

Jaguar Mining Reports Updated Mineral Reserves and Mineral Resources for its MTL Complex Including Faina and Pitangui Projects

TORONTO, ON / ACCESSWIRE / December 18, 2023 / Jaguar Mining Inc. ("Jaguar" or the "Company") (TSX:JAG)(OTCQX:JAGGF) is pleased to announce updated Mineral Reserves and Mineral Resources (MRMR) for its MTL Complex, a group of mineral deposits with the potential to provide feed to the Turmalina processing plant. The MTL Complex mineral deposits includes the Turmalina Mine, the Faina Project, the Pontal deposits, the Zona Basal open pit deposit and the Pitangui Project - São Sebastião Mineral Resource, acquired as part of Jaguar's recent acquisition of IAMGOLD's Brazilian assets (see press release dated August 2, 2023).

Mineral Reserves and Mineral Resources for the MTL Complex are reported net of depletion by the Turmalina Mine as of July 31, 2023.

Please refer to **Figures 1 and 2** for the relative locations of the Mineral Reserves and Mineral Resources reported attributable to the MTL Complex.

An updated NI 43-101 Technical Report for the MTL Complex will be published on SEDAR within 45 days of this press release.

HIGHLIGHTS

- **Consolidated Proven and Probable Mineral Reserves for the MTL Complex** are reported as 324 koz (2,472 kt @ 4.08 g/t Au).
- **Consolidated Measured and Indicated Mineral Resources for the MTL Complex** are reported as 1,155 koz (8,495 kt @ 4.23 g/t Au).
- **Inferred Mineral Resources for MTL Complex** are reported as 881 koz (7,644 kt @ 3.58 g/t Au).
- **Probable Mineral Reserves for the Faina Project** are reported as 132 koz (787 kt @ 5.22 g/t Au).
- **Indicated Mineral Resources for the recently acquired Pitangui Project** added 448 koz, (3,423 kt @ 4.07 g/t Au) to the Company's inventory.
- **Inferred Mineral Resources for the recently acquired Pitangui Project** added 379 koz, (3,343 kt @ 3.53 g/t Au) to the Company's inventory.

Vern Baker, President and CEO of Jaguar stated, "We are pleased to provide this updated MRMR for the MTL Complex which incorporates the work we have completed to access the Faina Mineral Resource area and our recently acquired Pitangui Project - São Sebastião Mineral Resource. We expect this new mineral resource base to provide the foundation for increasing production rates at the MTL Complex with additional long-term potential. By year-end we expect to have completed approximately 1,800 meters of access drift to reach the Faina area. In 2024, we expect to begin developing within the gold-bearing structures as well as continuing infrastructure development, and by the second half of 2024, we expect to start some test stoping.

We are confident in our ability to grow the Faina mineral resource both to depth and along trend towards Pontal.

At our Pitangui Project, work has already begun to continue the permitting process started by IAMGOLD. In this updated MRMR, the São Sebastião Mineral Resource (the basis for the Pitangui Project) is included in our portfolio of Mineral Resources and is being included in our long-term Life-of-Mine planning. We believe underground development could potentially start within two years and with processing capacity available at the Turmalina plant, we are optimistic about the opportunity to develop this new project at low capital costs."

Figure 1. Location of Jaguar's Operations and Exploration Projects in the Iron Quadrangle Area, Minas Gerais, Brasil

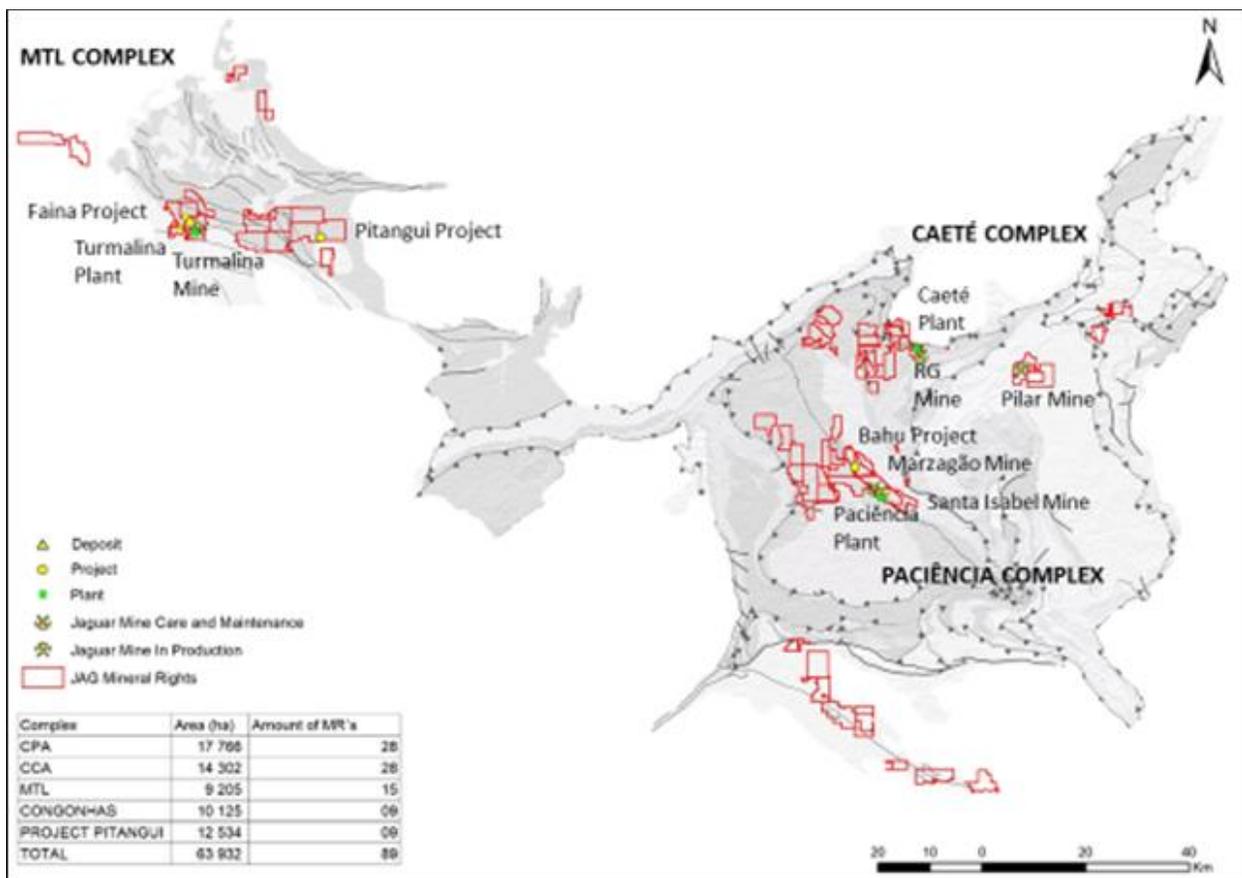


Figure 2. Location of Jaguar's MTL Complex showing the relative location of the Turmalina Mine and Plant, the Faina Project, the Pitangui Project - São Sebastião Mineral Resource, the Pontal Mineral Resource and the Zona Basal Mineral Resource

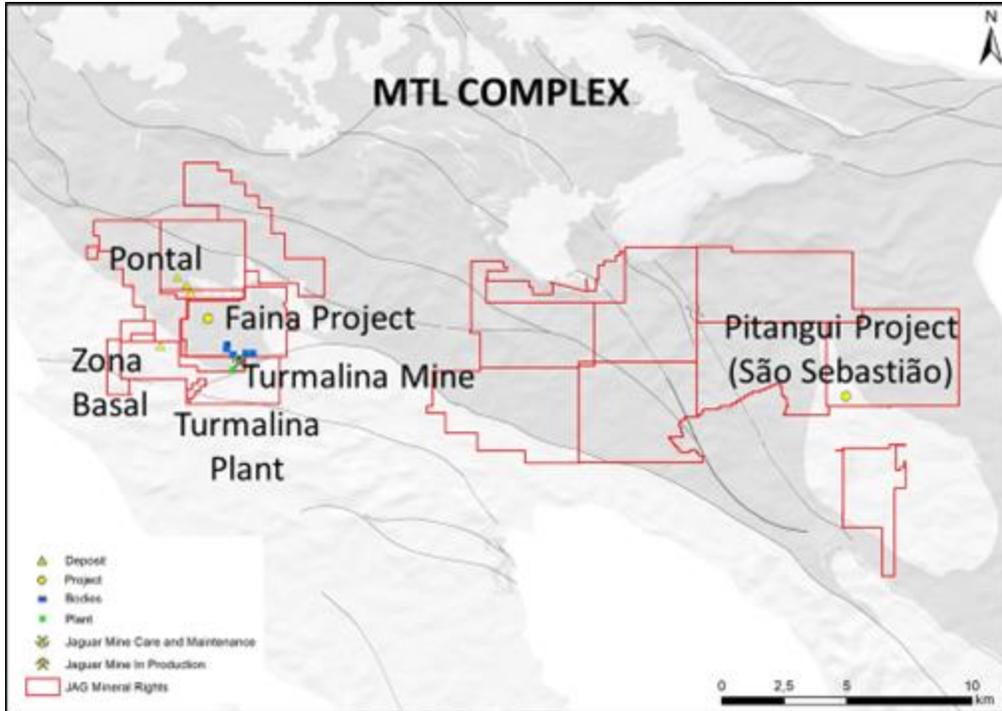
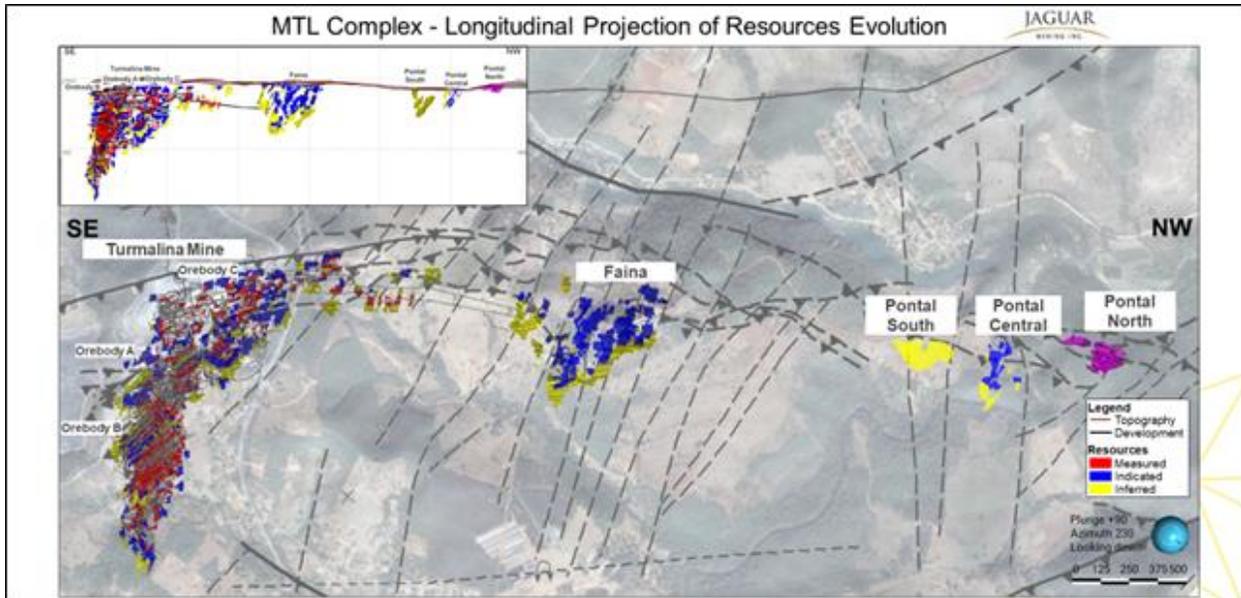


Figure 3. Long section showing the relative location of the Turmalina Mine, the Faina Project, and Pontal Mineral Resource areas



2023 CONSOLIDATED MTL COMPLEX MINERAL RESERVES AND MINERAL RESOURCES

Mineral Resources and Mineral Reserves are reported for the MTL Complex as of July 31, 2023 and are net of mined depletion for the Turmalina Mine, include the first disclosure of Mineral

Reserves, and restated Mineral Resources for the Faina Project, the first disclosure of Mineral Resources for the Pitangui Project - São Sebastião Deposit, updated Mineral Resources for the Pontal Deposits and restated Mineral Resources for the Zona Basal Deposit.

The consolidated Mineral Reserves and Mineral Resources reported for the MTL Complex are supported by a NI 43-101 Technical Report which will be published on SEDAR within 45 days of this press-release.

Mineral Reserves

Consolidated Proven and Probable (2P) Mineral Reserves for the MTL Complex are reported as 324 koz (2,472 kt @ 4.08 g/t Au).

The above Mineral Reserves contain a net addition of 111 koz over the prior disclosure (December 31, 2022) reflecting the addition of 132 koz of Probable Mineral Reserves from the Faina Project offset by mined depletion (to July 31, 2023) of 21 koz from the Turmalina Mine.

As of July 31, 2023, Proven and Probable (2P) Mineral Reserves for the Turmalina Mine are reported as 192 koz, (1,685 kt @ 3.55 g/t Au).

At the Turmalina Mine, 2P Mineral Reserves can be divided between Orebody A (53 koz, 377 kt @ 4.37 g/t Au), Orebody B (34 koz, 321 kt @ 3.34 g/t Au) and Orebody C (105 koz, 988 kt @ 3.30 g/t Au).

Table 1. MTL Complex Consolidated Mineral Reserves as of July 31, 2023

	Proven Reserves			Probable Reserves			Proven & Probable Reserves		
	Tonnes	Grade	Gold oz	Tonnes	Grade	Gold oz	Tonnes	Grade	Gold oz
	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)
MTL Complex									
Ore Body A	299	4.62	44	78	3.38	9	377	4.37	53
Ore Body B	217	3.26	23	104	3.50	12	321	3.34	34
Ore Body C	309	3.32	33	679	3.30	72	988	3.30	105
Sub-Total - Turmalina Mine	824	3.78	100	862	3.33	92	1686	3.55	192
Faina	0	0.00	0	787	5.22	132	787	5.22	132
Total - Underground	824	3.78	100	1648	4.23	224	2472	4.08	324

Notes:

- CIM (2014) definitions are followed for Mineral Reserves.**
- Mineral Reserves reported are in-situ.**
- Mineral Reserves at Turmalina were estimated at a break-even cut-off grade of 2.32 g/t Au. Mineral Reserves at Faina were estimated at a cut-off grade of 4.00 g/t Au.**

4. Mineral Reserves at Turmalina include all drill hole and channel sample data as of September 13, 2022, and are depleted using mining excavations as of July 31, 2023. Mineral Reserves at Faina includes drill hole information as of September 9, 2022. Mineral Resources at the Zona Basal deposit include drill hole information current as of August 25, 2022. Mineral Resources at the São Sebastião deposit include drill hole information current as of July 29, 2019.
5. Mineral Reserves are estimated using an average long-term gold price of \$1,650 per ounce and a US\$/BRL\$ exchange rate of 5.20 at both mines.
6. A minimum mining width of 3.50 m was used at Turmalina and 3.00 m at Faina.
7. Numbers may not add due to rounding.
8. There are no known environmental, permitting, legal, title, socio-economic, political, or other risk factors that could materially affect the Mineral Reserve estimates.

Figure 4. Graph showing consolidated MTL Complex Proven and Probable (2P) Mineral Reserves year-on-year changes from 2015 to 2023

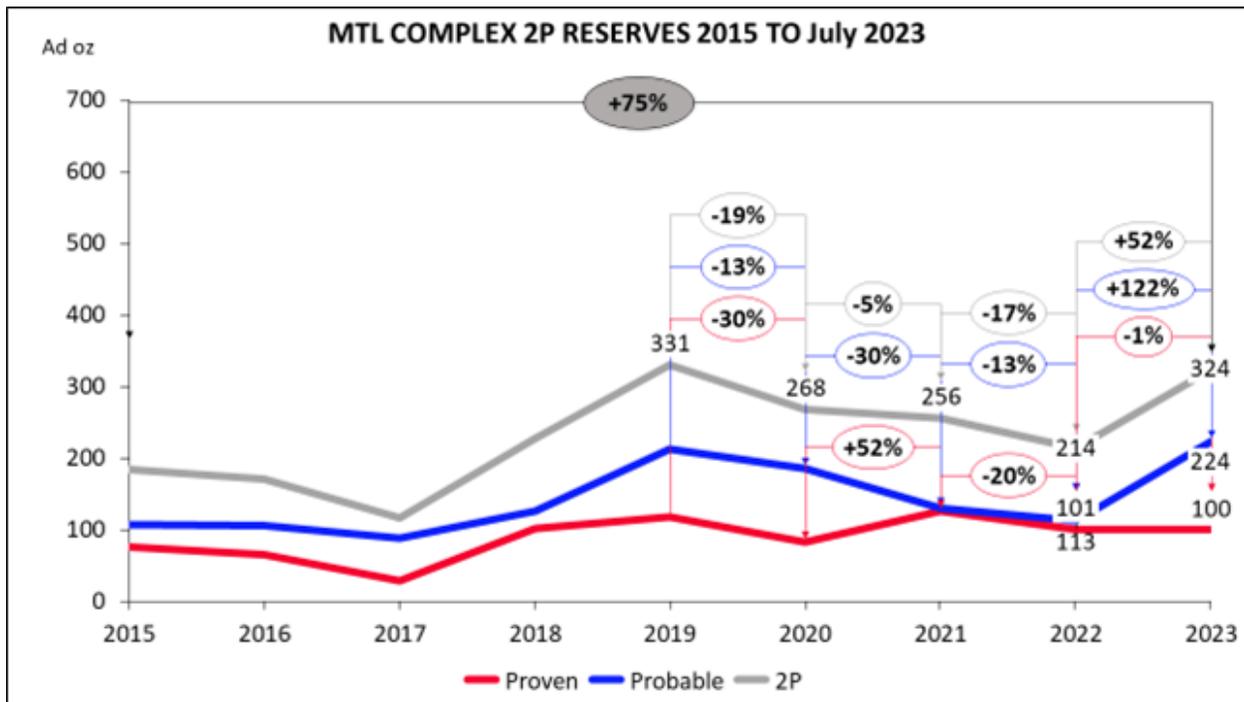


Figure 5. Long Section showing changes in the Turmalina Mine Mineral Reserves as of 2022 vs 2023 (mined depletion 21 koz)

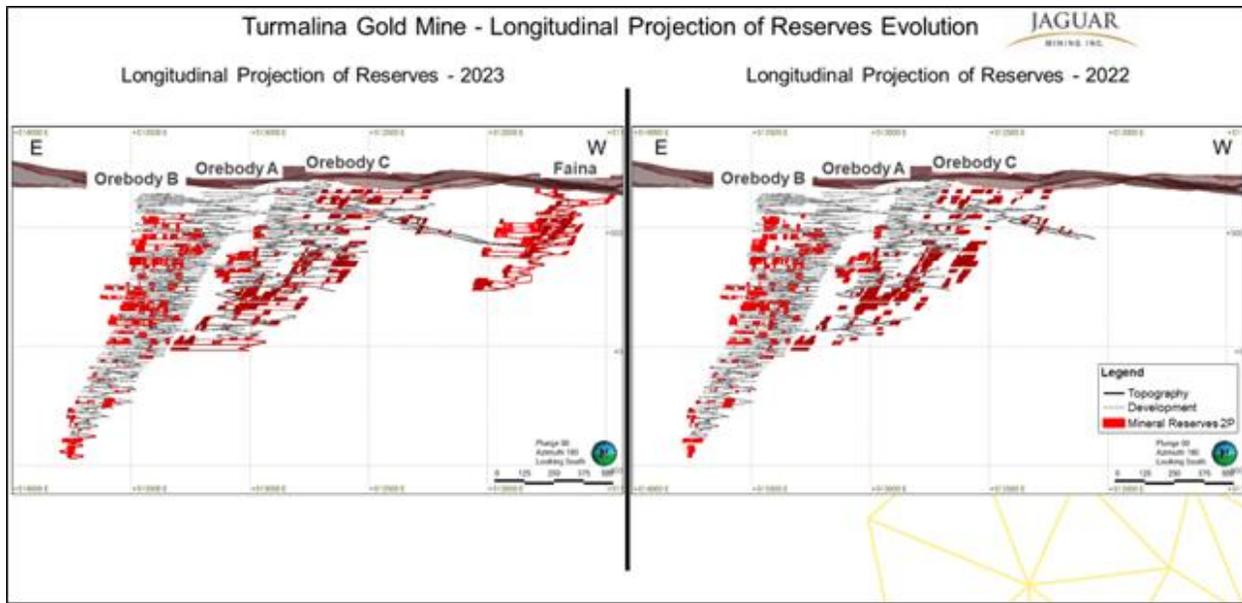
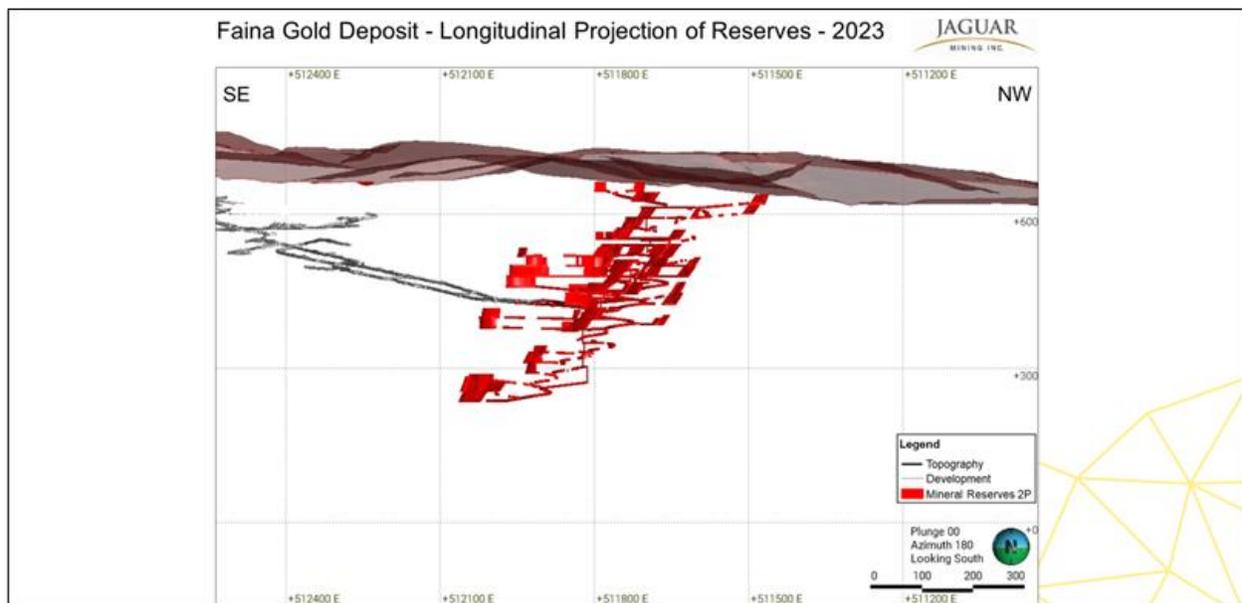


Figure 6. Long Section showing Faina Project Mineral Reserves as of November 30, 2023



Mineral Resources

Consolidated MTL Complex Mineral Resources are reported for the Turmalina Mine (net of mined depletion), restated Mineral Resources for the Faina Project, newly included Mineral Resources for the Pitangui Project - São Sebastião Deposit, updated Mineral Resources for the Pontal Deposits and restated Mineral Resources for the Zona Basal deposit.

As of November 30, 2023, consolidated Measured and Indicated Mineral Resources (Underground) for the MTL Complex are reported as 1,155 koz (8,495 kt @ 4.23 g/t Au).

Consolidated Measured and Indicated Mineral Resources reported above, reflect a net addition of 377 koz with respect to prior reporting (December 31, 2022). The net addition is attributable to the addition of 448 koz Indicated Mineral Resources from the Pitangui Project - São Sebastião Mineral Resource offset by mined depletion at the Turmalina Mine, and a reduction in reported Mineral Resources for the Pontal Deposits resulting from remodelling, changes to grade estimation parameters and a change to the reporting cut-off grade for these deposits.

As of November 30, 2023, Inferred Mineral Resources for the MTL Complex are reported as 881 koz (7,644 kt @ 3.59 g/t Au) which reflects a 387 koz net increase from prior reporting (December 31, 2022) mainly attributable to the addition of 379 koz Inferred Mineral Resources from the Pitangui Project - São Sebastião Mineral Resource

The Pitangui Project - São Sebastião Mineral Resource block model was completed by SRK in 2019 and was modified by SLR for current reporting in accordance with CIM Estimation of Mineral Resource and Mineral Reserve Best Practices Guidelines. The Mineral Resources endorsed by SLR in Table 2 have been reported within panels measuring 5m x 5m x 2m, based on a 2.25 g/t Au cut-off grade, satisfying the reasonable prospects for eventual economic extraction by reporting within a potentially mineable shape.

Table 2. Consolidated MTL Complex Mineral Resources as of July 31, 2023

	Measured Resources			Indicated Resources			Measured & Indicated Resources			Inferred Resources		
	Tonnes	Grade	Gold oz	Tonnes	Grade	Gold oz	Tonnes	Grade	Gold oz	Tonnes	Grade	Gold 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)
MTL Complex UG												
Ore Body A	717	6.28	145	263	3.64	31	980	5.59	176	95	3.61	11
Ore Body B	297	3.69	35	193	3.88	24	490	3.75	59	167	4.36	23
Ore Body C	677	3.53	77	1232	3.36	133	1909	3.42	210	1000	3.05	99
Sub-Total Turmalina Mine	1691	4.73	257	1688	3.46	188	3379	4.10	445	1272	3.25	133
Faina	0	0.00	0	1427	5.08	233	1427	5.08	233	1420	5.09	232
Pontal				266	3.44	29	266	3.44	29	139	4.72	24
Pontal South										668	3.76	81
Projeto Pitangui (São Sebastião)				3423	4.07	448	3423	4.07	448	3343	3.53	379
Total - Underground	1691	4.73	257	6804	4.11	898	8495	4.23	1155	6863	3.85	849
MTL Complex Open Pit												
Zona Basal										781	1.28	32
MTL UG Total - Mineral Resources	1691	4.73	257	6804	4.11	898	8495	4.23	1155	6863	3.85	849
MTL OP Total - Mineral Resources	0	0	0	0	0	0	0	0	0	781	1.28	32
MTL TOTAL - Mineral Resources	1691	4.73	257	6804	4.11	898	8495	4.23	1155	7644	3.59	881

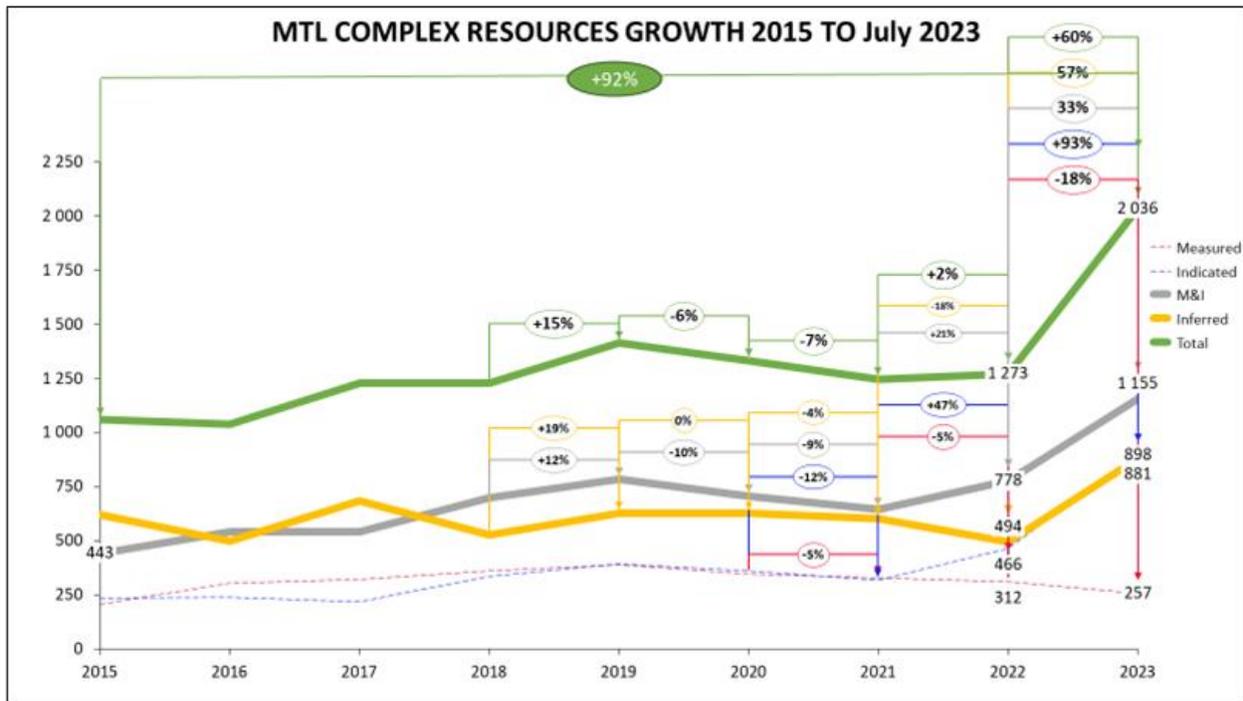
Notes:

1. **CIM (2014) definitions were followed for the classification of Mineral Resources.**
2. **Mineral Resources are inclusive of the Mineral Reserves at Turmalina. No Mineral Reserves are currently present at the Pontal, Zona Basal, or São Sebastião.**
3. **Mineral Resources are estimated at a cut-off grade of 1.79 g/t Au at Turmalina, 2.65 g/t Au at Faina, 3.0 g/t Au at Pontal and Pontal South, 0.75 g/t Au at Zona Basal and 2.25 g/t Au at São Sebastião.**
4. **Mineral Resources at Turmalina include all drill hole and channel sample data as of September 13, 2022, and are depleted using mining excavations as of July 31, 2023.**

Mineral Resources at the Faina and Pontal deposits include drill hole information as of September 9, 2022. Mineral Resources at the Zona Basal deposit include drill hole information current as of August 25, 2022. Mineral Resources at the São Sebastião deposit include drill hole information current as of July 29, 2019.

5. Mineral Resources are estimated using a long-term gold price of US\$1,800/oz Au for the Turmalina, Faina, Pontal, and Zona Basal deposits and US\$1,500/oz Au for the São Sebastião deposit.
6. Mineral Resources are estimated using an average long term exchange rate of R\$5.20 : US\$1.00 for the Turmalina, Faina, Pontal, and Zona Basal deposits.
7. A minimum mining width of 2.0 m was used for Turmalina. Minimum widths of approximately 2.0 m were used for Faina, Pontal, and Zona Basal. A minimum height of 2 m was applied to São Sebastião using reporting panels.
8. Gold grades are estimated by the OK interpolation algorithm using capped composite samples.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Numbers may not add due to rounding.

Figure 7. Graph showing consolidated MTL Complex Mineral Resources (koz) year on year changes 2015 to July 31, 2023



Underground Mineral Resources

- Turmalina Mine Measured and Indicated Mineral Resources are reported as 445 koz (3379 kt @ 4.10 g/t Au).

- Turmalina Mine Inferred Mineral Resources are reported as 133 koz (1,272 kt @ 3.25 g/t Au).
- Faina Measured and Indicated Mineral Resources are reported as 233 koz (1,427 kt @ 5.08 g/t Au).
- Faina Inferred Mineral Resources are reported as 232 koz (1,420 kt @ 5.09 g/t Au).
- Pitanguí Project - São Sebastião Measured and Indicated Mineral Resources are reported as 448 koz (3,423 kt @ 4.07 g/t Au).
- Pitanguí Project - São Sebastião Inferred Mineral Resources are reported as 379 koz (3,343 kt @ 3.53 g/t Au).
- Pontal Measured and Indicated Mineral Resources are reported as 29 koz (266 kt @ 3.44 g/t Au) which reflects a reduction of 33 koz due to changes in the orebody model and reporting at an increased cut-off grade (2.1 to 3.0 g/t Au).
- Pontal Inferred Mineral Resources are reported as 24 koz (159 kt @ 4.72 g/t Au) an increase of 3 koz due to changes in the orebody model and reporting at an increased cut-off grade (2.1 to 3.0 g/t Au).
- Pontal South Inferred Mineral Resources are reported as 81 koz (669 kt @ 3.76 g/t Au) an increase of 5 koz due to changes in the orebody model and reporting at an increased cut-off grade (2.1 to 3.0 g/t Au).

Open Pit Mineral Resources

- Zona Basal Inferred Mineral Resources (Open Pit) are reported as 32 koz (781 kt @ 1.28 g/t Au) unchanged from previous disclosure (December 31, 2022)

Figure 8. Long Section showing Turmalina Mine Mineral Resources as of November 30, 2023

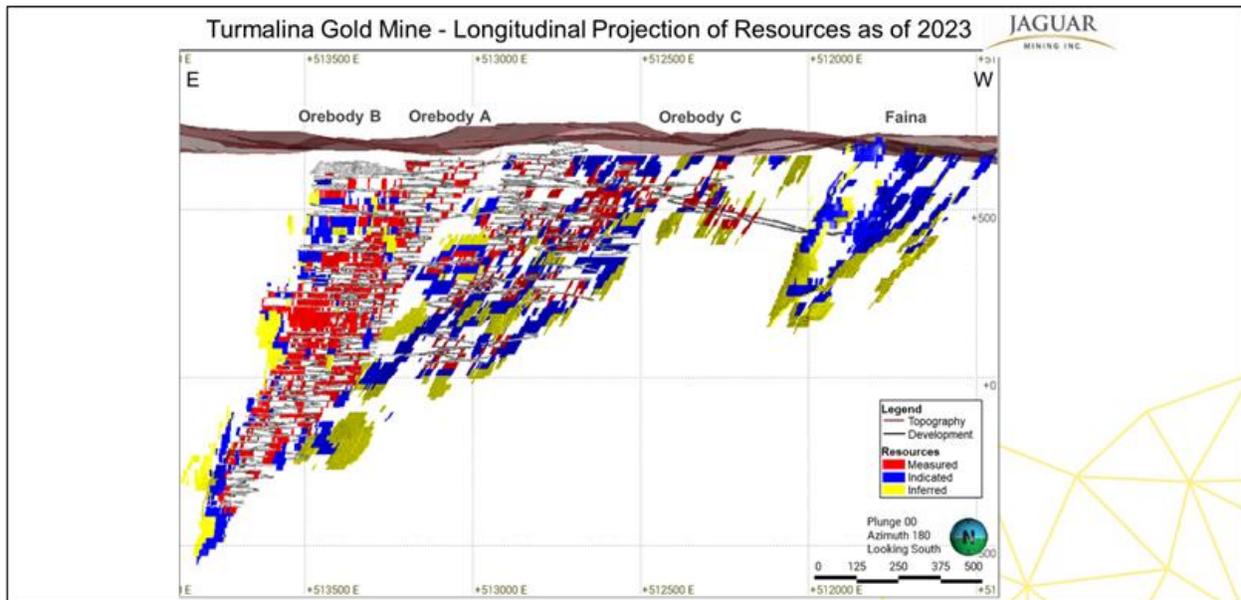


Figure 9. Long Section showing Faina Mineral Resources unchanged from December 31, 2022

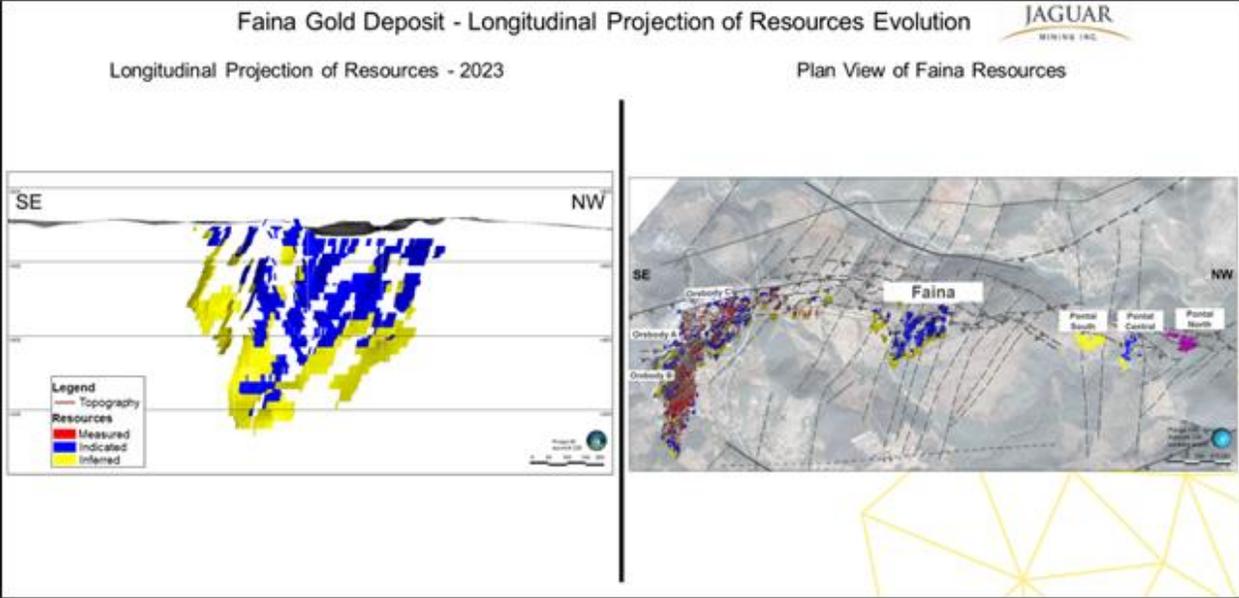


Figure 10. Long Section showing Pitangui Project - São Sebastião Mineral Resources as of November 30, 2023

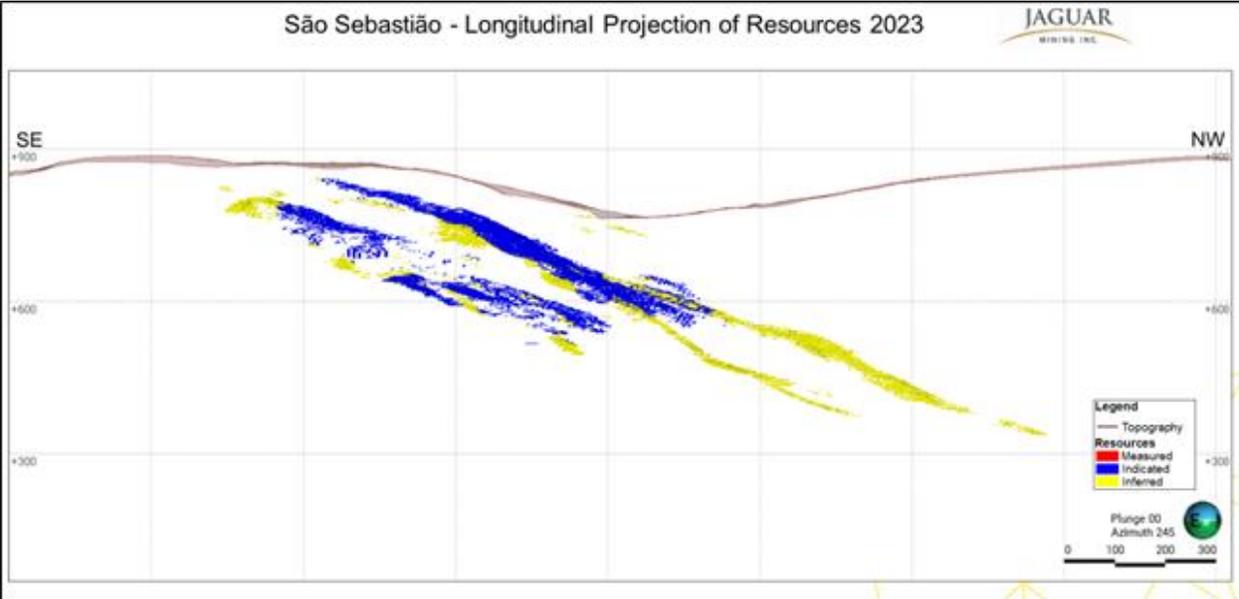


Figure 11. View showing Pontal Geological Model as of November 30th, 2023

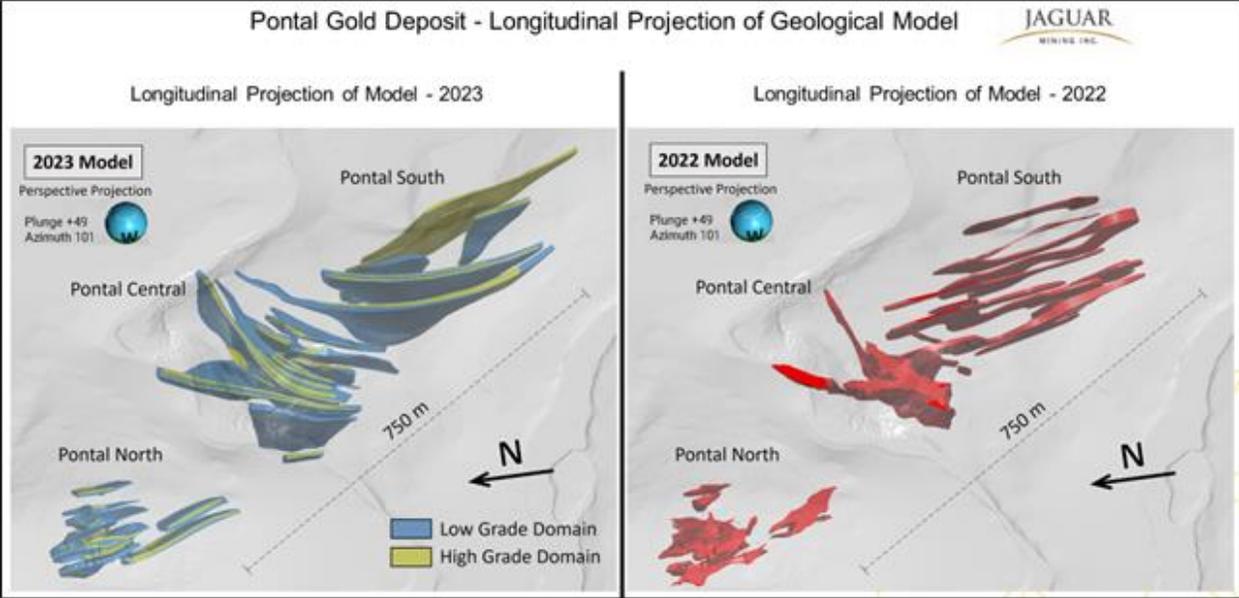


Figure 12. Long Section showing Zona Basal Mineral Resources unchanged from December 31, 2022

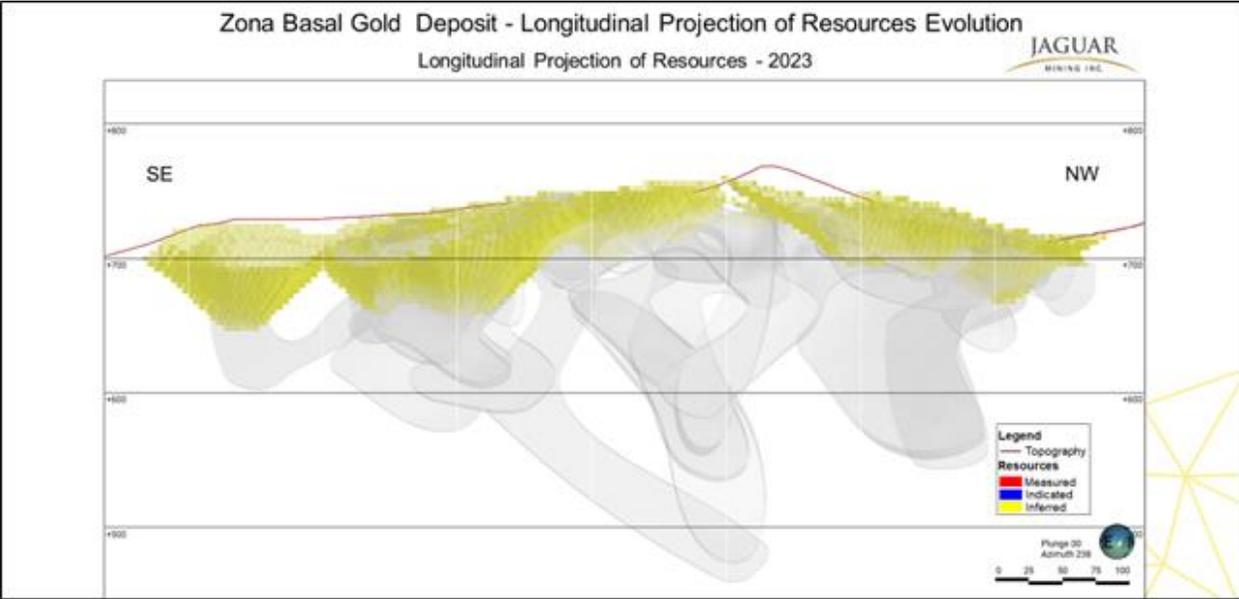


Table 3. MRMR Assumptions

TURMALINA MINE		
Reserves Marginal	g/t Au	1.88
Reserves	g/t Au	2.32
Resources	g/t Au	1.72
FAINA PROJECT		
Reserves Marginal	g/t Au	3.16
Reserves	g/t Au	4.00
Resources	g/t Au	2.81
PONTAL PROJECT		
Resources	g/t Au	3.00
ZONA BASAL		
Resources	g/t Au	0.75
SÃO SEBASTIÃO PROJECT		
Resources	g/t Au	2.25

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 by Jeff Sepp, P.Eng., and (ii) in respect of the estimated Mineral Resources by Pierre Landry P. Geo (Turmalina, Faina, Zona Basal, Pontal and Pitanguí Project - São Sebastião) of SLR Consulting (Canada) Ltd 55 University Avenue, Suite 501, Toronto, Ontario M5J2H7 SLR is an independent mining consultancy and Mr. Sepp, and Mr Landry, are each Qualified Persons within the definition of NI 43-101.

All remaining Scientific and technical information (other than described above) contained in this press release has been reviewed and approved by Jonathan Victor Hill, BSc (Hons) (Economic Geology - UCT), FAUSIMM, Vice President Geology and Exploration, who is also 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").

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.

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 Turmalina Mining Complex, Minas Gerais, Brazil"*, a copy of which is available on the Company's SEDAR profile at www.sedar.com.

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, slope design wireframes were used to constrain the Mineral Resource reports.

With respect to the Pitangui Project - São Sebastião Mineral Resource, SLR has reviewed and verified the database used to complete the Mineral Resource estimate reported in Table 2, and has expressed the opinion that the exploration data are sufficiently reliable for the purpose of supporting a mineral resource estimate.

The sampling and analysis of drill core used to support the Pitangui Project - São Sebastião mineral resource estimate was monitored through the implementation of a quality assurance - quality control program designed to follow industry best practice. Drill core (HQ and NQ size) samples were selected by IAMGOLD geologists and cut lengthwise with a diamond saw at the project site. Half of the core is retained on site for future reference. Sample intervals range between 0.4 and 1.0 metres in length. Samples were submitted to either ACME Analytical Laboratory or ALS Limited, and assayed for gold using a standard fire assay procedure with an atomic absorption finish ("FA-AA") and a multi-element ICP-MS analysis. From 2015 onwards a percentage of pulps were also sent to SGS GEOSOL as an umpire laboratory for gold (FA-AA) and multi-element ICP-MS analyses.

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

south-eastern 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 gold producing company tenement holder in the Iron Quadrangle, holding some 69 kHa.

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 69,000 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.

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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.

SOURCE: Jaguar Mining Inc.