



## NEWS RELEASE

March 1, 2019  
FOR IMMEDIATE RELEASE

TSX: JAG

### **Jaguar Mining Increases Reserves 81%; Large Growing Base of Higher Grade Reserves, Near Surface at Turmalina, To Drive Gold Production Growth and Extend Mine Life**

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**Toronto, Canada, March 1, 2019 – Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX: JAG)** is pleased to report Mineral Resources and Mineral Reserves estimates as at December 31, 2018 for its Pilar Gold Mine ("Pilar") and Turmalina Gold Mine ("Turmalina"), each prepared in accordance with CIM definitions (2014) as required by National Instrument 43-101 ("NI 43-101"). Mineral Resources and Mineral Reserves updates are supported by NI 43-101 Technical reports that will be filed on SEDAR within 45 days.

#### **Year End 2018 Consolidated Jaguar Mineral Reserves Highlights**

- Consolidated Pilar and Turmalina Mines Proven and Probable (2P) Reserves increased 81% year-over-year (net of 2018 depletion) to 439,000 oz's of gold at a weighted average grade of 4.39 g/t Au (Table 1)
- Turmalina Proven and Probable tonnes increased by 74% and grade increased by 12% to 1408 tonnes at 5.05 g/t containing 228,000 oz's of gold
- Pilar Proven and Probable Reserve tonnes increased by 83% and grade decreased by 8% to 1784 tonnes at 3.68 g/t containing 211,000 oz's of gold
- Consolidated Proven Reserves increased 123% to 245,000 oz's of gold at a weighted average grade of 4.01 g/t Au
- Consolidated Probable Reserves increased 47% to 194,000 oz's of gold at a weighted average grade of 5.00 g/t Au
- At both Pilar and Turmalina now have 4 years of Proven and Probable Reserves at current mining rates and over 3 years at target production rates

*Ben Guenther, Interim CEO of Jaguar Mining stated: "We achieved solid growth in our 2018 year-end Proven and Probable gold ounces that increased by 81% to a large base of 439,000 ounces compared to 2017, in addition to depletion. We are especially pleased that results have delivered a meaningful increase in both Proven and Probable tonnes and grade at Turmalina. Turmalina Orebody A and Orebody C both have significant life at favorable grades of 5.47 and 4.73 g/t respectively. Both Turmalina and Pilar have over 4 years of Proven and Probable Reserves at current mining rates and over 3 years at our target production rates. The 2018 focus was on Resource-Reserve Conversion via infill drilling at both operations after significantly increasing our Resource Inventory in 2016-2017 through the growth exploration program."*

*"Looking forward, the increase in Mineral Reserves greatly improves our confidence in the production capability to support a return to a growing gold production profile and the potential to extend the mine life at Turmalina and Pilar."*

**Table 1.** Consolidated Jaguar Mineral Reserves Summary December 31, 2018, compared to December 31, 2017:

<b>Jaguar (Pilar and Turmalina Gold Mines) - Change in Mineral Reserves 2017-2018</b>						
<b>Gold Ounces (000's)</b>				<b>Gold Grade (g/t)</b>		
<b>As at December 31</b>	<b>2018</b>	<b>2017</b>	<b>Change (%)</b>	<b>2018</b>	<b>2017</b>	<b>Change (%)</b>
Proven Reserves	245	110	123%	4.01	4.18	-4%
Probable Reserves	194	132	47%	5.00	4.26	17%
<b>Total 2P</b>	<b>439</b>	<b>242</b>	<b>81%</b>	<b>4.39</b>	<b>4.22</b>	<b>4%</b>

**Year-End 2018 Pilar Gold Mine Mineral Resources and Mineral Reserves Highlights (Refer to Tables 2 – 5 below)**

- Total Pilar Measured Resources increased 37% to 435,000 oz's of gold, net of depletion, grading 4.40 g/t Au
- Total Indicated Resources increased 7% to 231,000 oz's of gold, net of depletion, grading 3.87 g/t Au
- Total Measured and Indicated ("M&I") Resources increased 25% to 666,000 oz's of gold, net of depletion grading 4.20 g/t Au
- Prioritizing resource – reserve conversion in 2018, Inferred Resources decreased 63% to 161,000 oz's of gold grading 3.61 g/t Au
- Total Proven and Probable ("2P") Mineral Reserves of 211,000 oz's of gold, up 69%, grading 3.68 g/t Au
- Significant increase in 2P reserves reflect replacement of 2018 Mineral Reserve depletion through production and addition of new Mineral Reserves via infill drilling and development and confirm more than years of future production at current production levels
- 38,000 oz's of the above 2P Mineral Reserves reflect reserves contained in remnant material located in upper portions of the mine accessible from the existing ramp and level development

**Year- End 2018 Turmalina Gold Mine Mineral Reserves and Resources Highlights (Refer Tables 6 – 9)**

- Total Measured Resources increased 15% to 305,000 oz's of gold, net of depletion, grading 5.37 g/t Au
- Total Indicated Resources increased 75% to 272,000 oz's of gold, net of depletion, grading 5.70 g/t Au
- Total Measured and Indicated ("M&I") Resources increased 37% to 577,000 oz's of gold, grading 5.52 g/t Au
- Prioritizing resource – reserve conversion in 2018, Inferred Resources decreased 51% to 148,000 oz's of gold with a 21% decrease in grade to 4.31g/t Au
- Total Proven Mineral Reserves increased 252% to 102,000 oz's of gold, grading 4.33 g/t Au
- Total Probable Mineral Reserves have increased 43% to 126,000 oz's of gold, grading 5.82 g/t Au

- Total Proven and Probable (“2P”) Mineral Reserves have increased 95% to 228,000 oz’s of gold, grading 5.05 g/t reflecting replacement of 2018 Mineral Reserve depletion through production and addition of new Mineral Reserves via infill drilling
- Orebody C grade and tonnage increases underpin an 81% increase in shallow, high-grade Mineral Reserves to 123,000 oz’s at 4.73 g/t Au which now surpasses the Orebody A 2P Mineral Reserve of 105,000 oz’s at 5.47 g/t Au (refer Table 8)
- 47,000 oz’s of the above 2P Mineral Reserves reflect reserves contained in remnant material located in upper portions of the mine accessible from existing ramp and level development

Jaguar Mining prepared the Mineral Resource and Reserve estimates under the supervision of Reno Pressacco, P.Geol, and Jeff Sepp, P.Eng. of Roscoe Postle Associates Inc. (“RPA”). RPA is an independent mining consultant and Mr. Pressacco and Mr. Sepp are Qualified Persons within the definition of NI 43-101. The effective date of the estimates is December 31, 2018. An independent technical report documenting the Mineral Resource and Mineral Reserves estimates for the Pilar mine, prepared in accordance with NI 43-101, will be filed on SEDAR within 45 days of the date of this press release.

### About Pilar and Turmalina

Pilar is an underground gold mine and is part of the Caeté Gold Complex that also includes the underground Roça Grande gold mine (currently on care and maintenance) and mill operation. The Caeté Complex is located in the municipalities of Caeté and Santa Bárbara, respectively, in the state of Minas Gerais, Brazil, and is approximately 100 km from Belo Horizonte, the capital city of the state of Minas Gerais. Turmalina is an underground gold mine and plant complex, also located in the state of Minas Gerais; approximately 130 km northwest of Belo Horizonte (see Figure 1).

### Pilar Gold Mine Mineral Resource and Mineral Reserve Estimates as at December 31, 2018

(Refer to Tables 2–5 below)

- **Proven & Probable Reserves:** 1,784 million tonnes grading 3.68 g/t Au, containing 211,000 oz. Au
- **Measured & Indicated Resources:** 4,934 million tonnes grading 4.20 g/t Au, containing 666,000 oz. Au
- **Inferred Resources:** 1,385 million tonnes grading 3.61 g/t Au containing 161,000 oz. Au

**Table 2**

Pilar Gold Mine Mineral Reserves Summary December 31, 2018, compared to December 31, 2017:

Pilar Gold Mine - Change in Mineral Reserves						
As at December 31	Gold Ounces (000's)			Gold Grade (g/t)		
	2018	2017	Change (%)	2018	2017	Change (%)
Proven Reserves	143	81	77%	3.79	3.78	0%
Probable Reserves	68	44	55%	3.47	4.45	-22%
<b>Total</b>	<b>211</b>	<b>125</b>	<b>69%</b>	<b>3.68</b>	<b>3.99</b>	<b>-8%</b>

**Table 3**

Pilar Gold Mine Mineral Resources Summary December 31, 2018, compared to December 31, 2017:

<b>Pilar Gold Mine - Change in Mineral Resources</b>						
<b>Gold Ounces (000's)</b>				<b>Gold Grade (g/t)</b>		
<b>As at December 31</b>	<b>2018</b>	<b>2017</b>	<b>Change (%)</b>	<b>2018</b>	<b>2017</b>	<b>Change (%)</b>
Measured Resources	435	317	37%	4.40	4.47	-2%
Indicated Resources	231	216	7%	3.87	4.22	-8%
<b>Total - M&amp;I</b>	<b>666</b>	<b>532</b>	<b>25%</b>	<b>4.20</b>	<b>4.37</b>	<b>-4%</b>
Inferred Resources	161	433	-63%	3.61	5.69	-37%

**Table 4**

Pilar Gold Mine Mineral Reserves Summary as at December 31, 2018, by Orebody:

<b>Pilar Gold Mine - Mineral Reserves, December 31, 2018</b>									
<b>Ore Body</b>	<b>Proven Reserves</b>			<b>Probable Reserves</b>			<b>Proven and Probable Reserves</b>		
	<b>ROM (t)</b>	<b>Au</b>	<b>Oz</b>	<b>ROM (t)</b>	<b>Au</b>	<b>Oz</b>	<b>ROM (t)</b>	<b>Au</b>	<b>Oz</b>
	<b>(000's)</b>	<b>(g/t)</b>	<b>(000's)</b>	<b>(000's)</b>	<b>(g/t)</b>	<b>(000's)</b>	<b>(000's)</b>	<b>(g/t)</b>	<b>(000's)</b>
BA	81	5.16	13	23	2.89	2	104	4.66	15
BF	383	3.72	46	239	3.98	31	622	3.82	77
BFII	633	3.71	75	304	2.97	29	937	3.47	104
TORRE	43	3.72	5	42	4.58	6	85	4.15	11
Others	36	3.05	3	-	-	-	36	3.05	3
<b>Total</b>	<b>1,176</b>	<b>3.79</b>	<b>143</b>	<b>608</b>	<b>3.47</b>	<b>68</b>	<b>1,784</b>	<b>3.68</b>	<b>211</b>

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves
2. Mineral Reserves were estimated at a break-even cut-off grade of 1.90 g/t Au
3. Mineral Reserves are estimated using an average long-term gold price of US \$1,300 per ounce
4. Mineral Reserves are estimated using an average long-term foreign exchange rate of 3.7 Brazilian Reals: 1 US Dollar
5. A minimum mining width of 2 m was used
6. Numbers may not add due to rounding
7. There are no known environmental, permitting, legal, title, socio-economic, political or other risk factors which could materially affect the Mineral Reserve estimates.

**Table 5**

Pilar Gold Mine Mineral Resources Summary at December 31, 2018, by Orebody:

Pilar Gold Mine - Mineral Resources, December 31, 2018												
Ore Body	Measured Resources			Indicated Resources			Total Measured & Indicated Resources			Inferred Resources		
	Tonnes	Au	Oz	Tonnes	Au	Oz	Tonnes	Au	Oz	Tonnes	Au	Oz
	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)
BA	521	4.13	69	82	3.62	9	603	4.03	78	98	3.03	9
BF	815	4.47	117	459	5.24	77	1 274	4.78	194	398	3.29	42
BFII	953	4.96	152	161	3.49	18	1 114	4.77	170	533	4.43	76
BFIII	16	3.97	2	25	3.22	3	41	3.79	5	4	3.71	1
Torre	373	3.99	48	273	3.95	35	646	4.00	83	300	3.02	29
Others	401	3.65	47	855	3.24	89	1256	3.37	136	52	2.39	4
<b>Total</b>	<b>3 079</b>	<b>4.40</b>	<b>435</b>	<b>1 855</b>	<b>3.87</b>	<b>231</b>	<b>4 934</b>	<b>4.20</b>	<b>666</b>	<b>1 385</b>	<b>3.61</b>	<b>161</b>

## Notes:

1. CIM (2014) definitions are followed for Mineral Resources
2. Mineral Resources were estimated at a break-even cut-off grade of 1.8 g/t Au
3. Mineral Resources are estimated using an average long-term gold price of US \$1,500 per ounce
4. Mineral Resources are estimated using an average long-term foreign exchange rate of 3.7 Brazilian Reals: 1 US Dollar
5. A minimum mining width of 2 m was used
6. Gold grades are estimated by the Ordinary Kriging interpolation algorithm using capped composite samples
7. Mineral Resources are inclusive of Mineral Reserves
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
9. Numbers may not add due to rounding
10. There are no known environmental, permitting, legal, title, socio-economic, political or other risk factors which could materially affect the Mineral Resource estimates.

**Pilar Gold Mine Mineral Reserves and Resources**

- Infill Drilling and evaluation of remnant material completed in 2018 successfully replaced depletion. Mineral Reserves are now equivalent to more than three years of production at current and planned production rates resulting in total 2P Mineral Reserves of 211,000 ounces of gold (1,784,000 tonnes at an average grade of 3.68 g/t Au) which are 69% higher compared to 2P Reserves of 125,000 ounces as at December 31, 2017.
- Mineral Reserves at Pilar are based on the main orebodies currently in production centered on Levels 9, 10 and 11 (BA, BF and BFII). Further work is in progress to convert the M&I Resource inventory to 2P Reserves on material from other orebodies and remnant material that are accessible from ramp and access development throughout the mine.

- The database, used to prepare the estimates, with a cut-off date of December 31, 2018, comprises 1,658 drill holes and 20,698 channel samples. The estimate was generated from a block model constrained by three-dimensional (3D) wireframe models. A capping value varying from 10 to 60 g/t Au was applied for all eight orebodies. Wireframe models of the mineralization and excavated material for Pilar were constructed by Jaguar and reviewed by RPA. A separate wireframe was prepared for each orebody and was used to constrain the grade estimates into the block model.
- Mineralized material for each orebody was classified into the Measured, Indicated, or Inferred Mineral Resource categories based on the search ellipse ranges obtained from the variography study, the observed continuity of the mineralization, the drill hole and channel sample density, and previous production experience from these orebodies.
- The Mineral Resources are inclusive of Mineral Reserves. For those portions of the Mineral Resources that comprise the Mineral Reserve, stope design wireframes were used to constrain the Mineral Resource reports. Additional Mineral Resources are present that reside beyond the Mineral Reserves. For these areas, 3D clipping polygons were prepared to aid in the estimation of the Mineral Resources. The clipping polygons were prepared in either plan or longitudinal views, as appropriate. The clipping polygons were drawn to include continuous volumes of blocks whose estimated grades were above the stated cut-off grade, and were not located in mined out areas. The clipping polygons were used to appropriately code the block model and estimate the Mineral Resources.
- For the December 31, 2018, estimates, the Company prepared an updated geological and block model under the supervision of RPA. The Mineral Resources and Mineral Reserves for 2018 will be supported by a NI 43-101 technical report to be filed on SEDAR within 45 days of this press release.

#### Turmalina Gold Mine Mineral Reserves and Resources

(Refer to Tables 6-9 below)

- **Proven & Probable Reserves:** 1,408 million tonnes grading 5.05 g/t Au, containing 228,000 oz. Au
- **Measured & Indicated Resources:** 3,253 million tonnes grading 5.52 g/t Au, containing 577,000 oz. Au
- **Inferred Resources:** 1,066 million tonnes grading 4.31 g/t Au containing 148,000 oz. Au

**Table 6**

Turmalina Gold Mine Mineral Reserves Summary December 31, 2018, compared to December 31, 2017:

Turmalina Gold Mine - Change in Mineral Reserves						
As at December 31	Gold Ounces (000's)			Gold Grade (g/t)		
	2018	2017	Change (%)	2018	2017	Change (%)
Proven Reserves	102	29	252%	4.33	5.90	-27%
Probable Reserves	126	88	43%	5.82	4.18	39%
Total	228	117	95%	5.05	4.50	12%

**Table 7**

Turmalina Gold Mine Mineral Resources Summary December 31, 2018, compared to December 31, 2017:

<b>Turmalina Gold Mine - Change in Mineral Resources</b>						
<b>Gold Ounces (000's)</b>				<b>Gold Grade (g/t)</b>		
<b>As at December 31</b>	<b>2018</b>	<b>2017</b>	<b>Change (%)</b>	<b>2018</b>	<b>2017</b>	<b>Change (%)</b>
Measured Resources	305	265	15%	5.37	5.70	-6%
Indicated Resources	272	155	75%	5.70	3.86	48%
<b>Total - M&amp;I</b>	<b>577</b>	<b>420</b>	<b>37%</b>	<b>5.52</b>	<b>4.86</b>	<b>14%</b>
Inferred Resources	148	305	-51%	4.31	5.49	-21%

**Table 8**

Turmalina Gold Mine Mineral Reserves as at December 31, 2018, by Orebody:

<b>Turmalina Gold Mine - Mineral Reserves, December 31, 2018</b>									
<b>Ore Body</b>	<b>Proven Reserves</b>			<b>Probable Reserves</b>			<b>Proven and Probable Reserves</b>		
	<b>ROM (t)</b>	<b>Au</b>	<b>Oz</b>	<b>ROM (t)</b>	<b>Au</b>	<b>Oz</b>	<b>ROM (t)</b>	<b>Au</b>	<b>Oz</b>
	<b>(000's)</b>	<b>(g/t)</b>	<b>(000's)</b>	<b>(000's)</b>	<b>(g/t)</b>	<b>(000's)</b>	<b>(000's)</b>	<b>(g/t)</b>	<b>(000's)</b>
Ore Body ANW	116	6.40	24	192	6.60	40	308	6.52	64
Ore Body ASE	229	4.64	34	65	3.36	7	294	4.36	41
Ore Body CSE	388	3.53	44	418	5.85	79	806	4.73	123
<b>Total</b>	<b>733</b>	<b>4.33</b>	<b>102</b>	<b>675</b>	<b>5.82</b>	<b>126</b>	<b>1,408</b>	<b>5.05</b>	<b>228</b>

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves
2. Mineral Reserves were estimated at a break-even cut-off grade of 2.5 g/t Au
3. Mineral Reserves are estimated using an average long-term gold price of US \$1,300 per ounce
4. Mineral Reserves are estimated using an average long-term foreign exchange rate of 3.7 Brazilian Reais: 1 US Dollar
5. A minimum mining width of 2 m was used
6. Numbers may not add due to rounding
7. There are no known environmental, permitting, legal, title, socio-economic, political or other risk factors which could materially affect the Mineral Reserve estimates.

**Table 9**

Turmalina Gold Mine Mineral Resources Summary as at December 31, 2018, by Orebody:

Turmalina Gold Mine - Mineral Resources, December 31, 2018												
Area	Measured Resources			Indicated Resources			Total Measured & Indicated Resources			Inferred Resources		
	Tonnes	Au	Oz	Tonnes	Au	Oz	Tonnes	Au	Oz	Tonnes	Au	Oz
	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)
Ore Body A	894	6.86	197	339	7.61	83	1,233	7.06	280	372	4.81	58
Ore Body B	353	3.34	38	192	4.26	26	545	3.65	64	18	6.46	4
Ore Body C	520	4.20	70	955	5.31	163	1,475	4.91	233	676	3.97	86
<b>Total</b>	<b>1,767</b>	<b>5.37</b>	<b>305</b>	<b>1,486</b>	<b>5.70</b>	<b>272</b>	<b>3,253</b>	<b>5.52</b>	<b>577</b>	<b>1,066</b>	<b>4.31</b>	<b>148</b>

## Notes:

1. CIM (2014) definitions are followed for Mineral Resources
2. Mineral Resources were estimated at a break-even cut-off grade of 2.1 g/t Au
3. Mineral Resources are estimated using an average long-term gold price of US \$1,500 per ounce
4. Mineral Resources are estimated using an average long-term foreign exchange rate of 3.7 Brazilian Reais: 1 US Dollar
5. A minimum mining width of 2 m was used
6. Gold grades are estimated by the Ordinary Kriging interpolation algorithm using capped composite samples
7. Mineral Resources are inclusive of Mineral Reserves
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
9. Numbers may not add due to rounding
10. There are no known environmental, permitting, legal, title, socio-economic, political or other risk factors which could materially affect the Mineral Resource estimates.

- Infill Drilling and evaluation of remnant material completed in 2018 successfully replaced depletion. Mineral Reserves are now equivalent to more than three years of production at current and planned production rates resulting in total 2P Mineral Reserves of 228,000 ounces of gold (1,408,000 tonnes at an average grade of 5.05 g/t Au) which are 95% higher compared to 2P Reserves of 117,000 ounces as at December 31, 2017.
- Orebody C grade and tonnage increases underpinned an 81% increase in shallow – high grade Mineral Reserves to 123,000 oz's at 4.73 g/t Au which now surpasses the total Orebody A 2P Mineral Reserve of 105,000 oz's. (refer to Table 8).
- Mineral Resource estimates at December 31, 2018, reflect an updated geological and block model prepared by Jaguar staff under the supervision of RPA. This updated block model incorporates the results from the on-going diamond drilling campaigns completed since late 2017.
- This Mineral Resource includes total Measured and Indicated Resources of 577,000 ounces of gold (3,253 million tonnes at an average grade of 5.52 g/t Au) and Inferred Resources of 148,000 ounces of gold (1,066 million tonnes at an average grade of 4.31 g/t Au).
- Orebody C Mineral Resource grades have increased following new infill drilling intercepts and from development channel sampling completed in 2018, in particular on Levels 3 and 4. (Please refer to Press



Release 27<sup>th</sup> February 2019).

- Increases in Measured and Indicated Resources (and concomitant decrease in Inferred Resources) compared to the previously reported resource inventory is in line with the Company's target of replacing reserves mined in 2018 and establishing a significant increase in M&I Mineral Resources mainly below Level 11 on Orebody A and Level 4 on Orebody C (refer to Figures 6, 7, 8 and 9).
- The database used to prepare the estimates, with a cut-off date of December 31<sup>st</sup> 2018, comprises 3,980 drill holes and 16,246 channel samples. The estimate was generated from a block model constrained by three-dimensional (3D) wireframe models. A capping value of 50 g/t Au was applied for all three orebodies. The wireframe models of the mineralization and excavated material for Turmalina were constructed by Jaguar and reviewed by RPA. A separate wireframe was built for each orebody and was used to constrain the grade estimates into the block model.
- The mineralized material for each orebody was classified into the Measured, Indicated, or Inferred Mineral Resource categories based on the search ellipse ranges obtained from the variography study, the observed continuity of the mineralization, the drill hole and channel sample density, and previous production experience from these orebodies.
- The Mineral Resources are inclusive of Mineral Reserves. For those portions of the Mineral Resources that comprise the Mineral Reserve, stope design wireframes were used to constrain the Mineral Resource reports. Additional Mineral Resources are present that reside beyond the Mineral Reserves. For these areas, 3D clipping polygons were prepared to aid in the estimation of the Mineral Resources. The clipping polygons were prepared in either plan or longitudinal views, as appropriate. The clipping polygons were drawn to include continuous volumes of blocks whose estimated grades were above the stated cut-off grade, and were not located in mined out areas. The clipping polygons were used to appropriately code the block model and estimate the Mineral Resources.

## Qualified Persons

The scientific and technical information contained in this press release has been reviewed and approved (i) in respect of the estimated Mineral Reserves and the Life of Mine Plan (LOM) by Jeff Sepp, P.Eng., of Roscoe Postle Associates Inc. ("RPA"), and (ii) in respect of the estimated Mineral Resources by Reno Pressacco, P.Geo., of RPA. RPA is an independent mining consultant and Mr. Sepp and Mr. Pressacco are each Qualified Persons within the definition of NI 43-101.

## Quality Control

All sampling and samples utilized at Jaguar for mineral resource and or mineral reserves estimation uses a quality-control program that includes insertion of blanks and commercial standards in order to ensure best practice in sampling and analysis.

HQ, NQ, and BQ size drill core is sawn in half with a diamond saw. Samples are selected for analysis in standard intervals according to geological characteristics such as lithology and hydrothermal alteration. Rock channel sampling of the underground development follows the same standard intervals as for the drill core. All diamond drill hole collars are accurately surveyed using a Total Station instrument, and down-hole deviations are surveyed using non-magnetic equipment (SPT Stockholm Precision Tools with GyroMaster™ Solid State North Seeker).

Half of the sawed sample is forwarded to the analytical laboratory for analysis while the remaining half of the core is stored in a secure location. The drill core and rock chip samples for resource-reserve conversion and grade control samples are transported for physical preparation and analysis in securely sealed bags to the Jaguar in-house laboratory located at the company's Caeté Complex, Caeté, Minas Gerais. Growth exploration samples are sent to the independent ALS Brazil (subsidiary of ALS Global) laboratory located in Vespasiano, Minas Gerais, Brazil. The analysis of these exploration samples is conducted at ALS Global's respective facilities (fire assay is

conducted by ALS Global in Lima, Peru, and multi-elementary analysis is conducted by ALS Global in Vancouver, Canada). ALS has accreditation in a global management system that meets all requirements of international standards ISO/IEC 17025:2005 and ISO 9001:2015. All major ALS geochemistry analytical laboratories are accredited to ISO/IEC 17025:2005 for specific analytical procedures.

For a complete description of Jaguar's sample preparation, analytical methods and QA/QC procedures, please refer to "Technical Report on the Roça Grande and Pilar Operations, Minas Gerais State, Brazil", a copy of which is available on the Company's SEDAR profile at [www.sedar.com](http://www.sedar.com).

## **The Iron Quadrangle**

The Iron Quadrangle has been an area of mineral exploration dating back to the 16th century. The discovery in 1699-1701 of 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 Mining is the second largest operating gold company tenement holder in the Iron Quadrangle, holding 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 64,000 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 and Caeté Gold Mine Complex. 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](http://www.jaguarmining.com).

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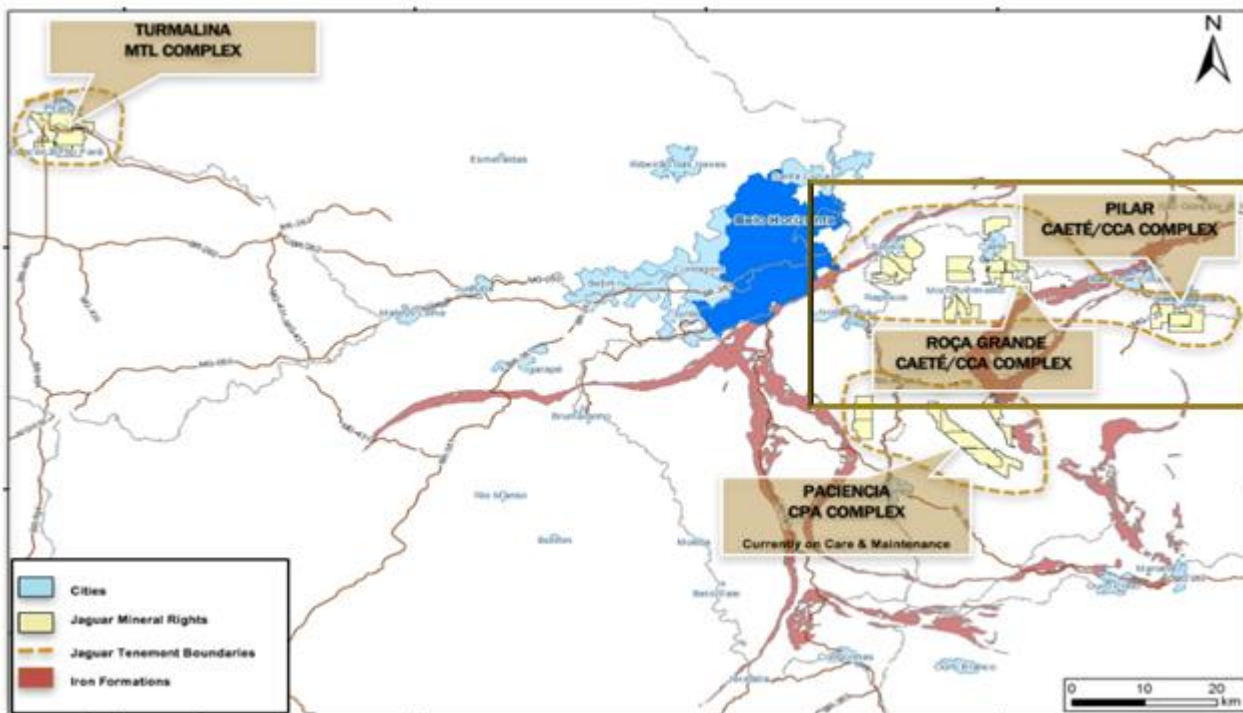
## **Forward-Looking Statements**

*Certain statements in this news release constitute "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking 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 set forth in this news release is 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," "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. These forward-looking statements are made as of the date of this news release and the dates of technical reports, as applicable. This news release contains forward-looking information regarding potential and, among other things, expected future mineral resources, potential mineral production opportunities, geological and mineral exploration statistics, ore grades, current and expected future assay results, and definition/delineation/exploration drilling at the Pilar Gold Mine and the Turmalina Gold Mine in Brazil, as well as forward-looking information regarding costs of production, capital expenditures, costs and timing of the development of projects and new deposits, success of exploration, development and mining activities, capital requirements, project studies, mine life extensions, and continuous improvement initiatives. The Company has made numerous assumptions with respect to forward-looking information contained herein, including, among other*

things, assumptions about the estimated timeline and for the development of the drill program at the Pilar Gold Mine (and its expanded exploration footprint) and the Turmalina Gold Mine; 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 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 and 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 involves a number of known and unknown risks and uncertainties, including among others: the risk of Jaguar not meeting its plans regarding its operations and financial performance; uncertainties with respect to the price of gold, labour 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 without limitation 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). Although we have attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information.

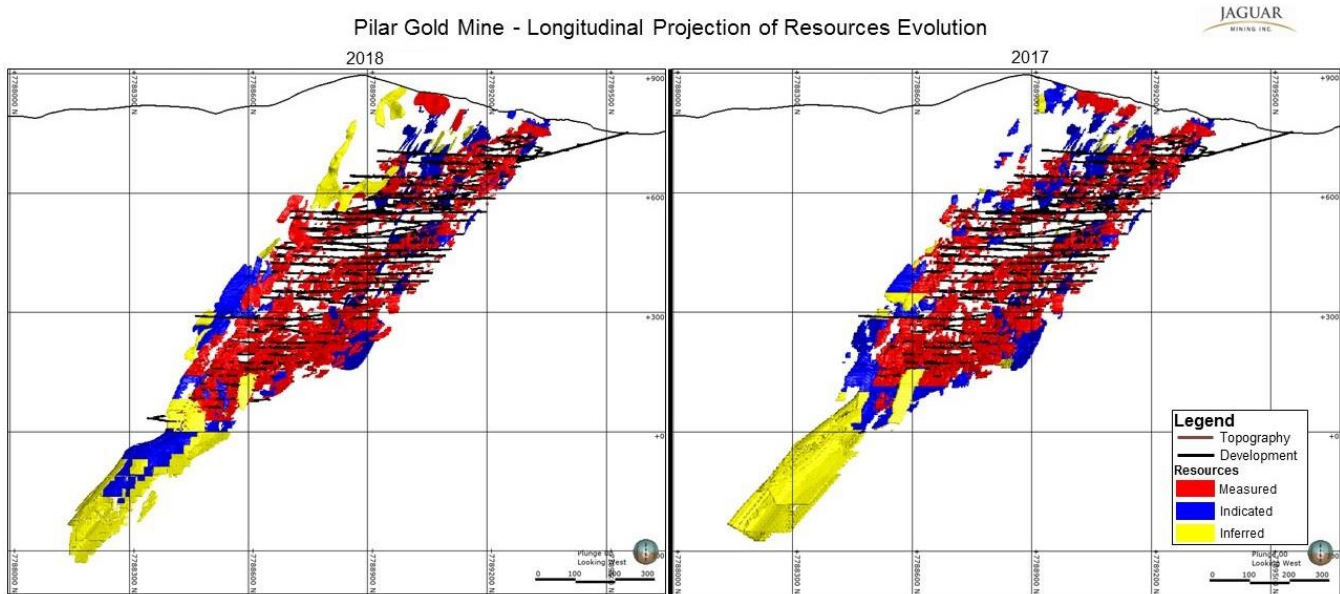
**Figure 1**

Locations of Jaguar’s Mining and Mineral Rights



**Figure 2**

The distribution of Mineral Resources at Pilar Gold Mine as at December 31, 2018, (left) and December 31, 2017, (right) seen from the hanging wall looking west



**Figure 3**

The distribution of Mineral Resources at Turmalina Gold Mine as at December 31, 2018, (left) and December 31, 2017, (right) seen from the hanging wall looking towards the south west.

