



PRESS RELEASE

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Concord, New Hampshire

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JAG – TSX/NYSE

Jaguar Mining Provides Q1 2011 Update of Operations *Q1 Earnings Conference Call Details Included*

Jaguar Mining Inc. (“Jaguar” or “the Company”) (JAG: TSX/NYSE) provides a summary of its preliminary Q1 2011 operating performance as compared to Q4 2010. As a result of the operational improvement program initiated in 2010, significant progress has been achieved at all operations. All figures are in U.S. dollars unless otherwise indicated.

Consolidated Operations

- In Q1 2011, the Company produced 41,449 ounces of gold at a cash operating cost of \$727 per ounce as compared to 34,682 ounces at a cash operating cost of \$762 per ounce in Q4 2010, a 20% production increase and 5% cash operating cost decrease.
- Notwithstanding the impact of a stronger Brazilian real in Q1 2011, which added \$15 per ounce, the cash operating cost was reduced by \$35 per ounce.
- Removing the effect of gold-in-process and stockpile inventory changes from Q4 2010, the underlying operating cash cost was \$663 per ounce.
- Q1 2011 average feed grade increased 10% to 3.42 grams per tonne (“g/t”) as compared to 3.09 g/t in Q4 2010.
- Q1 2011 gold sales increased 17% to 39,794 ounces at an average price of \$1,386 as compared to 34,134 ounces at an average price of \$1,306 per ounce in Q4 2010.
- The Q1 2011 cash operating margin increased 24% to \$659 per ounce, exceeding the Company’s expectation.
- Underground mine development for Q1 2011 increased by 20% to a total of 5.9 km as compared to 4.9 km in Q4 2010.
- As of March 31, 2011, the Company had cash and cash equivalents of \$136 million.

Mr. Daniel R. Titcomb, Jaguar’s President and CEO stated: “Our Q1 production results reflect our operating team’s significant effort and priority to improve processes and operations. The ongoing program we initiated in 2010 to accelerate development at all of our mines is providing increased operating flexibility. Based on the substantial progress made thus far, we are confident our 2011 targets will be met.”

Turmalina Operations

- In Q1 2011, Turmalina produced 15,855 ounces of gold at a cash operating cost of \$755 per ounce as compared to 10,275 ounces at a cash operating cost of \$899 per ounce in Q4 2010, a 54% increase in ounces produced and a reduction of 16% in costs.
- Removing the effect of gold-in-process inventory changes from Q4 2010, the underlying operating cash cost was \$ 639 per ounce.
- Ore processed in Q1 2011 totaled 136,153 tonnes at an average feed grade of 4.02 g/t as compared to 142,765 tonnes of ore at an average feed grade of 2.89 g/t in Q4 2010, an increase of 39% as a result of improved mine grades and better dilution control.
- Plant recovery averaged 90% in Q1 2011 as compared to 88% in Q4 2010.
- Mine development totaled 2.1 km in Q1 2011 as compared to 1.7 km during Q4 2010, an increase of 12%.

Paciência Operations

- In Q1 2011, Paciência produced 12,114 ounces of gold at a cash operating cost of \$555 per ounce as compared to 13,808 ounces at a cash operating cost of \$628 per ounce in Q4 2010.
- Q1 2011 cash operating costs were reduced by 13% from Q4 2010, as a result of the previously announced decision to haul Pilar Mine ROM to the Caeté mill.
- Ore processed in Q1 2011 totaled 118,222 tonnes at an average feed grade of 3.51 g/t as compared to 135,455 tonnes at an average feed grade of 3.57 g/t in Q4 2010.
- Plant recovery averaged 93% in Q1 2011 as compared to 94% in Q4 2010.
- Mine development totaled 2.05 km in Q1 2011 as compared to 1.5 km in Q4 2010, a 37% increase.

Caeté Operations Ramp-up

- In Q1 2011, Caeté produced 13,480 ounces of gold at a cash operating cost of \$850 per ounce as compared to 10,595 ounces at a cash operating cost of \$804 per ounce in Q4 2010, a 27% increase in ounces produced.
- Q1 2011 average cash operating costs were affected during the current ramp-up stage, by processing of the remaining Roça Grande pre-operating low-grade development ore stockpile and by the stronger Brazilian real.
- Removing the effect of stockpile inventory changes, the underlying operating cash cost was \$775 per ounce.
- Ore processed in Q1 2011 totaled 166,163 tonnes at an average feed grade of 2.86 g/t as compared to 156,344 tonnes at an average feed grade of 2.84 g/t in Q4 2010.

- Plant recovery averaged 88% during Q1 2011 and Q4 2010.
- Mine development totaled 1.8 km in Q1 2011 as compared to 1.6 km in Q4 2010, an increase of 13%.

Q1 2011 Earnings Conference Call Details

The Company plans to release its Q1 2011 financial and operating results after the market close on May 17, 2011. The Company will hold a conference call the following morning, May 18, 2011 at 9:00 AM EDT to discuss the results. Management will reference a presentation during the conference call, which will be posted on the Company's web site after the Q1 2011 earnings press release is issued on May 17, 2011.

Conference Call Details:

From North America: 800-476-0592
International: 213-416-2192

Replay:
From North America: 800-675-9924
International: 213-416-2185
Replay ID: 51811
Webcast: www.jaguarmining.com

About Jaguar Mining

Jaguar is a junior gold producer in Brazil with operations in a prolific greenstone belt in the state of Minas Gerais. Jaguar is also developing the Gurupi Project in northern Brazil in the state of Maranhão. Based on its development plans, Jaguar is one of the fastest growing gold producers in Brazil. The Company is actively exploring and developing additional mineral resources at its 256,300-hectare land base. Additional information is available on the Company's website at www.jaguarmining.com.

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Forward Looking Statements

This press release contains forward-looking statements, within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws, concerning the Company's objectives, such as achieving the Company's 2011 gold production target. These forward-looking statements can be identified by the use of the words "intends", "plans", "expects", "expected" and "will". Forward-looking statements involve known and unknown risks, uncertainties and other factors, which may cause the actual results, or performance to be materially different from any future results or performance expressed or implied by the forward-looking statements.

These factors include the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drilling results and other geological data, fluctuating gold prices and monetary exchange rates, the possibility of project cost delays and overruns or unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future, uncertainties related to production rates, timing of production and the cash and total costs of production, changes in applicable laws including laws related to mining

development, environmental protection, and the protection of the health and safety of mine workers, the availability of labor and equipment, the possibility of labor strikes and work stoppages and changes in general economic conditions. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

These forward-looking statements represent our views as of the date of discussion. The Company anticipates that subsequent events and developments may cause the Company's views to change. The Company does not undertake to update any forward-looking statements, either written or oral, that may be made from time to time by or on behalf of the Company subsequent to the date of this discussion except as required by law. For a discussion of important factors affecting the Company, including fluctuations in the price of gold and exchange rates, uncertainty in the calculation of mineral resources, competition, uncertainty concerning geological conditions and governmental regulations and assumptions underlying the Company's forward-looking statements, see the "CAUTIONARY NOTE" regarding forward-looking statements and "RISK FACTORS" in the Company's Annual Information Form for the year ended December 31, 2010 filed on System for Electronic Document Analysis and Retrieval and available at <http://www.sedar.com> and the Company's Annual Report on Form 40-F for the year ended December 31, 2010 filed with the United States Securities and Exchange Commission and available at www.sec.gov.

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