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For Immediate Release **TSX-V: JAG**

PRESS RELEASE

Jaguar Reports First Quarter Financial Results, Company Positioning for Strong Production and Growth; Increased Operating Cash Flow, Cash Operating Costs of $742 and AISC of $1,061 in Q1 2016

Toronto, Canada, May 10, 2016 - Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX-V: JAG) today announced operational and financial results for the first quarter ("Q1 2016") ended March 31, 2016. The Company's Financial Statements and Management Discussion & Analysis are available on SEDAR and on the Company's website at www.jaguarmining.com. All figures are in US dollars unless otherwise expressed.

Q1 2016 Highlights

- Consolidated gold production of 21,197 ounces based on a 15% increase in average head grade to 3.78 g/t and 90.2% recovery compared to 21,336 ounces, average head grade of 3.28 g/t, and 89.4% recovery in Q1 2015.
- Turmalina gold production increased 34% to 15,772 ounces with higher milled tonnes and a 19% increase in average grade to 4.29 g/t, compared to Q1 2015.
- To position for sustainable production and growth, the Company increased investment in mine development in Q1 2016; primary development increased 65% to 1,161 metres and secondary ore development for stoping preparation across all mine sites increased 242% to 1,046 metres compared to Q1 2015 primary and secondary development of 705 metres and 306 metres respectively.
- 11% decrease in consolidated cash operating costs ("COC") to $742 per ounce of gold sold, compared to $831 per ounce of gold sold during Q1 2015, on track to meet 2016 guidance of $700 - $750.
- 8% decrease in consolidated all-in sustaining costs ("AISC") to $1,061 per ounce of gold sold, compared to $1,150 during Q1 2015.
- Increased operating cash flow (excluding tax refunds) of $8.6 million compared to $6.1 million in Q1 2015.
- Cash and cash equivalents of $18.0 million at March 31, 2016 compared to $15.3 million as at December 31, 2015.
- Completed 11,892 metres of definition, infill, and exploration drilling in Q1 2016, up 33% over 8,968 metres in Q1 2015. Consolidated Mineral Reserves increased 34% to 357,000 ounces with a 9% increase in grade to 4.82 g/t Au across Southern Brazil operating mines. M&I Mineral Resources remain strong at 1.1 million ounces grading 4.45 g/t Au.
- Pilar Mine Mineral Reserves increased 310% to 172,000 ounces of gold, after depletion, exceeding reserve replacement targets.

2016 Key Growth Drivers

- Completing 2016 capital investment program to increase number of available working areas through increased development and exploration to grow sustainable production across all operating mines. Capital investments funded through operating cash flow during first half of 2016 with capital spending set to reduce in Q3 and Q4 2016.
- Growing mine production, increasing throughput and reducing cash operating costs towards lower end of 2016 cost guidance.
- Commencing mine-wide Operational Excellence Program ("OEP") at Turmalina Gold Mine to identify and eliminate waste, lower costs, and improve productivity to create and deliver results, which will drive future growth.

Rodney Lamond, President and Chief Executive Officer of Jaguar commented, *"We are very pleased with the efforts of our employees and support groups to deliver a solid quarter with strong production. In particular, a 34% increase in gold production at Turmalina offset lower gold production at Caeté as the operations, both the Pilar and RG mines, restructured their mine plans. We ended the quarter with an increased cash balance of $18.0 million compared to 2015 year-end, which reflected a 65% increase in primary development and a 33% increase in definition drilling; a $1.9 million interest payment on the convertible debentures, and one-time severance payments compared to the prior year. Looking ahead, we are on track to achieve our 2016 gold production guidance of 90,000 – 95,000 ounces, while also focusing on positioning our Company to achieve increased sustainable production growth. A key driver to achieving this growth is* *completing our capital investment program in 2016, funded through operating cash flow, which includes increased development and exploration across all mine sites."*

Q1 2016 Financial & Operating Highlights

($ thousands, except where indicated)	For the three months ended March 31,	
	2016	2015
Financial Data		
Revenue	**$26,664**	$28,747
Cost of sales	**25,281**	26,537
Depreciation (included in cost of sales)	**7,702**	6,404
Gross margin	**1,383**	2,210
Gross margin (excluding depreciation)[1]	**9,085**	8,614
Net loss	**(15,001)**	(12,946)
Per share ("EPS")	**(0.13)**	(0.12)
EBITDA[1]	**(5,860)**	(1,510)
Adjusted EBITDA[1,2]	**5,216**	7,056
Cash operating costs (per ounce sold)[1]	**742**	831
All-in sustaining costs (per ounce sold)[1]	**1,061**	1,150
Average realized gold price ($ per ounce)[1]	**1,165**	1,187
Cash generated from operating activities	**9,526**	12,177
Sustaining capital expenditures[1,3]	**5,013**	4,789
Non-sustaining capital expenditures[1,3]	**382**	592
Total capital expenditures[3]	**5,395**	5,381
Operating Data		
Gold produced (ounces)	**21,197**	21,336
Gold sold (ounces)	**22,881**	24,228
Primary development (metres)	**1,161**	705
Secondary development (metres)	**1,046**	306
Definition, infill, and exploration drilling (metres)	**11,892**	1,737

[1] Average realized gold price, sustaining and non-sustaining capital expenditures, cash operating costs and all-in sustaining costs, EBITDA and adjusted EBITDA and gross margin (excluding depreciation) are non-IFRS financial performance measures with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A.

[2] Adjusted EBITDA excludes non-cash items such as impairment and write downs. For more details refer to the Non-IFRS Performance Measures section of the MD&A.

[3] These amounts are presented on accrual basis. Capital expenditures are included in our calculation of all-in sustaining costs.

Cash and Gold Bullion

($ thousands)	**March 31, 2016**	December 31, 2015
Cash and cash equivalents	**$18,016**	$15,319
Gold bullion	**-**	-
Total cash and gold bullion	**$18,016**	$15,319

First Quarter 2016 Financial Highlights

Revenue, Net Income (Loss), and External Factors

- Gold ounces sold for Q1 2016 were 22,881 ounces compared with 24,228 ounces sold for Q1 2015.
- Revenue during Q1 2016 decreased to $26.7 million, compared with $28.7 million in Q1 2015, due to a 2% decrease year-over-year in the average realized gold price to $1,165 in Q1 2016 compared with $1,187 in Q1 2015 and a 6% decrease in ounces sold.
- Net income (loss) was impacted negatively due to the change in the fair value of the convertible debentures ($20.8 million) based on the significant increase in the share price from December 31, 2015 to March 31, 2016, which was partially offset by a reversal in the litigation provision amounting to $10.2 million due to change in the estimate. Adjusted EBITDA (excluding non-cash items) for Q1 2016 was $5.2 million compared to $7.1 million for Q1 2015.
- The average Brazilian Real and Canadian dollar, versus the US dollar during the quarter was approximately R$3.90 and C$1.37 per US dollar, respectively.

Cash Operating Costs, Capital Expenditures, and All-In-Sustaining Costs

- COC decreased 11% to $742 per ounce of gold sold in Q1 2016, compared to $831 per ounce during Q1 2015.
- AISC decreased 8% to $1,061 per ounce of gold sold in Q1 2016, compared to $1,150 per ounce sold during Q1 2015.
- In Q1 2016, sustaining capital expenditures totaled $5.0 million and focused on increasing primary development and exploration drilling at Pilar and RG compared to $4.8 million in Q1 2015.
- Operating cash flow (excluding cash tax refunds) was $8.6 million for Q1 2016, compared to $6.1 million in Q1 2015.
- Free cash flow was $3.2 million for Q1 2016 based on operating cash flow (excluding cash tax refunds) less total capital expenditures, compared to $0.7 million in Q1 2015.

Cash Position, Working Capital, Operational Excellence, and Tax Refunds

- As at March 31, 2016, the Company had a cash position of $18.0 million, an increase of $2.7 million over cash of $15.3 million as at December 31, 2015.
- Working capital declined to a working capital deficiency of $1.0 million as at March 31, 2016 compared to working capital of $2.0 million as at December 31, 2015, reflecting a quarter over quarter increase of 65% in primary development, a 33% increase in definition drilling, and $1.9 million in interest payments on the convertible debentures and one-time severance payments.
- The Company continues to review and implement cost control measures across the operations and corporate offices to improve operating cash flow and enhance the Company's working capital position.
- After a diagnostic review during Q1 2016, the Company entered into a commercial agreement in April 2016 with the Aquila Group to launch a mine-wide Operational Excellence Program at Turmalina. The program will identify and eliminate waste, lower costs, and improve productivities with the end goal of creating and delivering results in order to establish sustainable growth.
- The Company received a total of $1.0 million of cash tax refunds in respect of its Federal VAT input tax credits for years 2009 through 2011, for its operating Brazilian subsidiaries during Q1 2016 (Q1 2015 – $6.1 million).

Operational Highlights

Strong Gold Production, Recovery, and Primary Development

- Consolidated gold production of 21,197 ounces in Q1 2016 compared to 21,336 ounces in Q1 2015.
- Gold recovery increased to 90.2% in Q1 2016 compared to 89.4% in Q1 2015.
- Turmalina produced 15,772 ounces of gold in Q1 2016, up 34%, with average grade of 4.29 g/t, up 19% compared to Q1 2015.
- The Company completed 1,161 metres of primary waste development during Q1 2016, an increase of 65% over 705 metres in Q1 2016.

Improving Consolidated Grades

- Consolidated average head grade increased 15% to 3.78 g/t in Q1 2016 versus 3.28 g/t in Q1 2015.
- Total processing was 196,000 tonnes in Q1 2016 (Q1 2015 – 226,000 tonnes) at an average head grade of 3.78 g/t (Q1 2015 – 3.28 g/t).
    - In Q1 2016, Turmalina processed 128,000 tonnes (Q1 2015 – 111,000 tonnes) at an average head grade of 4.29 g/t (Q1 2015 – 3.59 g/t).
    - Caeté processed 68,000 tonnes in Q1 2016 (Q1 2015 – 115,000 tonnes) at an average head grade of 2.83 g/t (Q1 2015 – 3.16 g/t).

Positive Drill Results at Pilar and Turmalina Gold Mines; 310% Increase in Pilar Reserves

- Consolidated Mineral Reserves, representing Southern Brazil operating mines, increased 34% to 357,000 ounces with a 9% increase in grade to 4.82 g/t Au.
- Pilar Mineral Reserves increased 310% to 172,000 ounces of gold after depletion, while also exceeding reserve replacement targets, as a result of the increased gold presence encountered on the BF and BFII Ore Bodies which comprise 91% of Pilar's underground Mineral Reserves.
- Consolidated M&I Mineral Resources for the Southern Brazil operating mines remain strong at 1.1 million ounces grading 4.45 g/t Au.
- The Company completed 11,892 metres of definition, infill, and exploration drilling during Q1 2016, an increase of 33% over 8,968 metres in Q1 2015.

Outlook for 2016

Jaguar remains strongly focused on delivering positive and sustainable physical performance, profitability, and cost optimization. The Company has established the following consolidated production and cost guidance for 2016 which represents achievable results from operations:

2016 Guidance

	Turmalina Complex		Caeté Complex		Consolidated	
Operations	**Low**	**High**	**Low**	**High**	**Low**	**High**
Gold production (ounces)	62,000	65,000	28,000	30,000	90,000	95,000
Cash operating costs (per ounce sold)[1]	$600	$650	$925	$975	$700	$750
All-in sustaining costs (per ounce sold)[1]	$850	$900	$1,150	$1,200	$950	$1,000
Recovery (%)	90	90	90	90	90	90
Development						
Primary (metres)	3,000	3,300	1,700	1,900	4,700	5,200
Secondary (metres)	3,200	3,400	2,500	2,700	5,700	6,100
Definition, infill, and exploration drilling (metres)	18,000	20,000	10,000	12,000	28,000	32,000

1. Cash operating costs and All-in sustaining costs are non-GAAP financial performance measures with no standard definition under IFRS. Refer to Non-IFRS Financial Performance Measures below. 2016 cost guidance has been prepared on the basis of a foreign exchange rate of 3.8 Brazilian Reais vs. the US dollar and a gold price of US$1,150 per ounce.

Qualified Person

Scientific and technical information contained in this press release has been reviewed and verified by Marcos Dias Alvim, BSc Geo., MAusIMM (CP), Project Development Manager, who is an employee of Jaguar Mining Inc., and is a "qualified person" as such term is defined by National Instrument 43-101 ("NI 43-101").

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 approximate 191,000 hectares. The Company's principal operating assets are located in 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.

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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. This news release contains forward-looking information regarding expected production, grades, tones milled, recovery rates, cash operating costs, and definition/delineation drilling, in addition to overall expenditures and results of operations during 2016. The Company has made numerous assumptions with respect to forward-looking information contained herein, including, among other things, assumptions about the estimated timeline for the development of its mineral properties; the supply and demand for, and the level and volatility of the price of, gold; the accuracy of reserve and resource estimates and the assumptions on which the reserve and resource estimates are based; the receipt of necessary permits; market competition; 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 risk of Jaguar not meeting the forecast plans regarding its operations and financial performance, 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.

Neither the TSX Venture Exchange nor its Regulations Services Provider (as that term is defined in policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

Non-IFRS Measures

This press release provides certain financial measures that do not have a standardized meaning prescribed by IFRS. Readers are cautioned to review the above stated footnotes where the Company expanded on its use of non-IFRS measures.

1. Cash operating costs and cash operating cost per ounce are non-IFRS measures. In the gold mining industry, cash operating costs and cash operating costs per ounce are common performance measures but do not have any standardized meaning. Cash operating costs are derived from amounts included in the Consolidated Statements of Comprehensive Income (Loss) and include mine-site operating costs such as mining, processing and administration as well as royalty expenses, but exclude depreciation, depletion, share-based payment expenses, and reclamation costs. Cash operating costs per ounce are based on ounces produced and are calculated by dividing cash operating costs by commercial gold ounces produced; US$ cash operating costs per ounce produced are derived from the cash operating costs per ounce produced translated using the average Brazilian Central Bank R$/US$ exchange rate. The Company discloses cash operating costs and cash operating costs per ounce as it believes those measures provide valuable assistance to investors and analysts in evaluating the Company's operational performance and ability to generate cash flow. The most directly comparable measure prepared in accordance with IFRS is total production costs. A reconciliation of cash operating costs per ounce to total production costs for the most recent reporting period, the quarter ended March 31, 2016 is set out in the Company's first quarter 2016 MD&A filed on SEDAR at www.sedar.com.
2. All-in sustaining cost is a non-IFRS measure. This measure is intended to assist readers in evaluating the total costs of producing gold from current operations. While there is no standardized meaning across the industry for this measure, except for non-cash items the Company's definition conforms to the all-in sustaining cost definition as set out by the World Gold Council in its guidance note dated June 27, 2013. The Company defines all-in sustaining cost as the sum of production costs, sustaining capital (capital required to maintain current operations at existing levels), corporate general and administrative expenses, and in-mine exploration expenses. All-in sustaining cost excludes growth capital, reclamation cost accretion related to current operations, interest and other financing costs, and taxes. A reconciliation of all-in sustaining cost to total production costs for the most recent reporting period, the quarter ended March 31, 2016 is set out in the Company's first quarter 2016 MD&A filed on SEDAR at www.sedar.com.