



NEWS RELEASE

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FOR IMMEDIATE RELEASE:

TSX: JAG

Jaguar Announces Major Growth Exploration Initiative Focusing on Brownfield Exploration Pipeline and Mine Life Extension

Toronto, Canada, October 27, 2016 - Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX: JAG) is pleased to announce that it has commenced an expanded and accelerated growth exploration initiative at its operating underground gold mines Turmalina, Pilar and Roça Grande located in the Iron Quadrangle, Minas Gerais, Brazil. This initiative will be focused on brownfield exploration targets to expand and discover new mineral resources located in and around existing mine infrastructure that have a strong potential to further grow sustainable production, lower unit costs, increase cash flows and extend expected mine life. The Company's current ongoing exploration programs will continue to focus on increasing resources at its core assets through the upgrading of current Measured and Indicated Mineral ("M&I") Resources to Mineral Reserves.

Over the next 12 months, the Company expects to invest up to US\$8 million in exploration and growth initiatives. Approximately 75% of the investment will be on underground work at the Company's core operating mines for drilling of step-out and down-dip extensions and targets. The remaining growth exploration investment is expected to be on the high priority targets Pacheca and Cubas located near Pilar Gold Mine.

Rodney Lamond, President and Chief Executive Officer of Jaguar, stated: *"Considering our sizable footprint in the prolific greenstone belt of the Iron Quadrangle in Brazil, and the significant exploration potential across all of our operating mines, this accelerated growth exploration initiative is an exciting step towards assisting us in increasing our resources and extending our operating mine life. This program will also allow for the potential discovery of new resources to support our goal of growing our sustainable production profile. To date, we have made excellent progress with our infill resource drilling programs, however we now have the immediate means, to accelerate our resource growth objectives and to execute exploration programs on the numerous target areas that could potentially add significant new resources to the current mineral base."*

Growth Exploration Highlights

- **Major growth capital investment primarily focused on increasing mineral resources at its core assets, and discovery of new resources near existing infrastructure at its operating mines.**
- **Expanded growth exploration program includes approximately 31,000 metres ("m") of diamond drilling, including approximately 15,000 m deep down-plunge continuities of the ore bodies A and C at Turmalina and BFII and BF at the Pilar Gold Mine.**
- **8,500 m of surface diamond drilling will be dedicated to test the high priority Pacheca and Cubas targets in the vicinities of the Pilar Gold Mine and other advanced targets.**
- **Exploration targets generated, as a result of extensive compilation work from previous exploration campaigns, in and around the current mine sites will be followed up by geophysical surveys and diamond drilling. Subject to the results, an additional 7,750 m of surface drilling will be dedicated to test those targets.**
- **Geophysics, soil geochemistry, trenching, plus prospecting and mapping will also be conducted to advance additional target areas for future drilling. Field work has already commenced at the Pacheca and Cubas targets, located near Pilar Gold Mine.**

Turmalina Gold Mine

An underground drilling campaign of approximately 9,600 m will be dedicated to the test the down-plunge extension and continuity of ore bodies A and C.

Ore Body A

Deep diamond drilling of ore body A will be performed after the development of a new exploration horizon is positioned in the hanging wall of the mine. The proposed drilling is intended to reach the 12, 13 and 14 levels, up to 240 vertical m below current development and 160 m below the current inferred resources.

Ore Body C

Down-dip extension drilling of the South Eastern portion of Ore Body C is expected to generate new mineral resources that are near surface and to contribute in the near term to the Turmalina throughput profile.

IP Geophysics will test the hanging wall of Orebody C and eastern continuity of Orebody A. Following the IP work, an estimated 6,000 m surface diamond drilling program is expected to take place.

Pilar Gold Mine

An underground drilling campaign of approximately 5,100 m will be dedicated to test the down-plunge extension and continuity of ore bodies BFII, BF and BA.

Deep diamond drilling will be performed after the development of a new exploration horizon is positioned in the hanging wall of the mine. The proposed drilling is intended to reach the 12, 13 and 14 levels, up to 250 vertical metres below current development and 200 metres below the current inferred resources.

Approximately 3,500 m of surface diamond drilling on the Pacheca Target is planned. The Pacheca target is located three km NE of the Pilar mine and is characterized by a series of extensive open pit excavations made by Portuguese explorers during the 18th century. Similarly hosted in the Banded Iron Formation (BIF) encompassing most of the Iron Quadrangle, the Pacheca target is strongly delineated by soil Au geochemistry.

Surface diamond drilling on the Cubas Target of approximately 2,500 m is planned. The Cubas Target is identified by a number of deep IP anomalies situated on the southern continuity of the shear zone, which hosts the main Pilar ore bodies.

Roça Grande (RG) Gold Mine

During 2016, the Company undertook a compilation program of the available surface information. In light of the revised geological model, a review of the diamond drill-hole information will be carried out to consolidate the geological model. Soil geochemistry and a total of 1,750 m of drilling follow-up is expected to test the ore bodies' open continuities.

The Iron Quadrangle

The Iron Quadrangle has been an area of mineral exploration for centuries, dating back to the 16th century. The discovery in 1699-1701 of black 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 holds the second largest gold land position in the Iron Quadrangle with 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 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 ("Mineracao 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.

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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 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. The Company has made numerous assumptions with respect to forward-looking information contained herein, including, among other things, assumptions about the development and production activities and the intended use and allocation of capital on its growth exploration initiatives; the assumptions on which the reserve and resource estimates are based; the receipt of necessary permits; ongoing relations with employees and impacted communities; and general business and economic conditions. Forward-looking information involve a number of known and unknown risks and uncertainties, including among others the uncertainties with respect to the price of gold, labor disruptions, mechanical failures, increase in costs, environmental compliance and change in environmental legislation and regulation, procurement and delivery of parts and supplies to the operations, uncertainties inherent to capital markets in general 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. 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 news 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 news 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 news release is expressly qualified by this cautionary statement.

Figure 1 – Location Plan, Turmalina Gold Mine

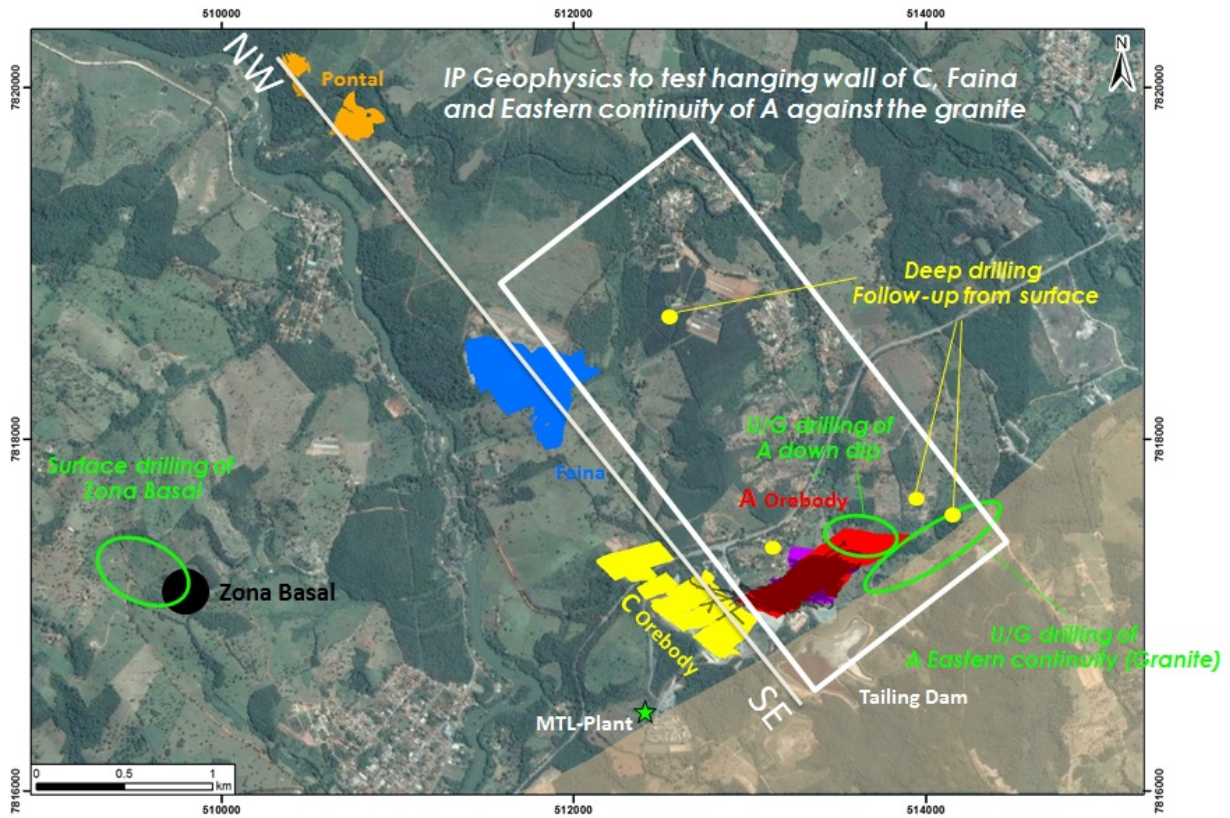


Figure 2 – Detailed Longitudinal Section, Turmalina Gold Mine

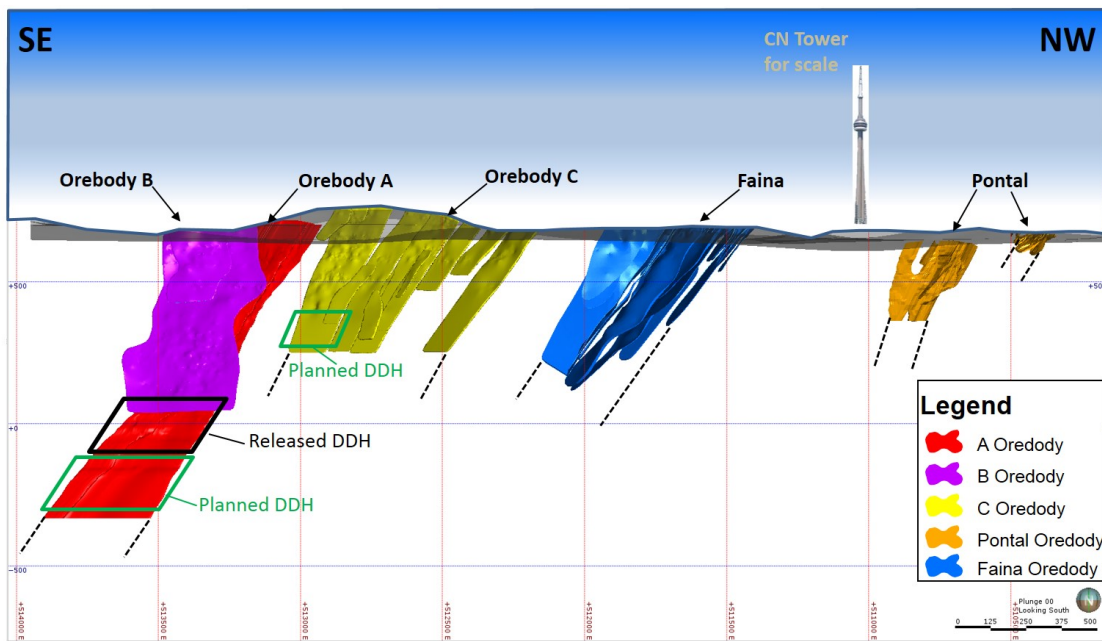


Figure 3 – Location map, Pilar Gold Mine

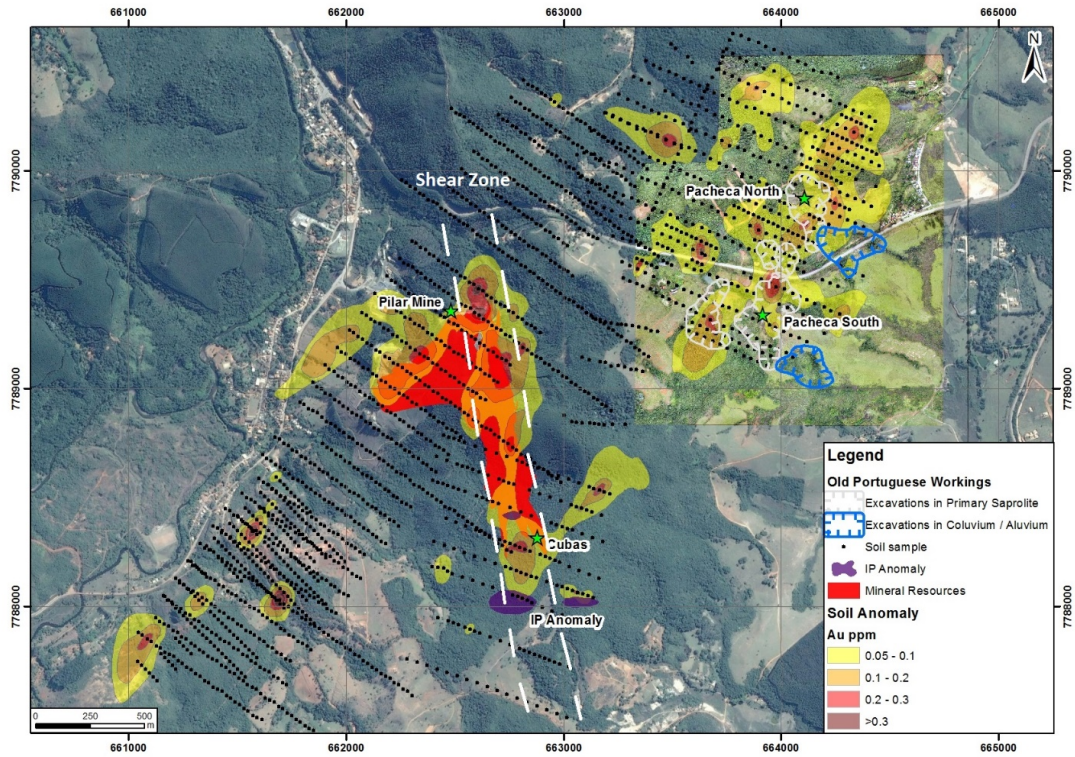


Figure 4 – Underground drilling of BF and BFII Orebodies, Pilar Gold Mine

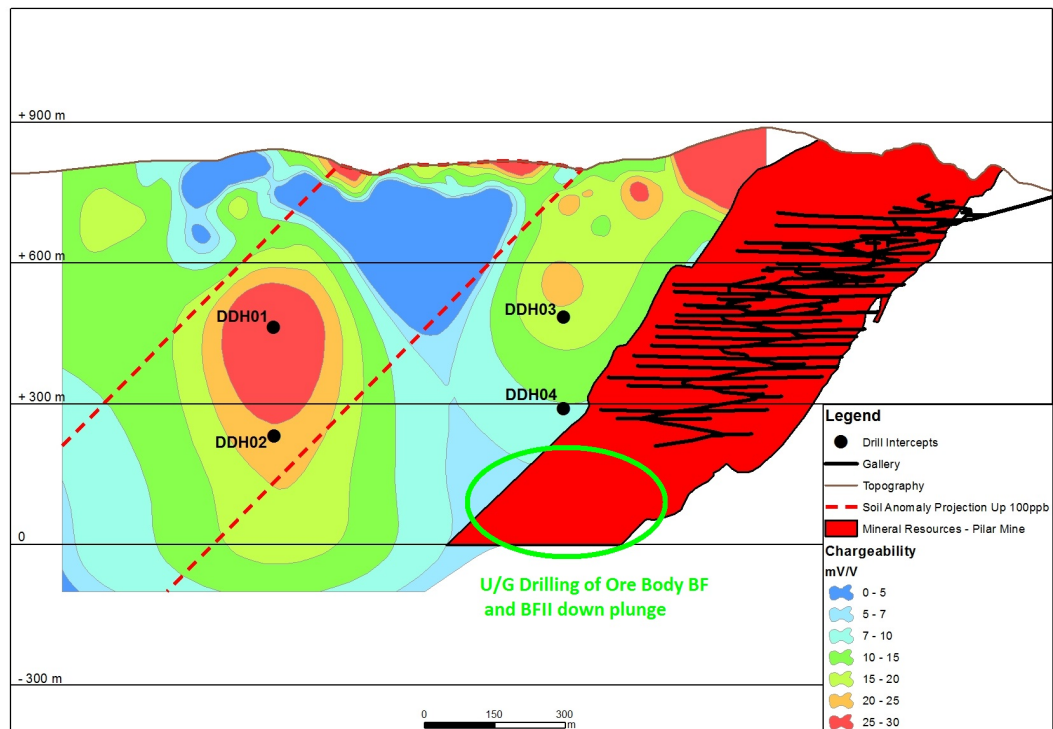


Figure 5 – Cubas, Pilar Deep Drilling Targets

