



PRESS RELEASE

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JAG – TSX/NYSE

Jaguar Mining Provides Q4 2009 Update of Operations

Underground Operations Met 2009 Plan, + 53% Growth Over 2008;
Establishes 2010 Production Guidance of 200,000 – 217,000 oz, 29-40% Above 2009

Jaguar Mining Inc. (“Jaguar” or “the Company”) (JAG: TSX/NYSE, JAG.NT: TSX) provided a summary today of its preliminary Q4 2009 operating performance. All figures are in U.S. dollars unless otherwise indicated. See recent operating highlights below.

Consolidated Operations (Turmalina, Paciência and Sabará)

- In Q4 2009, the Company produced 39,890 ounces of gold at an average cash operating cost of \$539 per ounce compared to 37,916 ounces at an average cash operating cost of \$396 per ounce during the same period last year, a production increase of 5%. A sharp rise in the Brazilian real vs. the US dollar accounted for over one-half of the increase in average cash operating costs over average cash operating costs reported in Q4 2008, while lower grades at Turmalina accounted for the balance. Q4 2009 production was below expectations and cash operating costs were above management’s expectations for the quarter due primarily to lower than anticipated grades at the Turmalina operation (see below).
- For the fiscal year ended December 31, 2009, Jaguar produced 155,102 ounces of gold at an average cash operating cost of \$468 per ounce compared to 115,348 ounces at an average cash operating cost of \$429 per ounce for 2008, a production increase of 34%.
- Jaguar’s initial 2009 gold production plan, established in late-2008, targeted 2009 gold production of between 165,000 to 175,000 ounces, which included 20,000 ounces for the Sabará operation. However, in 2009 the Sabará operation was idled for eight months and only produced 6,460 ounces compared to 18,199 ounces produced in 2008. This resulted in a shortfall of overall production as compared to the Company’s production plan. Excluding the Sabará (heap leach) operation, Jaguar’s 2009 gold production from its sulfide operations (Turmalina and Paciência) totaled 148,642 ounces, well within the range expected by management for these two operations, and represented an increase of 53% as compared to 97,149 ounces in 2008.
- Excluding the 1,408 ounces of gold produced at Sabará in Q3 2009 (July only), the Company’s Q4 2009 gold output was 288 ounces below Q3 2009 production, or by 0.7%. A discussion of Q4 2009 production for each operation is presented below.
- After completing a review of the Sabará operation in early-January, management intends to classify its Sabará facility as a Discontinued Operation in 2010 and record a charge to Q4 2009 earnings of approximately \$3.4 million. The Company is considering its alternatives with respect to Sabará, which could include, among other things, seeking a buyer for the operation along with the oxide mineral concessions that can supply that processing facility.

- Q4 2009 gold sales rose to 35,944 ounces at an average price of \$1,099 per ounce compared to Q4 2008 gold sales of 35,138 ounces at an average price of \$793 per ounce. The Company had additional in-process inventory of approximately 5,500 ounces at the end of December, which will move into sales in Q1 2010.
- Underground mine development at Jaguar's operations in the Iron Quadrangle during Q4 2009 reached an all-time high of 4.5 km in a quarter, bringing year-to-date development to 14.9 km, 24% above planned, and total in-place development to nearly 45 km. This amount of development will strengthen the Company's ability to convert resources into reserves on-schedule, as well as provide at least 18 months of advanced mine access.

Turmalina Operations

In Q4 2009, Turmalina produced 21,184 ounces of gold at an average cash operating cost of \$523 per ounce compared to 19,987 ounces at an average cash operating cost of \$330 per ounce in Q4 2008. The stronger Brazilian real against the US dollar, as well as lower feed grades into the mill, accounted for the increase in costs. Management has implemented a program to prevent the cause of lower feed grades.

For FY 2009, Turmalina produced 82,070 ounces of gold at an average cash operating cost of \$424 per ounce compared to 72,785 ounces at an average cash operating cost of \$364 per ounce in FY 2008.

The following was achieved at Turmalina during Q4 2009:

- Mine production totaled 179,783 tonnes of ore at an average run-of-mine ("ROM") grade of 4.34 grams per tonne compared to 126,777 tonnes of ore at an average ROM grade of 6.01 grams per tonne in Q4 2008. Grades and tonnage into the mill were impacted by significantly above normal rainfall. The mine plan sequencing included surface mining at a high-grade oxide zone at the D ore body, which was shut down during much of Q4 2009. The overall production plan for Q4 2009 called for a sizeable contribution from the oxides at the D ore body, which is blended with sulfide ore from the underground operations. To maintain tonnage into the mill, lower grade development ore held in the stockpile was used to offset the loss of the high-grade D ore body. This situation gave rise to the lower ROM grades into the mill, lower gold output than planned and the higher cash operating costs posted in Q4 2009.
- Ore processed through the mill totaled 178,609 tonnes at an average feed grade of 3.93 grams per tonne compared to 128,438 tonnes at an average feed grade of 5.93 grams per tonne in Q4 2008 and 153,324 tonnes at an average grade of 5.27 grams per tonne in Q3 2009. The higher mill throughput is attributed to the recently completed mill expansion at Turmalina where operations are slightly exceeding the design capacity.

For FY 2009, ore processed through the mill totaled 587,949 tonnes at an average feed grade of 4.81 grams per tonne compared to 480,814 tonnes at an average feed grade of 5.46 grams per tonne.

- The plant recovery rate averaged 89% in Q4 and for FY 2009, up slightly from 88% in FY 2008.
- Mine development totaled 1.29 km in Q4 and 5.0 km for FY 2009.

- Management believes that installed underground development within the Turmalina mine is adequate to achieve the mine plan for a period of 18 months.

Paciência Operations

In Q4 2009, Paciência produced 18,707 ounces of gold at an average cash operating cost of \$556 per ounce compared to 13,423 ounces at an average cash operating cost of \$413 per ounce during Q4 2008. The stronger Brazilian real (R\$1.74 per \$1.0 in Q4 2009 vs. R\$2.28 per \$1.0 in Q4 2008) accounted for two-thirds of the increase in average cash operating costs in Q4 2009 from the prior year.

For FY 2009, Paciência produced 66,671 ounces of gold at an average cash operating cost of \$502 per ounce compared to gold production of 24,364 ounces at an average cash operating cost of \$443 per ounce in FY 2008, the inaugural year for operations at Paciência.

The following was achieved at Paciência during Q4 2009:

- Consolidated ore production totaled 188,021 tonnes at an average ROM grade of 3.70 grams per tonne compared to 114,785 tonnes at an average ROM grade 3.29 grams per tonne in Q4 2008.
- Ore processed through the mill totaled 178,479 tonnes with an average feed grade of 3.41 grams per tonne compared to 146,666 tonnes with an average feed grade of 3.43 grams per tonne in Q4 2008. For FY 2009, ore into the mill at Paciência totaled 645,556 tonnes at an average feed grade of 3.42 grams per tonne.
- The plant recovery rate averaged 93% in Q4 2009, ahead of plan, and FY 2009 compared to 92% in Q4 2008 and FY 2008.
- Mine development in Q4 2009 totaled 2.5 km and 8.7 km for FY 2009.

Sabará Operations

The Company continued to leave the Sabará operation idle during Q4 2009 given the heavy rainfall and supply sources of oxide ore available for leaching. No ore was produced or shipped to the plant during Q4 2009.

Jaguar intends to classify the non-core Sabará facility as a Discontinued Operation in 2010, which will result in a charge against earnings of approximately \$3.4 million in Q4 2009. Management continues to assess the alternatives with respect to the Sabará facility. These alternatives include seeking a buyer for the equipment or relocating the leaching plant to a new site which has considerable oxide resources.

Caeté Project

Construction of Jaguar's new Caeté Project is on-schedule for completion in April 2010. Photos of the construction progress will be presented at the Company's Analyst Meeting, which is being held today, January 19th in Toronto. Additional information concerning this event is detailed below.

Cash Position

As of December 31, 2009, the Company held cash and cash equivalents of approximately \$121.3 million, approximately 60% of which was held in accounts in Brazil.

2010 Outlook

The Company's actual production and average cash operating costs for 2009 and estimated for 2010 are as follows:

	<i>Actual</i>	<i>Actual</i>	<i>Estimated</i>	<i>Estimated</i>
Operation	2009 Production (oz)	2009 Cash Operating Costs (\$/oz)	FY 2010 Production (oz)	FY 2010 Cash Operating Costs (\$/oz)
Turmalina	82,070	\$424	95,000 – 101,000	\$480 – 490
Paciência	66,671	\$502	75,000 – 81,000	\$495 – 510
Caeté	-	-	30,000 – 35,000	\$500 – 510
Total	148,742	\$459	200,000 – 217,000	\$489 – 500
Sabará*	6,360	\$680	-	
Total	155,102	\$468	200,000 – 217,000	

*Facility will be classified as Discontinued Operation in 2010.

*Note: Estimated 2010 cash operating costs based on R\$1.75 per \$1.00.
The 2009 exchange rate was R\$2.04 per \$1.00.*

Analyst Meeting – January 19, 2010, 9:30 AM EST, Intercontinental Hotel, Toronto, Canada

The Company is holding an Analyst Meeting at the Intercontinental Hotel in Toronto, Canada beginning at 9:30 EST today. The meeting will last approximately two and one-half hours and will be web cast for interested parties wishing to listen and learn more about the Company's operations. Jaguar's management team will present a review of operations and forward operating plans, geological opportunities and drill targets, an overview of the recently acquired Gurupi property in Northern Brazil along with details from the forthcoming feasibility study for that project, which is being finalized by AMEC plc, as well as financial information concerning the Company's ability to fund its plans to become a growing mid-tier gold producer.

The link for the web cast, along with copies of all materials being presented at the meeting, can be found on the Company's home web page at www.jaguarmining.com.

In addition, the Company has provided an update of its corporate presentation, which can also be found on the home web page of the Company's website.

Q4 2009 Earnings Release and Conference Call

The Company plans to release its Q4 2009 financial and operating results after the market close on March 22, 2010. The Company will hold a conference call the following morning, March 23 at 10:00 a.m. ET, to discuss the results. Details for the conference call will be released approximately two weeks prior to that event.

About Jaguar

Jaguar is one of the fastest growing gold producers in Brazil with operations in a prolific greenstone belt in the state of Minas Gerais and has plans to develop the Gurupi Project in northern Brazil in the state of Maranhão. Jaguar is actively exploring and developing additional mineral resources at its approximate 575,000-acre land base in Brazil. The Company has no gold hedges in place thereby providing the leverage to gold prices directly to its investors. 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 estimated 2010 gold production and cash operating costs, management's intention to classify Sabará as a Discontinued Operation in 2010 and begin commissioning of the Caeté Project in April 2010. 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, 2008 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, 2008 filed with the United States Securities and Exchange Commission and available at www.sec.gov.

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