we are pleased to welcome our new majority shareholders, the Tocqueville Gold Fund and Eric Sprott. We value their support as an integral part of our new capital structure."

Tocqueville Gold Fund and Eric Sprott represent 77% of the Debenture holders electing to convert their Debentures in exchange for Common Shares.

On October 5, 2016, the Company issued a notice of redemption to holders of the outstanding US\$4,885,000 principal amount of Debentures. As set out in the notice of redemption, the outstanding Debentures will be redeemed as of November 8, 2016 (the "Redemption Date"), upon payment of a redemption amount of US\$1,212.79 for each US\$1,000 principal amount of Debentures, being equal to the aggregate of (i) US\$1,200, representing the price equal to 120% of the principal amount of Debentures (the "Redemption Price"), and (ii) all accrued and unpaid interest to but excluding the Redemption Date. Each holder will have the right to convert their Debentures into Common Shares of the Company, at a conversion price of C\$0.15 per Common Share at any time on or prior to November 7, 2016.

On August 3, 2016, the Debentures commenced trading on the Toronto Stock Exchange ("TSX"), allowing Debenture holders to trade the Debentures.

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 191,000 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 ("Mineração Turmalina Ltda" or "MTL") and Caeté Gold Mine Complex ("Mineração Serras do Oeste Ltda" or "MSOL") which combined produce more than 90,000 ounces of gold annually. 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.

For further information please contact:

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FORWARD-LOOKING STATEMENTS

Certain statements in this press release constitute "forward-looking information" within the meaning of applicable Canadian securities legislation. 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", "anticipates", "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. This press release contains forward-looking information regarding the status of the Debentures and changes in the market capital of the Company. The Company has made numerous assumptions with respect to forward-looking information contained herein, including, among other things, assumptions about the estimated timeline for conversion and redemption of the Debentures and general business and economic conditions. Forward-looking information involves a number of known and unknown risks and uncertainties, which, if incorrect, may cause actual results to differ materially from those anticipated by the Company and described herein. Accordingly, readers should not place undue reliance on forward-looking information.

For additional information with respect to these and other factors and assumptions underlying the forward-looking information made in this press release, see the Company's most recent annual information form and management's discussion and analysis, as well as other public disclosure documents that can be accessed under the issuer profile of "Jaguar Mining Inc." on SEDAR at www.sedar.com. The forward-looking information set forth herein reflects the Company's reasonable expectations as at the date of this press release and is subject to change after such date. The Company disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law. The forward-looking information contained in this press release is expressly qualified by this cautionary statement.