JAGUAR MINING INC.

NEWS RELEASE

March 21, 2017 **2017 – 04**
FOR IMMEDIATE RELEASE **TSX:JAG**

Jaguar Mining Reports Strong Full-Year and Fourth Quarter 2016 Results; Generated $38 Million in Operating Cash Flow and Turned Free Cash Flow Positive

Toronto, Canada, March 21, 2017 - Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX: JAG) today announced financial and operating results for the fourth quarter ("Q4 2016") and full-year ended December 31, 2016 ("FY 2016"). All dollar amounts are in thousands of U.S. dollars unless otherwise stated.

FY 2016 Consolidated Highlights

- Operating cash flow up 56% to $37.8 million as compared to FY 2015. Free cash flow turned positive year-over-year to $11.3 million.
- 2016 gold production of 96,608 ounces exceeded 2016 guidance. Delivered record gold recovery of 91%, higher grade of 3.74 g/t, and higher throughput levels.
- Increasing consolidated 2017 gold production guidance between 100,000 – 110,000 ounces.
- Substantial increase in capital investments with $25.4 million of sustaining capital in FY 2016 to transform operations, support a growing production profile, and expand mine life. Primary development increased 44% to 5,462 metres while secondary development more than doubled to 4,751 metres compared to FY 2015.
- Capital expenditures up 58% to $29.8 million, of which 85% was invested in sustaining capital, financed 100% through operating cash flow demonstrating the sustaining capability of the operations.
- Improved cash operating costs ("COC") to $719 per ounce sold, from $755 in FY 2015. Despite the strengthening of the Brazilian Real and restart of development at Pilar, the Company achieved the lower end of 2016 COC guidance range of $700 – $750 per ounce sold.
- All-in sustaining costs ("AISC") of $1,099 per ounce sold, reflects a 47% increase in sustaining capital spend.
- Working capital improved to $8.9 million as at December 31, 2016, up from $2.0 million at December 31, 2015. Working capital reflects a substantial increase in cash invested in primary and secondary development, up 44% and 113% respectively, and includes $10.3 million in loans from Brazilian banks which are renewed every six months and are all classified as short-term.

Q4 2016 Consolidated Highlights

- Strengthened the balance sheet with the full conversion of $21.5 million of the Senior Secured Convertible Debentures.
- Operating cash flow up 25% to $8.5 million after paying approximately $2.9 million in recoverable taxes.
- Consolidated gold production of 25,407 ounces, up 10% from 23,169 in Q4/15. Gold sales up 3% to 25,110 ounces.
- COC of $735 per ounce sold, up 16% from $631 in Q4 2015, primarily due to an appreciating Brazilian Real compared to the US dollar, and the restart of secondary development at Pilar, now positioned to commence stoping phase.
- AISC of $1,098 per ounce sold, up 11%, from $991 in Q4 2015, reflecting higher sustaining capital spending across all three mines to accelerate primary development, exploration drilling, and equipment investments including the rebuild of the paste-fill plant and recommissioning of Mill #3 at Turmalina.
- Established a $10.0 million secured loan facility with Sprott Private Resource Lending (Collector) LP ("Sprott Lending") to fund $8.0 million in accelerated growth exploration commenced in 2017 at all operating mines.
- Entered into an arrangement with Avanco Resources Limited to develop and acquire up to 100% of the Gurupi Project through an Earn-In Agreement and NSR Royalty; while retaining exposure to full exploration upside of the property.

Rodney Lamond, President and Chief Executive Officer of Jaguar, commented, *"2016 was a successful and transformational year for Jaguar Mining. We exceeded 2016 production guidance and improved cash operating costs to $719 per ounce sold, despite operating under a strengthening Brazilian foreign currency. Operating cash flow increased 56% to $37.8 million while free cash flow turned positive with $11.3 million generated during 2016. Capital investment across all operating mines significantly increased and the projects undertaken in 2016 were fully funded through operating cash flow. During the fourth quarter, Jaguar completed the conversion of all senior secured debentures to common shares which strengthened the balance sheet and our capital structure. Our ability to access capital enabled us to negotiate a $10.0 million secured loan facility with Sprott Lending. Up to $8.0 million of the facility will be used to fund an accelerated growth exploration program in 2017. Additionally, we entered into an arrangement with Avanco Resources Limited to advance the development of Gurupi while retaining Jaguar's exposure to the significant upside potential of the property."*

"In 2017, we expect our gold production to increase to between 100,000 – 110,000 ounces. We are also focused on delivering lower unit costs through the formalization of company-wide expense controls, leveraging technology, and efficiency and productivity improvements from operational excellence programs at both Turmalina and Pilar. Consolidated cash operating costs are expected to be between $720 - $755 per ounce sold and AISC of $900 - $1,000 per ounce sold."

Mr. Lamond concluded: "Sustaining exploration drilling programs completed during 2016 were designed to grow and replace the mining depletion of mineral reserves at our core mining assets and to extend mine life. For 2017, we are confident that our growth exploration drilling programs will provide additional resource growth opportunities. Our team is reviewing and *evaluating efforts to achieve the Company's strategic goal to increase production by 50% by adding back capacity from the Paciência mining complex. This asset was previously placed on care and maintenance in 2012. At our core assets, we are maintaining the increased pace of mine development and accelerated exploration programs to continue to build confidence in current geological models and mine plans. This focus will enable us to achieve our 2017 production guidance with an expected increase in production during the second half of 2017. We are confident and motivated on executing our five-year strategy of increasing the sustainable gold production profile to approximately 200,000 ounces per year."*

Full details of the results are provided in the Company's Management's Discussion & Analysis, available on the Company's website at www.jaguarmining.com and on SEDAR at www.sedar.com.

FY 2016 and Q4 2016 Key Financial Statement Highlights

- Revenue for Q4 2016 increased 13% to $30.3 million, compared with $26.8 million in Q4 2015, due to a 10% year-over-year increase in the average realized gold price to $1,205 in Q4 2016 compared with $1,098 in Q4 2015, and a 3% increase in ounces sold. Revenue for FY 2016 also increased 13% to $120.5 million from $106.5 million in FY 2015.
- Net loss for the year ended December 31, 2016 was mainly a result of the change in the fair value of the convertible debentures (non-cash loss of $78.0 million) based on the significant increase in Jaguar's share price from December 31, 2015 to the respective conversion dates of the debentures, which was partially offset by a decrease in the Company's labour litigation provision amounting to $6.6 million primarily due to a change in the estimate in the first quarter of 2016.
- Adjusted EBITDA for Q4 2016 was $6.3 million compared to $7.4 million for Q4 2015, while adjusted EBITDA for the year ended December 31, 2016 was $36.6 million compared to $21.4 million in FY 2015.
- Operating cash flow (excluding cash tax refunds) was $8.5 million for Q4 2016, compared to $6.5 million in Q4 2015. For FY 2016, operating cash flow (excluding cash tax refunds) was $36.8 million compared to $16.6 million for FY 2015.
- Free cash flow was $2.3 million for Q4 2016 and $11.3 million for FY 2016 based on operating cash flow (excluding cash tax refunds) less total capital expenditures, compared to $0.9 million and negative $1.6 million in Q4 2015 and FY 2015, respectively. Free cash flow per ounce sold was $117 in FY 2016 compared to negative $7 in FY 2015.

Outlook

The following is the Company's production and cost guidance for 2017:

	Turmalina Complex		Caeté Complex		Consolidated	
	Low	**High**	**Low**	**High**	**Low**	**High**
Gold production (ounces)	60,000	65,000	40,000	45,000	100,000	110,000
Cash operating costs (per ounce sold)[1]	$600	$650	$ 900	$1,000	$720	$755
All-in sustaining costs (per ounce sold)[1]	$800	$850	$1,020	$1,180	$900	$1,000
Development						
Primary (m)	2,500	2,900	2,200	2,600	4,700	5,500
Secondary (m)	2,200	2,700	3,400	3,850	5,600	6,550
Definition, infill, and exploration drilling (m)	16,000	18,000	10,000	13,000	26,000	31,000
Growth exploration investment (core assets) ($Ms)					$7.5	$8.0

[1] Cash operating costs and all-in sustaining costs are non-gaap financial performance measures with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A. 2017 cost guidance has been prepared on the basis of a foreign exchange ratio of 3.5 Brazilian Reias vs. the US dollar.

2017 Key Growth Drivers

- Completing 2017 capital investment program to increase the number of available working areas through increased development and exploration to grow sustainable production across all operating mines.
- $8.0 million to be spent on major growth exploration program including Turmalina and Pilar, as well as the high priority Pacheca and Cubas targets near Pilar and other advanced targets. Approximately $6.0 million will be allocated towards Jaguar's core assets, Turmalina and Pilar, to drive increased mine life. The remaining $2.0 million will be distributed towards other growth targets.
- This growth exploration program is primarily focused on increasing identified mineral resources at core assets and the discovery of new resources near existing infrastructure across operating mines. The growth exploration program is expected to complete approximately 31,000 metres of diamond drilling, including approximately 15,000 metres of drilling down-plunge continuities of Orebodies A and C at Turmalina and Orebodies BFII and BF at Pilar. Lastly, approximately 8,500 metres of surface diamond drilling will test the Pacheca and Cubas targets and other advanced targets.
- Growing mine production, increasing throughput, and reducing cash operating costs guidance.
- Commencing mine-wide Operational Excellence Program ("OEP") at Pilar to identify and eliminate waste, lower costs, and improve productivity to create and deliver results, which will drive future growth. Continuing OEP at Turmalina.
- Implementation of formalized capital allocation and value driven decision making.

Consolidated 2016 Financial Highlights

($ thousands, except where indicated)	For the three months ended December 31,		For the twelve months ended December 31,	
	2016	2015	**2016**	2015
Financial Data				
Revenue	**$30,261**	$26,820	**$120,539**	$106,513
Operating costs	**19,355**	13,933	**71,012**	67,327
Depreciation	**10,153**	3,628	**35,752**	16,519
Gross profit	**753**	9,259	**13,775**	22,667
Gross profit (excluding depreciation)[1]	**10,906**	12,887	**49,527**	39,186
Loss on change in fair value of notes payable	**361**	4,821	**77,977**	4,818
Net (loss) income	**(9,280)**	1,670	**(82,795)**	(11,212)
Per share ("EPS")	**(0.03)**	0.02	**(0.50)**	(0.10)
EBITDA[1]	**3,037**	(2,873)	**(38,761)**	9,189
Adjusted EBITDA[1,2]	**6,348**	7,431	**36,648**	21,438
Adjusted EBITDA per share[1]	**0.02**	0.07	**0.22**	0.19
Cash operating costs (per ounce sold)[1]	**735**	631	**719**	755
All-in sustaining costs (per ounce sold)[1]	**1,098**	991	**1,099**	1,079
Average realized gold price (per ounce)[1]	**1,205**	1,098	**1,239**	1,145
Cash generated from operating activities	**8,467**	6,786	**37,781**	24,249
Free cash flow[1]	**2,292**	899	**11,346**	(661)
Free cash flow (per ounce sold)[1]	**91**	37	**117**	(7)
Sustaining capital expenditures[1]	**6,172**	5,598	**25,419**	17,243
Non-sustaining capital expenditures[1]	**1,648**	334	**4,429**	1,618
Total capital expenditures	**7,820**	5,932	**29,848**	18,861

[1] Average realized gold price, sustaining and non-sustaining capital expenditures, cash operating costs and all-in sustaining costs, free cash flow, EBITDA and Adjusted EBITDA, Adjusted EBITDA per share, and gross profit (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.

	For the three months ended December 31,		For the twelve months ended December 31,	
	2016	2015	**2016**	2015
Operating Data				
Gold produced (ounces)	**25,407**	23,169	**96,608**	90,421
Gold sold (ounces)	**25,110**	24,416	**97,277**	92,988
Primary development (metres)	**1,091**	987	**5,462**	3,796
Secondary development (metres)	**1,205**	742	**4,751**	2,232
Definition, infill, and exploration drilling (metres)	**9,914**	6,760	**37,860**	36,240

Foreign Currency

Jaguar has been impacted from the strengthening in the Brazilian Real exchange rate relative to the US dollar, which has had the effect of increasing cash costs in US dollar terms.

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The average exchange rate during Q4 2016 was R$3.30 per US dollar compared to R$3.84 per US dollar in Q4 2015. The closing exchange rate as at December 31, 2016 was R$3.26 per US dollar compared to R$3.90 per US dollar as at December 31, 2015, representing a 16% appreciation of the Brazilian Real relative to the US dollar during 2016.

Convertible Debentures

On October 5, 2016, the Company issued a notice of redemption to holders of the outstanding debentures. As set out in the notice of redemption, the outstanding debentures were to be redeemed as of November 8, 2016 (the "Redemption Date") upon payment of 120% of the principal amount and all accrued and unpaid interest to but excluding the Redemption Date.

During Q3 and Q4 2016, all the convertible debentures holders elected to voluntarily convert their debentures into common shares of the Company. The Company has significantly strengthened its balance sheet with the elimination of its senior secured debt.

Liquidity and Use of Funds

Cash balance as at December 31, 2016 was $26.3 million compared to a cash balance of $15.3 million as at December 31, 2015, while investing in capital activities and maintaining a stable working capital position. During the fourth quarter, the Company entered into an agreement with Sprott Private Resource Lending (Collector) LP for a $10.0 million secured loan facility to fund the Company's accelerated growth exploration program.

Capital investments during 2016 were 100% funded through operating cash flows. In addition to the increase in capital expenditures, Jaguar also paid $1.9 million in other debt principal and interest payments during the year.

Working capital was $8.9 million as at December 31, 2016 compared to $2.0 million as at December 31, 2015, including increased capital spending including annual increases of 44% in primary development and 113% in secondary development.

2016 Actual Performance Compared with 2016 Guidance

The Company exceeded 2016 annual production guidance based on consolidated production of 96,609 ounces. The Company also achieved the lower end of consolidated cash operating cost guidance of $700 to $750 per ounce sold, with cash operating costs of $719 per ounce sold for FY 2016. Consolidated AISC of $1,099 per ounce sold was higher than 2016 guidance due to increased sustaining capital expenditures of $25.4 million for 2016, which represented a 47% increase over FY 2015.

	Turmalina Complex		Caeté Complex		Consolidated		
	Low	High	Low	High	Low	High	FY Actual
Gold production (ounces)	62,000	65,000	28,000	30,000	90,000	95,000	**96,609**
Cash operating costs (per oz sold)[1]	$600	$650	$925	$975	$700	$750	**$719**
All-in sustaining costs (per oz sold)[1]	$850	$900	$1,150	$1,200	$950	$1,000	**$1,099**
Recovery	90%	90%	90%	90%	90%	90%	**91%**
Development							
Primary (m)	3,000	3,300	1,700	1,900	4,700	5,200	**5,462**
Secondary (m)	3,200	3,400	2,500	2,700	5,700	6,100	**4,751**
Definition, infill, & exploration drilling (m)	18,000	20,000	10,000	12,000	28,000	32,000	**37,860**

[1] Cash operating costs and all-in sustaining costs are non-gaap financial performance measures with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A.

Corporate Update

- On February 8, 2017, the Company announced multiple high-grade drill intercepts generated from 36 infill drill holes (5,393 metres) designed to test the currently reported mineral resource envelope of Orebodies A and C at Turmalina. Significant drill intercepts for Orebody A include 11.33 g/t Au over 17.1 metres (estimated true width ("ETW") – 14.6 metres), 9.95 g/t Au over 14.2 metres (ETW – 10.8 metres), and 6.08 g/t Au over 20.3 metres (ETW – 10.4 metres). Significant drill intercepts for Orebody C include 6.39 g/t Au over 6.1 metres (ETW – 6.0 metres), 9.27 g/t Au over 3.8 metres (ETW – 3.6 metres), and 7.04 g/t Au over 2.8 metres (ETW – 2.7 metres).
- The Company completed 9,914 metres of definition, infill, and exploration drilling during Q4 2016 (Q4 2015 – 6,760 metres) focused on key targets at Turmalina and Caeté, for a total of 37,860 metres of drilling in FY 2016, a 4% increase over 36,240 metres in FY 2015.
- On October 4, 2016, the Company announced that it has entered into an earn-in agreement with Avanco Resources Limited ("Avanco"), pursuant to which Avanco may earn up to a 100% interest in the Gurupi Project.

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 95,000 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.

Qualified Person

Scientific and technical information contained in this press release has been reviewed and approved by Geraldo Guimarães Vieira dos Santos, BSc Geo., MAIG-3946 (CP), Geology Manager, who is an employee of Jaguar Mining Inc., and is a "qualified person" as defined by National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101").

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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 statements and information are provided for the purpose of providing information about management's expectations and plans relating to the future. All of the forward-looking information made in this news release are qualified by the cautionary statements below and those made in our other filings with the securities regulators in Canada. 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. All statements, other than statements of historical fact, may be considered to be or include forward looking information. This news release contains forward-looking information regarding, among other things, expected sales, production statistics, ore grades, tonnes milled, recovery rates, cash operating costs, definition/delineation drilling, the timing and amount of estimated future production, costs of production, capital expenditures, costs and timing of the development of projects and new deposits, success of exploration, development and mining activities, currency fluctuations, capital requirements, project studies, mine life extensions, restarting suspended or disrupted operations, continuous improvement initiatives, and resolution of pending litigation. 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; political and legal developments in any jurisdiction in which the Company operates being consistent with its current expectations including, without limitation, the impact of any potential power rationing, tailings facility regulation, exploration and mine operating licenses and permits being obtained an renewed and/or there being adverse amendments to mining or other laws in Brazil and any changes to 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; uncertainties with respect to the price of gold, labor disruptions, mechanical failures, increase in costs, environmental compliance and change in environmental legislation and regulation, weather delays and increased costs or production delays due to natural disasters, power disruptions, procurement and delivery of parts and supplies to the operations; uncertainties inherent to capital markets in general (including the sometimes volatile valuation of securities and an uncertain ability to raise new capital) 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. In addition, there are risks and hazards associated with the business of gold exploration, development, mining and production, including environmental hazards, tailings dam failures, industrial accidents and workplace safety problems, unusual or unexpected geological formations, pressures, cave-ins, flooding, chemical spills, and gold bullion thefts and losses (and the risk of inadequate insurance, or the inability to obtain insurance, to cover these risks). 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.*

Non-IFRS Measures

This news 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 costs per ounce sold 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 sold and are calculated by dividing cash operating costs by commercial gold ounces sold. 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 December 31, 2016 is set out in the Company's fourth quarter 2016 MD&A filed on SEDAR at www.sedar.com.*

2. *All-in sustaining costs per ounce 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 costs 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 costs 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 December 31, 2016 is set out in the Company's fourth quarter 2016 MD&A filed on SEDAR at www.sedar.com.*