

# **MANAGEMENT'S DISCUSSION AND ANALYSIS**

FOR THE QUARTER ENDED SEPTEMBER 30, 2018

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# MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE THIRD QUARTER ENDED SEPTEMBER 30, 2018

This Management's Discussion and Analysis ("MD&A") should be read in conjunction with the condensed interim consolidated financial statements for the three and nine months ended September 30, 2018, and the annual audited consolidated financial statements and MD&A for the year ended December 31, 2017 and related notes thereto which have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board (IASB). For further information on Jaguar Mining Inc., reference should be made to its public filings (including its most recently filed annual information form ("AIF") which is available on SEDAR at www.sedar.com). Information on risks associated with investing in the Company's securities and technical and scientific information under National Instrument 43-101 concerning the Company's material properties, including information about mineral resources and reserves, are contained in the Company's most recently filed AIF and technical reports.

All amounts included in this MD&A are in United States dollars ("\$"), unless otherwise specified. References to C\$ are to Canadian dollars and R\$ are to Brazilian Reais. This report is dated as at November 12, 2018.

The Company has included certain non-GAAP financial measures, which the Company believes, that together with measures determined in accordance with IFRS, provide investors with an improved ability to evaluate the underlying performance of the Company. Non-GAAP financial measures do not have any standardized meaning prescribed under IFRS, and therefore they may not be comparable to similar measures employed by other companies. The data is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. The non-GAAP financial measures included in this MD&A include:

- Cash costs (per ounce sold);
- All-in sustaining costs (per ounce sold);
- Average realized price gold price (per ounce of gold sold);
- Adjusted operating cash flow;
- Adjusted EBITDA;
- Free cash flow (per ounce sold);
- Sustaining capital expenditures; and
- Non-sustaining capital expenditures.

Definitions and reconciliations associated with the above metrics can be found in Section Non-IFRS Performance Measures of this MD&A.

Where we say "we," "us," "our," the "Company" or "Jaguar," we mean Jaguar Mining Inc. or Jaguar Mining Inc. and/or one or more or all of its subsidiaries, as it may apply. The following abbreviations are used to describe the periods under review throughout this MD&A:

Abbreviation	Period	Abbreviation	Period
YTD 2018	January 1, 2018 – September 30, 2018	YTD 2017	January 1, 2017 – September 30, 2017
Q1 2018	January 1, 2018 – March 31, 2018	Q1 2017	January 1, 2017 – March 31, 2017
Q2 2018	April 1, 2018 – June 30, 2018	Q2 2017	April 1, 2017 – June 30, 2017
Q3 2018	July 1, 2018 – September 30, 2018	Q3 2017	July 1, 2017 – September 30, 2017

## **OUR BUSINESS**

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. The Company's principal operating assets are located in the state of Minas Gerais and include the Turmalina Gold Mine Complex ("MTL" and "Turmalina Gold mine and plant") and Caeté Gold Mine Complex ("MSOL", "Pilar Gold mine" and "Caeté plant"). The Company also owns the Paciência Gold Mine Complex ("Paciência"), which has been on care and maintenance since 2012.

Led by a new, but proven and experienced senior management team, our operating philosophy focuses on creating excellent shareholder value through the execution of a safe and sustainable operating plan, prudent cost management practices, generating free cash flow, and increasing Mineral Reserves and Resources through exploration growth projects.

We benefit from the exploration and development of the Company's existing brownfield land package and from mineral concessions comprising approximately 26,000 hectares, with close proximity to current operations, in the Iron Quadrangle mining district of Brazil, a prolific greenstone belt located near the city of Belo Horizonte in the State of Minas Gerais. In addition, approximately 35,000 hectares in the State of Ceará, where the Company's Pedra Branca Project is located, provide future upside potential.

# **Q3 2018 FINANCIAL & OPERATING SUMMARY**

	For th	ne three r	months ended	For the nine months ended					
(\$ thousands, except where indicated)		Septem	ber 30,	Septem	ber	30,			
		2018	2017	2018		2017			
Financial Data									
Revenue	\$	25,426	\$ 26,062	\$ 73,541	\$	78,606			
Operating costs		12,809	16,116	40,564		53,614			
Depreciation		4,919	5,898	14,211		17,271			
Gross profit		7,698	4,048	18,766		7,721			
Net income (loss)		2,208	(7,664)	(904)		(18,861)			
Per share ("EPS")		0.01	(0.02)	(0.00)		(0.06)			
EBITDA <sup>1</sup>		7,889	(507)	16,309		3,949			
Adjusted EBITDA <sup>1,2</sup>		8,909	6,094	19,805		14,020			
Adjusted EBITDA per share <sup>1</sup>		0.03	0.02	0.06		0.04			
Cash operating costs (per ounce sold) <sup>1</sup>		627	809	713		867			
All-in sustaining costs (per ounce sold) <sup>1</sup>		1,142	1,168	1,233		1,249			
Average realized gold price (per ounce) <sup>1</sup>		1,244	1,276	1,292		1,250			
Cash generated from operating activities		6,566	7,509	16,004		9,583			
Adjusted operating cash flow <sup>1</sup>		7,541	6,076	19,766		15,002			
Free cash flow <sup>1</sup>		(1,298)	2,212	(5,489)		(7,118)			
Free cash flow (per ounce sold) <sup>1</sup>		(63)	108	(96)		(113)			
Sustaining capital expenditures <sup>1</sup>		7,864	4,624	21,493		15,233			
Non-sustaining capital expenditures <sup>1</sup>		641	1,138	2,241		3,401			
Total capital expenditures		8,505	5,763	23,734		18,634			

<sup>&</sup>lt;sup>1</sup> Average realized gold price, sustaining and non-sustaining capital expenditures, cash operating costs and all-in sustaining costs, adjusted operating cash flow, 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.

<sup>&</sup>lt;sup>2</sup> 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 r	months ended	For the nine months ende			
	Septem	ber 30,	September 30,			
	2018	2017	2018	2017		
Operating Data						
Gold produced (ounces)	20,320	20,781	58,004	62,842		
Gold sold (ounces)	20,441	20,422	56,908	62,909		
Primary development (metres)	1,436	932	3,782	2,666		
Secondary development (metres)	727	922	1,751	3,292		
Definition, infill, and exploration drilling (metres)	11,716	11,592	29,917	34,525		

# **Financial and Operational Summary**

## **Corporate Update**

During Q3 2018, Jaguar Mining initiated a plan to return the growing and sustainable production profile more reflective of Jaguar's large base of mineral resources. The Company appointed Director Benjamin Guenther as Interim Chief Executive Officer, following the resignation of the previous Chief Executive Officer. The Company also strengthened the senior operating team in Brazil with the appointment of a new Vice President of Operations and completed other local management changes to add greater operating expertise while focusing on executing an action plan at Turmalina to improve near-term operating performance and return production to levels experienced in previous years.

## Revenue, Gross profit and Adjusted EBITDA<sup>1</sup>

- Revenue for Q3 2018 decreased 2% to \$25.4 million (20,441 ounces), compared with \$26.1 million (20,422 ounces) in Q3 2017, due to a 3% decrease in the average realized gold price, from \$1,276 in Q3 2017 to \$1,244 in Q3 2018.
- Gross profit for the three and nine months ended September 30, 2018 was \$7.7 million and \$18.8 million, respectively, compared to \$4 million and \$7.7 million for Q3 2017 and YTD 2017. Increased profitability reflects lower operating cash costs.
- Adjusted EBITDA for Q3 2018 was \$8.9 million compared to \$6.1 million for Q3 2017, while adjusted EBITDA for the nine
  months of 2018 was \$19.8 million compared to \$14 million in the nine months of 2017.

## Cash Operating Costs, All-In-Sustaining Costs ("AISC"), Capital Expenditures and Adjusted Operating Cash Flow<sup>1</sup>

- Cash operating costs decreased 22% to \$627 per ounce of gold sold for Q3 2018, compared to \$809 per ounce sold during Q3 2017, primarily due to operational excellence measures at Pilar.
- AISC decreased 2% to \$1,142 per ounce of gold sold in Q3 2018, compared to \$1,168 per ounce sold during Q3 2017.
- In Q3 2018, sustaining capital investment increased 70% to \$7.9 million compared to \$4.6 million in Q3 2017. This activity
  focused on increasing primary development to provide improved mining flexibility.
- Operating cash flow was \$6.6 million for Q3 2018, compared to \$7.5 million in Q3 2017. Adjusted operating cash flow was \$7.5 million in Q3 2018 and \$19.8 million for YTD 2018 based on operating cash flow adjusted for changes in working capital, compared to \$6.1 million and \$15 million for the comparative 2017 periods.
- Free cash flow was negative \$1.3 million for Q3 2018 based on operating cash flow less total capital expenditures, compared to \$2.2 million in Q3 2017. Free cash flow was negative \$63 per ounce sold in Q3 2018 compared to \$108 per ounce sold in Q3 2017.

<sup>&</sup>lt;sup>1</sup> This is a non-GAAP financial performance measures with no standard definition under IFRS. MD&A – Quarter Ended September 30, 2018

#### Cash Position and Working Capital

- As at September 30, 2018, the Company had a cash position of \$6.7 million, compared to \$18.6 million as at December 31, 2017. The September 30, cash balance does not include the \$2 million of cash deposit with Auramet. The lower cash balance compared to the end of 2017 reflects \$21.5 million in total Capital Expenditures and lower gold sales that declined 10% in the nine months ended September 30, 2018.
- Working capital was \$1.6 million as at September 30, 2018, compared to \$14.1 million as at December 31, 2017, which
  includes a short term receivable of \$4.5 million from the Accelerated Earn-in Agreement signed for the Gurupi Project
  on September 17, 2017. Working capital also includes \$5.1 million in loans from Brazilian banks, which mature every six
  months and are expected to be rolled forward. Working capital reduction is mainly due to the replacement of the Sprott
  Resource Lending facility with Auramet Advance, as the latter is classified as short term.

## Tonnes Processed and Average Grade, Gold Production

- Total processing was 175,000 tonnes in Q3 2018 (Q3 2017 213,000 tonnes) at an average head grade of 4.01 g/t (Q3 2017 3.18 g/t).
  - In Q3 2018, Turmalina processed 88,000 tonnes (Q3 2017 107,000 tonnes) at an average head grade of 3.62 g/t (Q3 2017 3.10 g/t).
  - Pilar processed 87,000 tonnes in Q3 2018 (Q3 2017 88,000 tonnes) at an average head grade of 4.40 g/t (Q3 2017 3.77 g/t).
- Consolidated gold production decreased to 20,320 ounces in Q3 2018, compared to 20,781 ounces in Q3 2017, reflecting lower production from Turmalina year-over-year. Gold recovery was 89.9% in Q3 2018 compared to 90.5% in Q3 2017.
- Pilar production increased 14% to a quarterly record 11,068 ounces in Q3 2018 compared to 9,674 ounces in Q3 2017. Turmalina produced 9,252 ounces in Q3 2018, compared to 9,616 ounces in Q3 2017.

### Major Growth Exploration Initiative

- Turmalina growth exploration drilling targeting Orebody C down dip extensions below Level 3 continued during the
  quarter with one rig in operation. As previously reported, drilling confirmed the continuity of the gold bearing structure
  beyond Level 8, approximately 300 m below current operations. The current drilling phase is being conducted in parallel
  with detailed geological and structural mapping of Orebody C exposed in ongoing underground production development
  and is expected to be completed during Q4 2018.
- Trenching and channel sampling of gold in soil anomalies at the Zona Basal Target at Turmalina commenced in Q3 2018.
   The initial phase of this work is planned to be completed prior to the onset of the wet season in November. Preliminary results from this work are expected to be reported on completion.
- A comprehensive revision of historical exploration work over the Pedra Branca Project in Ceará was completed during
  the third quarter. The Pedra Branca database was re-formatted to better reflect the historical soil, stream, rockchip,
  drilling and trenching data and updated geological mapping. Options for progressing this project are being evaluated by
  the exploration team.

### Appointment of New Chairman of the Board

The Company also announces the appointment of Thomas Weng stepping in as Jaguar's new Chairman. Mr. Weng was appointed as a director of the Corporation on April 1, 2016. Mr. Weng has more than 25 years of experience in the financial services sector. Mr. Weng is Co-Founding Partner with Alta Capital Partners, a financial advisory provider. Previously, Mr. Weng was Managing Director at Deutsche Bank and Head of Equity Capital Markets for Metals and Mining throughout the Americas and Latin America, across all industry segments. Prior to 2007, Mr. Weng held various senior positions at Pacific Partners, an alternative investment firm, and Morgan Stanley and Bear Stearns. Mr. Weng graduated from Boston University with a Bachelor of Arts in Economics.

### REVIEW OF OPERATING AND FINANCIAL RESULTS

# **Turmalina Gold Mine Complex**

#### Turmalina Gold Mine Action Plan

During the third quarter, the Company initiated an action plan at Turmalina focused on completing key strategic priorities to improve the performance and return the mine to higher historical sustainable production levels while also increasing the orebody capacity to contribute to cash flow growth.

The strategic action plan priorities include:

- Strengthening site management team capabilities.
- Modifying the mining approach and implementing quality controls to improve rock mass stability, reduce dilution, reduce
  ore loss and improve safety. Ensuring continued sublevel to sublevel down hole drilling, backfilling in the stoping cycle,
  and improving drilling and blasting practices. A Commissioned Paste Fill System.
- Grade control intervention to improve ore control drilling, planning, and consistent delivery of the mine plan.
- Stabilizing mine production while building mine inventories to provide mining flexibility and confidence in the plan.

## Turmalina Quarterly Production

(\$ thousands, except where indicated)	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016
Tonnes of ore processed ('000)	88,000	77,000	81,000	95,000	107,000	112,000	113,000	122,000
Average head grade (g/t) <sup>1</sup>	3.62	3.46	3.57	4.41	3.10	3.37	3.79	4.39
Average recovery rate (%)	90.1%	91.1%	91%	91%	90.5%	91%	91%	93%
Gold (oz.)								
Produced	9,252	7,824	8,442	12,245	9,616	10,870	12,736	16,101
Sold	8,609	7,610	8,414	12,142	9,082	10,815	13,536	16,024
Cash operating cost (per oz. sold) <sup>2</sup>	\$ 722	\$ 761	\$ 749	\$ 646	\$ 749	\$ 695	\$ 738	\$ 562
All-in sustaining cost (per oz. sold) <sup>2</sup>	\$ 1,181	\$ 1,316	\$ 1,238	\$ 784	\$ 993	\$ 956	\$ 903	\$ 784
Cash operating cost (R\$ per tonne) <sup>2</sup>	\$ 279	\$ 184	\$ 252	\$ 268	\$ 201	\$ 216	\$ 278	\$ 243

<sup>&</sup>lt;sup>1</sup> The 'average head grade' represents the recalculated head-grade milled.

During the third quarter of 2018, Turmalina produced 9,252 ounces of gold compared to 9,616 ounces in the corresponding 2017 period, a decrease of 4% or 364 ounces. The decrease in ounces produced was a result of a 18% decrease in the tonnes processed from 107,000 in Q3 2017 to 88,000 in Q3 2018, offset by 17% higher average head grade from 3.10 g/t in Q3 2017 to 3.62 g/t in Q3 2018. The cash operating cost per ounce sold for the third quarter of 2018 decreased by 4%, or \$27 per ounce, as compared to the same period in 2017. During the third quarter of 2018, approximately 26,000 tonnes were mined from Orebody A at an average grade of 4.53 g/t, and 64,000 tonnes from Orebody C at an average grade of 3.80 g/t.

<sup>&</sup>lt;sup>2</sup> Cash operating costs, average realized cost and All-in sustaining costs are a non-IFRS financial performance measure with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A.

#### **Turmalina Capital Expenditures**

	Three months ended				Nine months ended				
(\$ thousands)	September 30,					September 30,			
	2018			2017	2018			2017	
Sustaining capital <sup>1</sup>									
Primary development	\$ 3,4	451	\$	1,948	\$	10,523	\$	5,321	
Brownfield exploration	2	206		109		464		552	
Mine-site sustaining	2	295		159		1,307		1,400	
Total sustaining capital <sup>1</sup>	3,9	952		2,216		12,294		7,273	
Total non-sustaining capital <sup>1</sup>		592		715		1,496		1,763	
Total capital expenditures	\$ 4,5	544	\$	2,931	\$	13,790	\$	9,036	

<sup>&</sup>lt;sup>1</sup> Sustaining and non-sustaining capital are non-IFRS financial measures with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A. Capital expenditures are included in our calculation of all-in sustaining costs and all-in costs.

	Three mon	ths ended	Nine mont	hs ended
(metres)	Septem	ber 30,	Septem	ber 30,
	2018	2017	2018	2017
Primary development	780	443	2,167	1,313
Secondary development	558	337	951	1,383
Total development	1,338	780	3,118	2,696
Definition drilling	844	380	1,509	1,378
Infill drilling	3,791	2,524	8,160	11,253
Exploration drilling	3,568	5,451	9,701	6,480
Total definition, infill, and exploration drilling	8,203	8,355	19,370	19,111

#### Mining

Turmalina is an underground mine utilizing the sub-level stoping mining method with rockfill and historically paste fill, with some areas of the mine previously using mechanized cut and fill mining methods. Ore produced at Turmalina is transported to the adjacent Carbon-In-Leach ("CIL") processing plant. In December 2017, Jaguar remobilized the development contractor Toniolo Busnello ("TBSA") to site to start high-speed development in the mine to advance development one full level ahead of the active mining areas in Orebody A. Work continues to focus on developing Levels 4 and 5 of Orebody C, which have shown grades similar to Orebody A.

The mining method change in Orebody A was implemented to allow for backfilling of all stopes following excavation for better geotechnical stability. Mining longhole stopes in Orebody A will be done by drilling from the top down, resulting in better control of drilling and allow for immediate backfill once all ore has been excavated, allowing for faster stope cycling. Improvements in blasting controls are being implemented to reduce overbreak and achieve better fragmentation resulting in better grade control and higher mining recoveries.

The use of pastefill in historically mined stopes in the upper levels is being carried out and the pastefill system is being extended to current working areas for 2019. Until that time, ongoing stopes will continue to be backfilled with waste rockfill.

During the third quarter of 2018, the company developed 780 metres, as primary development of which 346 metres were achieved by Jaguar's own crews and 434 metres by contractor.

#### **Processing**

Ore produced at Turmalina is transported to the adjacent CIL processing plant. The Turmalina plant consists of three ball mills, with primary grinding done at Mill #3, which was rebuilt and commissioned at the end of 2016, with an estimated installed capacity of 1,600 tonnes per day. Using Mill #3, Turmalina is able to achieve the entire throughput of the plant and lower operating costs through electricity consumption savings, compared to using Mills #1 and #2 in 2016. Mills #1 and #2 have been taken off-line and can be used to occasionally supplement the capacity of Mill #3 if required. During Q3 2018, the plant processed 88,000 tonnes at a grade of 3.62 g/t compared with 77,000 tonnes at an average head grade of 3.46 g/t during Q2 2018. The processing plant achieved a recovery rate of 90.1% during Q3 compared with 91.1% during Q2 2018 yielding 9,252 ounces, an 18% improvement over Q2.

#### Turmalina Free Cash Flow<sup>1</sup>

(\$ thousands, except where indicated)	Three months ended September 30,				Nine months ended September 30,			
	2018		2017		2018			2017
Turmalina Complex								
Revenue	\$	10,709	\$	11,591	\$	31,835	\$	41,776
Less cash operating costs		6,218		6,813		18,309		24,309
Less sustaining capital expenditures		3,952		2,216		12,294		7,273
Free Cash Flow	\$	539	\$	2,562	\$	1,232	\$	10,194

<sup>&</sup>lt;sup>1</sup> This is a non-GAAP financial performance measure with no standard definition under IFRS. For further information, refer to the Non-IFRS Financial Performance Measure section of the MD&A".

# Caeté Gold Mine Complex

## Caeté Complex Quarterly Production

(\$ thousands, except where indicated)	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016
Tonnes of ore processed (t)	87,000	94,000	93,000	95,000	106,000	104,000	101,000	115,000
Average head grade (g/t) <sup>1</sup>	4.40	4.03	3.93	3.33	3.62	2.97	3.17	2.79
Average recovery rate (%)	89.6%	89.8%	89%	89%	90.4%	90%	91%	91%
Gold (oz.)								
Produced	11,068	10,995	10,423	9,067	11,164	8,899	9,556	9,307
Sold	11,832	9,620	10,823	8,699	11,339	7,638	10,498	9,085
Cash operating cost (per oz. sold) <sup>2</sup>	\$ 557	\$ 683	\$ 841	\$ 883	\$ 856	\$ 1,087	\$ 1,165	\$ 1,041
All-in sustaining cost (per oz. sold) <sup>2</sup>	\$ 888	\$ 967	\$ 1,076	\$ 1,252	\$ 1,068	\$ 1,315	\$ 1,526	\$ 1,329
Cash operating cost (R\$ per tonne) <sup>2</sup>	\$ 299	\$ 171	\$ 317	\$ 256	\$ 290	\$ 257	\$ 381	\$ 267

<sup>&</sup>lt;sup>1</sup> The 'average head grade' represents the recalculated head-grade milled.

The Caeté Mining Complex is composed of two underground mines (Pilar Mine and Roça Grande Mine). Ore produced from these mines is transported to the 2,200 tonnes per day gravity, flotation and CIL processing plant adjacent to Roça Grande. Ore from Pilar is trucked a total distance of approximately 40 kilometres by road to the Caeté plant. On March 22, 2018, the Roça Grande mine was placed on care and maintenance. The mine plan during the first quarter was to continue to mine areas of known resources while a drilling program commenced in the RG1 deposit to identify new reserves. Due to high operating costs, the mine was placed on care and maintenance while exploration will continue to try to identify economic reserves.

<sup>&</sup>lt;sup>2</sup> Cash operating costs, average realized cost and All-in sustaining costs are a non-IFRS financial performance measure with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A.

(\$ thousands, except where indicated)	Three months ended September 30,				Nine months ended September 30,				
	2018		2017		2018			2017	
Caeté Complex									
Revenue	\$	14,719	\$	14,471	\$	41,708	\$	36,830	
Less cash operating costs		6,591		9,706		22,256		30,235	
Less sustaining capital expenditures		3,912		2,408		9,199		7,960	
Free Cash Flow	\$	4,216	\$	2,357	\$	10,253	\$	(1,365)	

<sup>&</sup>lt;sup>1</sup> This is a non-GAAP financial performance measure with no standard definition under IFRS. For further information, refer to the Non-IFRS Financial Performance Measure section of the MD&A".

## **Pilar Quarterly Production**

#### Pilar

Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016
87,000	94,000	81,000	81,000	88,000	85,000	84,000	84,000
4.40	4.03	4.13	3.53	3.77	3.16	3.39	3.11
89.6%	89.8%	89.2%	89.4%	90.4%	90.0%	90.8%	90.8%
11,068	10,995	9,553	8,156	9,674	7,702	8,485	7,569
11,832	9,620	9,929	7,880	9,820	6,625	9,422	7,326
\$ 557	\$ 683	\$ 805	\$ 835	\$ 804	\$ 1,033	\$ 1,092	\$ 942
\$ 888	\$ 967	\$ 1,062	\$ 1,198	\$ 1,042	\$ 1,235	\$ 1,434	\$ 1,287
\$ 299	\$ 171	\$ 320	\$ 264	\$ 284	\$ 259	\$ 437	\$ 271
	87,000 4.40 89.6% 11,068 11,832 \$ 557 \$ 888	87,000       94,000         4.40       4.03         89.6%       89.8%         11,068       10,995         11,832       9,620         \$ 557       \$ 683         \$ 888       \$ 967	87,000       94,000       81,000         4.40       4.03       4.13         89.6%       89.8%       89.2%         11,068       10,995       9,553         11,832       9,620       9,929         \$ 557       \$ 683       \$ 805         \$ 888       \$ 967       \$ 1,062	87,000       94,000       81,000       81,000         4.40       4.03       4.13       3.53         89.6%       89.8%       89.2%       89.4%         11,068       10,995       9,553       8,156         11,832       9,620       9,929       7,880         \$ 557       \$ 683       \$ 805       \$ 835         \$ 888       \$ 967       \$ 1,062       \$ 1,198	87,000       94,000       81,000       81,000       88,000         4.40       4.03       4.13       3.53       3.77         89.6%       89.8%       89.2%       89.4%       90.4%         11,068       10,995       9,553       8,156       9,674         11,832       9,620       9,929       7,880       9,820         \$ 557       \$ 683       \$ 805       \$ 835       \$ 804         \$ 888       \$ 967       \$ 1,062       \$ 1,198       \$ 1,042	87,000       94,000       81,000       81,000       88,000       85,000         4.40       4.03       4.13       3.53       3.77       3.16         89.6%       89.8%       89.2%       89.4%       90.4%       90.0%         11,068       10,995       9,553       8,156       9,674       7,702         11,832       9,620       9,929       7,880       9,820       6,625         \$ 557       \$ 683       \$ 805       \$ 835       \$ 804       \$ 1,033         \$ 888       \$ 967       \$ 1,062       \$ 1,198       \$ 1,042       \$ 1,235	87,000       94,000       81,000       81,000       88,000       85,000       84,000         4.40       4.03       4.13       3.53       3.77       3.16       3.39         89.6%       89.8%       89.2%       89.4%       90.4%       90.0%       90.8%         11,068       10,995       9,553       8,156       9,674       7,702       8,485         11,832       9,620       9,929       7,880       9,820       6,625       9,422         \$ 557       \$ 683       \$ 805       \$ 835       \$ 804       \$ 1,033       \$ 1,092         \$ 888       \$ 967       \$ 1,062       \$ 1,198       \$ 1,042       \$ 1,235       \$ 1,434

 $<sup>^{\</sup>rm 1}$  The 'average head grade' represents the recalculated head-grade milled.

During the third quarter of 2018, Pilar produced a quarterly record 11,068 ounces of gold compared to 9,674 ounces in Q3 2017, an increase of 14% due to the net impact of a 17% increase in average head grade, slight decrease in recovery. Pilar has been using a specialized development contractor since 2016 to advance primary development. As the primary ramp advances ahead, the amount of secondary ore development completed by the contractor is reducing. The cash operating cost per ounce sold for Q3 2018 decreased 31% as compared to Q3 2017, primarily as a result of an increase in average head grade.

### **Pilar Capital Expenditures**

(\$ thousands, except where indicated)	Three mon Septem		Nine months ended September 30,				
	2018	<b>2018</b> 2017			2018	2017	
Sustaining capital <sup>1</sup>							
Primary development	\$ 2,609	\$	1,545	\$	7,077	\$	4,634
Brownfield exploration	141		124		449		424
Mine-site sustaining	1,162		669		1,673		1,839
Total sustaining capital <sup>1</sup>	3,912		2,338		9,199		6,897
Total non-sustaining capital <sup>1</sup>	49		262		214		1,196
Total capital expenditures	\$ 3,961	\$	2,600	\$	9,413	\$	8,093

<sup>&</sup>lt;sup>1</sup> Sustaining and non-sustaining capital 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. Capital expenditures are included in our calculation of all-in sustaining costs and all-in costs.

<sup>&</sup>lt;sup>2</sup> Cash operating costs, average realized cost and All-in sustaining costs are a non-IFRS financial performance measure with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measures section of the MD&A.

(metres)	Three mor Septem	ths ended ber 30,	Nine mont	
	2018	2017	2018	2017
Primary development	656	471	1,615	1,159
Secondary development	169	518	800	1,709
Total development	825	989	2,415	2,868
Definition drilling	1,183	740	3,183	2,216
Infill drilling	2,210	971	6,464	4,432
Exploration drilling	120	1,526	203	8,013
Total definition, infill, and exploration drilling	3,513	3,237	9,850	14,661

### Mining

Based on the strong exploration drilling results and increased reserves and resources, primary and secondary development that had been suspended since 2014 was resumed at Pilar during 2016. A development contractor arrived on site in 2016 to accelerate the main ramp below Level 10 to open up additional resources. The contractor continued to assist with primary and secondary development at Pilar during 2018. With the main ramp approximately 2 mining levels below current mining activities, the operation is well positioned with flexibility in the mine plan.

#### **Processing**

During Q3 2018, the Caeté plant processed 87,000 tonnes from Pilar at an average grade of 4.40 g/t compared to 88,000 tonnes at 3.77 g/t in Q3 2017. Recovery for the third quarter of 2018 was 89.6%, which was lower than the Q3 2017 recovery of 90.4%.

## Pilar Free Cash Flow<sup>1</sup>

MD&A - Quarter Ended September 30, 2018

(\$ thousands, except where indicated)	•	Three mor Septem	 ths ended Nine mon ber 30, Septen				
		2018	2017		2018		2017
Pilar							
Revenue	\$	14,719	\$ 12,533	\$	40,553	\$	32,322
Less cash operating costs		6,591	7,891		21,156		25,039
Less sustaining capital expenditures		3,912	2,338		9,199		6,897
Free Cash Flow	\$	4,216	\$ 2,304	\$ 10,198		\$	386

<sup>&</sup>lt;sup>1</sup> This is a non-GAAP financial performance measure with no standard definition under IFRS. For further information, refer to the Non-IFRS Financial Performance Measure section of the MD&A".

#### CONSOLIDATED FINANCIAL RESULTS

# Quarterly Financial Review<sup>1</sup>

	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017	Q2 2017	Q1 2017	Q4 2016
Revenue	\$ 25,426	\$ 22,888	\$ 25,228	\$ 26,626	\$ 26,062	\$ 23,352	\$ 29,192	\$ 30,261
Cost of sales (excluding depreciation) <sup>2</sup>	(12,809)	(12,356)	(15,399)	(15,526)	(16,116)	(15,990)	(21,508)	(19,355)
Gross profit (excluding depreciation) <sup>2</sup>	12,617	10,532	9,829	11,100	9,946	7,362	7,684	10,906
Net income (loss)	2,208	(1,334)	(1,781)	16,034	(7,664)	(3,323)	(7,877)	(9,280)
Cash flows from operating activities	6,566	4,079	4,979	5,387	7,509	216	1,855	8,467
Total assets	178,560	177,262	178,779	183,679	177,806	182,399	181,242	192,788
Total liabilities	60,145	61,471	61,783	65,293	75,591	72,671	74,330	78,454
Working Capital	1,590	4,025	10,978	14,132	23,171	9,561	3,052	11,332
Total Debt	8,070	9,049	14,908	17,525	19,997	24,299	21,340	22,590
Average realized gold price (per oz.) <sup>2</sup>	\$ 1,244	\$ 1,328	\$ 1,311	\$ 1,278	\$ 1,276	\$ 1,266	\$ 1,215	\$ 1,205
Cash operating cost (per oz. sold) <sup>2</sup>	\$ 627	\$ 717	\$ 800	\$ 745	\$ 809	\$ 857	\$ 924	\$ 735

<sup>&</sup>lt;sup>1</sup> Sum of all the quarters may not add up to the annual total due to rounding.

Current assets decreased \$11.4 million as at September 30, 2018, compared to December 31, 2017, primarily as a result of the decrease in cash. Current liabilities increased \$1.1 million as at September 30, 2018, compared to December 31, 2017, due to the unsecured customer advances with Auramet of \$7 million, to replace the Company's higher cost "secured" loan facility with Sprott Resource Lending effective June 30, 2018. The impact in current liabilities, due to the customer advances, was mainly offset by a decrease in notes payable and accounts payable. Non-current liabilities decreased \$6.3 million as at September 30, 2018, compared to December 31, 2017, primarily a result from decreases in notes payable, due to the repayment of the Sprott Resource effective June 30, 2018.

## Revenue

		Three	e mo	nths ende	Nine months ended						
(\$ thousands, except where indicated)		September 30,					September 30,				
		2018		2017	Change		2018	2017		Change	
Revenue	\$	25,426	\$	26,062	(2%)	\$	73,541	\$	78,606	(6%)	
Ounces sold		20,441		20,422	0%		56,908		62,909	(10%)	
Average realized gold price <sup>1</sup>	\$	1,244	\$	1,276	(3%)	Ś	1,292	Ś	1.250	3%	

<sup>1</sup> Average realized gold price is a non-IFRS financial performance measure with no standard definition under IFRS. For further information, refer to the Non-IFRS Financial Performance Measure section of the MD&A.

Revenue for the third quarter of 2018 decreased 2% compared to the same period in 2017, primarily as a result of a 3% decrease in the average realized gold price. The market price of gold is a primary driver of the Company's profitability and its ability to generate free cash flow. During the three months ended September 30, 2018, the market price of gold (London PM Fix) traded in a range of \$1,178-\$1,262, averaging at \$1,213 per ounce, and closed at \$1,187 per ounce on September 30, 2018. The average market price during the third quarter of 2018 was lower compared to the average market price of \$1,278 per ounce for the third quarter of 2017.

#### Production

A total of 175,000 tonnes were processed in Q3 2018 (Q3 2017 – 213,000 tonnes) at an average head grade of 4.01 g/t (Q3 2017 – 3.36 g/t), a 19% increase in average head grade compared to the same period in 2017.

<sup>&</sup>lt;sup>2</sup> Average realized gold price, cost of sales (excluding depreciation), gross profit (excluding depreciation) and cash operating costs are all non-IFRS financial performance measures with no standard definition under IFRS. For further information, refer to the Non-IFRS Financial Performance Measures section of the MD&A.

	Three	mo	nths ende	Nine months ended					
(\$ thousands, except where indicated)	Se	pte	mber 30,		September 30,				
	2018		2017	Change	2018		2017	Change	
Direct mining and processing cost	\$ 12,123	\$	15,457	(22%)	\$ 38,088	\$	50,456	(25%)	
Mining	7,740		10,369	(25%)	24,546		35,601	(31%)	
Processing	4,383		5,088	(14%)	13,542		14,855	(9%)	
Royalties, production taxes and others	686		659	4%	2,476		3,158	(22%)	
Royalty expense and CFEM taxes	774		688	13%	2,412		2,275	6%	
NRV adjustment and others	(88)		(29)	203%	64		883	(93%)	
Total operating expenses	\$ 12,809	\$	16,116	(21%)	\$ 40,564	\$	53,614	(24%)	
Depreciation	4,919		5,898	(17%)	14,211		17,271	(18%)	
Total cost of sales	\$ 17,728	\$	22,014	(19%)	\$ 54,775	\$	70,885	(23%)	

<sup>1</sup> Cash operating costs is a non-IFRS financial performance measure with no standard definition under IFRS. Refer to the Non-IFRS Financial Performance Measure section of the MD&A.

Total operating expenses decreased 21% from \$16.1 million in the three months ended September 30, 2017, to \$12.8 million in 2018, primarily as a result of expense reduction and cost containment measures, as well as the sharp devaluation of the Brazilian Real versus the US dollar, with the average exchange rate during Q3 2018 being R\$3.95 per US dollar compared to R\$3.16 per US dollar in Q3 2017. The decrease in the depreciation expense is a result of a change in the basis for the calculation of depreciation for Pilar by utilizing Measured and Indicated Mineral Resources compared to the prior period for which the basis was Proven and Probable Mineral Reserves. This change in accounting estimate was made in Q1 2018 to ensure depreciation reflects Management's best estimate of the useful life of Pilar and is being accounted for prospectively.

# **Operating Expenses**

(\$ thousands)			onths ende	ed		Nine months ended September 30,					
(\$ thousands)	2018	epte	2017	Change		2018	ept	2017	Change		
		_			_		_				
Changes to legal and recoverable tax provisions	\$ 509	\$	617	(18%)	Ş	1,990	\$	2,813	(29%)		
General and administration expenses	2,258		2,522	(10%)		7,125		7,736	(8%)		
Exploration and evaluation costs	125		107	17%		591		686	(14%)		
Care & maintenance costs (Paciência and Roça Grande mines)	417		310	35%		1,824		995	83%		
Stock-based compensation	417		148	182%		932		850	10%		
Amortization	32		51	(37%)		117		197	(41%)		
Impairment charges	-		5,178	(100%)		-		5,178	(100%)		
Other operating expenses	840		1,165	(28%)		3,388		2,412	40%		
Total operating expenses	\$ 4,598	\$	10,098	(54%)	\$	15,967	\$	20,867	(23%)		

### **Care and Maintenance Costs**

# **Paciência Gold Mine Complex**

The Paciência Gold Mine Complex remained on care and maintenance during the third quarter of 2018. No gold has been produced since the third quarter of 2012. No underground development or drilling work was carried out by the Company at Paciência during Q3 2018. The complex has been secured and the facilities are preserved and patrolled. A limited maintenance staff turns on the mills and equipment on a monthly basis to maintain the plant in working order. Paciência's carrying amount was written down to nil.

#### Roça Grande Gold Mine

Due to high operating costs, the Roça Grande Mine was placed on care and maintenance on March 22, 2018, while exploration continues to identify economic reserves. No underground development or drilling work was carried out by the Company at Roça Grande during Q3 2018. Roça Grande's carrying amount was written down to nil.

## **General and Administration Expenses**

The general and administration ("G&A") expenses exclude mine-site administrative costs that are charged directly to operations and include legal, accounting, costs to maintain offices and personnel in Belo Horizonte, Brazil and Toronto, Canada, and other corporate costs associated with being a publicly-traded company.

	Thre	e m	onths ende	ed	Nine months ended							
(\$ thousands)	September 30,								September 30,			
	<b>2018</b> 2017 Change <b>2</b>			2018		2017	Change					
Directors' fees	\$ 105	\$	129	(19%)	\$	277	\$	393	(30%)			
Audit related and insurance	104		100	4%		293		307	(5%)			
Corporate office (Toronto)	516		772	(33%)		2,011		2,273	(12%)			
Belo Horizonte office	1,533		1,521	1%		4,544		4,763	(5%)			
Total G&A expenses	\$ 2,258	\$	2,522	(10%)	\$	7,125	\$	7,736	(8%)			

For the nine months ended September 30, 2018, the total G&A expenses decreased 10% compared to the same period in 2017. Costs associated with the Belo Horizonte office were 5% lower in the nine months ended in September 30, 2018. Costs for the corporate office in Toronto were 12% lower for the nine months of 2018 compared to the same period of 2017, due to cost cutting measures. Management will continue its cost reduction focus for both Toronto and Belo Horizonte corporate office expenses.

# **Changes to Legal and Recoverable Taxes Provisions**

	Thre	nonths ende	ed .		Nine	Nine months ended							
(\$ thousands)	September 30,							September 30,					
	2018		2017	Change		2018		2017	Change				
Changes to legal provisions	\$ 2,416	\$	759	218%	\$	4,021	\$	1,820	121%				
Changes to recoverable taxes provision	(1,907)		(142)	1243%		(2,031)		993	(305%)				
Changes to legal and recoverable taxes provisions	\$ 509	\$	617	(18%)	\$	1,990	\$	2,813	(29%)				

In the nine month period ended September 30, 2018, the Company received the final tax assessments issued by the Brazilian Federal Tax Authority following the conclusion of its audit over the Company's historical Federal VAT input tax credits recognized in fiscal year 2013. Based on the results confirmed, the Company made a change in accounting estimate and reduced its provision criteria for tax credits recognized after January 1, 2012 from 20% as at December 31, 2017 to 5% as at September 30, 2018.

### **Legal Provisions**

As at September 30, 2018, there were 388 employee-initiated active lawsuits (September 30, 2017 - 436) against the Company, largely related to disputed overtime, break/interval and time at disposal. Based on Management's assessment of the likelihood of loss related to 292 lawsuits (September 30, 2017 - 328), the Company has recorded approximately \$8.2 million as labour legal provisions, with \$4.1 million classified as a current liability as at September 30, 2018 (September 30, 2017 – \$10.8 million and \$4.8 million, respectively).

During Q3 2018, 15 new lawsuits were initiated. The Company paid approximately \$441.000 in appeal deposits and escrow payments, \$550.000 in settlement installments, and \$134.000 for other costs such as social security, income tax, legal fees and expert fees. The total amount spent in Q3 2018 was \$1.2 million compared to \$1.2 million in Q3 2017.

#### **Recoverable Taxes Provision**

As at September 30, 2018, gross recoverable taxes that are primarily denominated in Brazilian Reais amounted to \$16 million (December 31, 2017 – \$22.5 million). As at September 30, 2018, the provision for recoverable taxes was approximately \$4.1 million (December 31, 2017 - \$7.3 million). Consequently, the net book value of recoverable taxes as at September 30, 2018 was \$11.9 million (December 31, 2017 – \$15.2 million).

Certain taxes paid in Brazil on consumables and property, plant and equipment generate tax credits through various mechanisms. The Company is currently working on several initiatives to ensure optimum utilization of those tax credits, which include assessment of the tax credits for offset against taxes otherwise payable and restitution in cash.

The Company has recorded a provision against its recoverable taxes in Brazil given the limited methods available to recover such taxes and the length of time it will take to recover such taxes. The provision reduces the net carrying amount of value added taxes and other taxes to their estimated recoverable value.

The Company continues to pursue approval of Federal VAT input tax credits with respect to the years 2008 through 2011 for its MSOL operating subsidiary. MSOL is the operating subsidiary for the Turmalina complex comprising the Turmalina mine, and the Caeté complex comprising the Pilar and Roça Grande mines. The Company received a cash refund in the amount of R\$3.5 million (approximately \$1 million) in March 2016, related to MSOL. In July 2016, the Company initiated a lawsuit to obtain a court order to force the tax authority to review the Company's remaining tax credits for MSOL with respect to the years 2008 to 2011, amounting to R\$36 million (approximately \$11 million). A court order was granted and by November 2016, the Tax Authority reviewed the claim and granted a favorable decision to partially recognize the amount claimed, deeming R\$1.5 million (approximately \$0.5 million) due to the Company. The Company collected this amount and proceeded to appeal the Tax Authority's review result in pursuit of further tax credit refund recognition on this claim.

ICMS is a type of value added tax which can either be sold to other companies (usually at a discount rate of 15% – 30%) or be used to purchase specified machinery and equipment, as subject to approval by government authority. The ICMS credits can only be realized in the state where they were generated; in the case of Jaguar, this is in the state of Minas Gerais, Brazil. In the three and nine months ended September 30, 2018, the Company sold R\$3.1 million and R\$5.9 million (approximately \$0.9 and \$1.6 million), respectively, in ICMS export tax credits and received approval from the state tax authority to sell an additional R\$8.6 million (approximately \$2.4 million) in ICMS export tax credits. As at September 30, 2018, the Company held R\$7.8 million (approximately \$2.2 million) in ICMS export tax credits authorized for sale but not yet sold (December 31, 2017 R\$ 5 million, approximately \$1.5 million).

#### **Impairment**

The Turmalina, Caeté, and Paciência projects are cash generating units ("CGUs"), which include property, plant and equipment, mineral rights, deferred exploration costs, and asset retirement obligations net of amortization. The CGUs also include mineral exploration project assets relating to properties, not in production such as mineral rights and deferred exploration costs. A CGU is generally an individual operating mine or development project.

For the three and nine months ended September 30, 2018, there were no indicators of impairment or reversal of past impairment charges.

# Non-Operating Expenses (Recoveries)

	Thre	e n	onths ende	d Nine				months ended		
(\$ thousands)	S	ept	ember 30,			S	epte	ember 30,		
	2018	2017	Change <b>2018</b> 2017				2017	Change		
Foreign Exchange Loss (Gain)	\$ (318)	\$	638	(150%)	\$	(1,604)	\$	628	(355%)	
Financial instruments loss (gain)	412		20	1960%		2,178		(327)	(766%)	
Finance costs	718		1,034	(31%)		2,850		4,053	(30%)	
Other non-operating expenses (recoveries)	68		(252)	(127%)		244		72	239%	
Non-operating expenses	\$ 880	\$	1,440	(39%)	\$	3,668	\$	4,426	(17%)	

During the three and nine months ended September 30, 2018, finance costs mainly represent interest on debt and accretion expense.

## **Sprott Resource Lending Facility**

On November 7, 2016, the Company entered into an agreement with Sprott Private Resource Lending (Collector) LP ("Sprott Lending") for a secured loan facility (the "Sprott Facility") totaling \$10 million ("Tranche 1") to fund accelerated growth exploration initiatives. Tranche 1 of the Sprott Facility is payable over a term of 30 months, in equal monthly repayments of principal, plus interest, with an interest rate of 6.5% per annum, plus the greater of US dollar LIBOR or 1.25% per annum. On September 9, 2017, the Company entered into an agreement with Sprott Lending for an additional tranche of the Sprott Facility totaling \$5 million ("Tranche 2"). Tranche 2 of the Sprott Facility is payable over a term of 36 months, in equal monthly repayments of principal, plus interest, with an interest rate of 6.5% per annum, plus the greater of US dollar LIBOR or 1.25% per annum.

In May 2018, the Company reached an agreement for a new \$7 million, unsecured customer advance with Auramet International LLC ("Auramet advance") that was used in conjunction with a new Brazil debt facility of \$2.4 million to fully repay the Company's Secured Loan facility with Sprott Resource Lending, effective September 30, 2018. During the three and nine months ended September 30, 2018, the Company made principal repayments of \$7.9 million and \$9.4 million, respectively, (\$1.1 million and \$2.1 million, respectively, during the three and nine months ended September 30, 2017), and interest payments of \$143,000 and \$324,000, respectively (\$191,000 and \$376,000, respectively, during the three and nine months ended September 30, 2017).

The Sprott Facility was a financial liability and was initially measured at fair value and subsequently measured at amortized cost using the effective interest method. During the three and nine months ended September 30, 2018, \$248,000 and \$336,000, respectively, was recorded as finance costs in the interim condensed consolidated statements of operations and comprehensive loss related to the remaining accretion of the transaction costs (\$101,000 and \$203,000, respectively, for the three and nine months ended September 30, 2017). The Sprott Facility was fully repaid, effective September 30, 2018.

#### **Auramet Advance**

On May 9, 2018, the Company entered into an agreement with Auramet International LLC for an unsecured customer advance ("Auramet advance") in the form of a gold purchase and sale agreement whereby Auramet extended up to \$7 million in minimum prepayment amounts each of \$1 million to Jaguar. As part of the agreement, the Company is required to maintain a \$2 million margin deposit with Auramet. Funds advanced under the Customer Advances are subject to interest at 1-month LIBOR + 7.5%, and hold a covenant to maintain a minimum cash balance of \$5 million, including a margin deposit. The Auramet advance matures, requiring settlement in full, by May 31, 2019. On November 9th, 2018, the Company restructured its customer advance contract with Auramet International LLC to extend its maturity from May 31, 2019 to October 31, 2019.

On May 9th, 2018, the Company also agreed to a European style gold call options agreement with Auramet whereby Auramet holds the right to purchase up to 7,000 ounces of gold (1,000 ounces per month) at a strike price of US\$1,450 per ounce on expiration dates maturing monthly between May 2019 and November 2019. As at and for the three and nine months ended September 30, 2018, the call options remained outstanding, spot gold prices remained below the call option's strike price, and the Company recorded no gain or loss to the condensed interim statements of operations and comprehensive loss (\$nil and \$nil, respectively, for the three and nine months ended September 30, 2017).

Prior to September 30, 2018, Jaguar collected \$7 million in proceeds pursuant to the Auramet Advance, and in July 2018, the Company made the \$2 million margin deposit.

#### Taxes

#### **Brazilian Taxes**

Brazilian tax regulation involves three jurisdictions and tax collection levels: Federal, State and Municipal. The main taxes levied are: corporate income tax with companies generally subject to income tax at a rate of 25%, social contribution tax on the net profit at a current rate of 9%, and VAT taxes at a rate of 9.25% for PIS/CONFINS and 12-18% for ICMS.

PIS and COFINS are Federal taxes imposed monthly on gross revenue earned by legal entities. The calculation method is, in the Company's case, non-cumulative, under which PIS and COFINS are levied on gross revenue at 1.65% and 7.6%, respectively, with deductions of input tax credits for expenses strictly connected to the company's business and prescribed by the regulating laws. The export of goods and services are exempt provided funds effectively enter the country. PIS and COFINS are due on importations of goods and services from abroad (i.e. PIS-Import and CO-FINS-Import).

In June 2018, the Company decided to enter into an Administrative Agreement with the Minas Gerais State Tax authority in order to pay R\$8.3 million (approximately \$2.2 million) in historical ICMS taxes due. In accordance with the agreement, the Company will pay its ICMS debt due in 60 monthly installments using ICMS tax credits (non-cash). This debt has its origin in ICMS levied on electricity ("Demanda Contratada") in which the Superior Courts have been ruled in the taxpayer's favour. The Company had filed an appeal against the levy of the ICMS and the likelihood of the Company losing the appeal was remote. Although the Company would likely win the judicial lawsuit, the Company took the decision to pay the mentioned debt in instalments, using its tax credits (non-cash), in order to facilitate and accelerate its ICMS tax credits recovery as cash.

In September 2018, the Company received a social security tax (INSS - Instituto Nacional do Seguro Social) tax assessment from Brazil's Federal Tax Authority with respect to fiscal years 2014 and 2015, challenging the social security tax rate basis applied by the Company, which as per Brazilian tax legislation is variable based on the Company's historical work accident rate. The tax assessment claimed entitlement to a total additional R\$1.9 million (approximately \$0.5 million) due from the Company. Upon review, the Company and its legal counsel assessed its probability of loss as more likely than not and entered a settlement agreement with the Federal Tax Authority to reduce its exposure to fines and interest and extend its cash flow impact, agreeing to pay a total of R\$1.5 million (approximately \$0.4 million), in cash, over 60 equal monthly installments starting in October 2018.

#### **Government Royalty**

In July 2017, an executive decree was published increasing the Brazilian royalty that is levied on gold sales, Compensação Financeira pela Exploração de Recursos Minerais ("CFEM"), from 1% to 1.5% effective November 1, 2017. The legislation also outlines a change in the methodology for calculating the royalty from being calculated on gross revenue less refining charges and insurance, as well as any applicable sales taxes, to being calculated on gross revenue only.

## **Income and Deferred Taxes Expenses**

		Thre	e n	nonth	s ended							
(\$ thousands)		9	ept	embe	er 30,		September 30,					
		2018		2017		Change		2018	2017		Change	
Current income tax expense	ç	\$ 1	2	\$	174	(93%)	\$	35	\$	1,289	(97%)	
Income tax expense		\$ 1	2	\$	174	(93%)	\$	35	\$	1,289	(97%)	

The income tax provision is subject to a number of factors, including the allocation of income between different countries, different tax rates in various jurisdictions, the non-recognition of tax assets, foreign currency exchange rate movements, changes in tax laws and the impact of specific transactions and assessments. Due to the number of factors that can potentially impact the effective tax rate and the sensitivity of the tax provision to these factors, it is expected that the Company's effective tax rate will fluctuate in future periods.

# **REVIEW OF FINANCIAL CONDITION**

# **Outstanding Debt**

Total debt outstanding as at September 30, 2018, was \$8 million, compared to \$17.5 million as at December 31, 2017 (of which \$9.4 million was the amortized cost of the Sprott Facility).

# Liquidity and Cash Flow

The Company had working capital of \$1.6 million as at September 30, 2018 (\$14.1 million as at December 31, 2017). Working capital as at September 30, 2018, includes \$5.1 million in loans from Brazilian banks (\$5.2 million as at December 31, 2017), which mature every six months and are expected to continue to be rolled forward.

	September 30,	December 31,
	2018	2017
Cash and cash equivalents	\$ 6,672	\$ 18,628
Non-cash working capital		
Other current assets:		
Restricted cash	5,152	2,926
Inventory	11,867	12,257
Recoverable taxes	8,044	10,848
Other accounts receivable	5,427	3,576
Prepaid expenses and advances	906	1,241
Current liabilities:		
Accounts payable and accrued liabilities	(16,567)	(17,896)
Notes payable	(7,444)	(12,385)
Customer advances	(7,000)	-
Current tax liability	-	(466)
Other taxes payable	(460)	-
Reclamation provisions	(336)	(528)
Other provisions and liabilities	(4,533)	(4,069)
Derivatives payable	(138)	-
Working capital <sup>1</sup>	\$ 1,590	\$ 14,132

 $<sup>^{</sup>m 1}$  This is a non-GAAP financial performance measure with no standard definition under IFRS.

The use of funds during the three and nine months ended September 30, 2018, is outlined below:

	Three months ended					Nine months ended						
(\$ thousands)		Septem	ber	30,		Septem	ber	30,				
		2018		2017		2018		2017				
Cash generated from operating activities	\$	6,566	\$	7,509	\$	16,004	\$	9,583				
Investing activities												
Capital expenditures on equipment and brownfield exploration												
Mineral exploration projects	\$	(38)	\$	(175)	\$	(196)	\$	(193)				
Purchase of property, plant and equipment		(7,931)	\$	(5,185)		(22,501)		(18,681)				
Proceeds from disposition of property, plant and equipment		36		-		168		306				
Proceeds from disposition of Mineral exploration projects		-		2,000		-		2,200				
Cash used in investing activities	\$	(7,933)	\$	(3,360)	\$	(22,529)	\$	(16,368)				
Financing activities												
Cash received upon issuance of shares via private placement	\$	-	\$	-	\$	-	\$	5,775				
Cash received upon issuance of debt		-		-		2,475		8,391				
Cash received upon issuance of customer advances		-		-		7,000		-				
Repayment of debt		(1,278)		(5,006)		(13,182)		(12,481)				
Restricted cash margin deposits paid		-		-		(2,000)		-				
Interest paid		(64)		(378)		(539)		(1,481)				
Cash provided by (used in) financing activities	\$	(1,342)	\$	(5,384)	\$	(6,246)	\$	204				
Effect of exchange rate changes on cash balances		137	\$	(228)		815		(480)				
Net increase (decrease) in cash and equivalents	\$	(2,572)	\$	(1,463)	\$	(11,956)	\$	(7,061)				

The \$6.6 million results in operating cash flows for Q3 2018 is primarily due to the decrease in cash operating costs, which is a result of the cost-cutting measures and the sharp devaluation of the Brazilian Real, with the average exchange rate being R\$3.95 in Q3 2018 and \$3.61 in YTD 2018 per US dollar, compared to R\$3.17 and R\$3.18 in the respective period of 2017.

# **Contractual Obligations and Commitments**

The Company's contractual obligations as at September 30, 2018, are summarized as follows:

	Le	ss than 1		1 - 3 years		F	More	than 5	Total
(\$ thousands, except where indicated)		year				- 5 years	years		IOtal
Financial Liabilities									
Accounts payable and accrued liabilities 1	\$	16,567	\$	-	\$	-	\$	-	\$ 16,567
Notes payable									
Principal									
Bank indebtedness <sup>2</sup>		5,149		-		-		-	5,149
Capital leasing obligations		1,792		162		-		-	1,954
Vale note		625		500		-		-	1,125
Interest		325		3		-		-	328
Customer advances									
Principal									
Auramet advance		7,000		-		-		-	7,000
Interest		395		-		-		-	395
Total financial liabilities	\$	31,853	\$	665	\$	-	\$	-	\$ 32,518
Other Commitments									
Operating lease agreements	\$	43	\$	-	\$	-	\$	-	\$ 43
Suppliers' agreements3	\$	471		-		-		-	471
Derivatives payable		138		-		-		-	138
Other provisions and liabilities		4,533		5,962		-		-	10,495
Reclamation provisions <sup>5</sup>		382		4,224		5,264		8,405	18,275
Total other commitments	\$	5,567	\$	10,186	\$	5,264	\$	8,405	\$ 29,422
Total	\$	37,420	\$	10,851	\$	5,264	\$	8,405	\$ 61,940

<sup>&</sup>lt;sup>1</sup> Amounts payable as at September 30, 2018.

## **CAPITAL STRUCTURE**

The capital structure of the Company as at September 30, 2018, is outlined below:

All amounts in \$ thousands, except number of common shares	As at Se	As at September 30, 2018			
Bank indebtedness	\$	5,149			
Capital leasing obligations		1,863			
Vale note		1,058			
Customer advances		7,000			
Total debt	\$	15,070			
Less: cash and cash equivalents		(6,672)			
Total net debt¹	\$	8,398			
Number of common shares outstanding		325.6 million			

<sup>1</sup> Net debt is a Non-IFRS Performance Measure and is defined as total indebtedness excluding unamortized transaction costs and premiums or discounts associated with debt, less cash and cash equivalents. Net debt provides a measure of indebtedness in excess of the current cash available. The Company reduces gross indebtedness by cash and cash equivalents on the basis that they could be used to pay down debt.

 $<sup>^{2}</sup>$  Bank indebtedness represents the principal on Brazilian bank loans that are renewed every six months.

<sup>&</sup>lt;sup>3</sup> Purchase obligations for supplies and consumables - includes commitments related to new purchase obligations to secure a supply of cyanide, reagents, mill balls and other spares. The Company has the contractual right to cancel the mine operation contracts with 30 days advance notice.

<sup>&</sup>lt;sup>4</sup> Purchase obligations for supplies and consumables - includes commitments related to new purchase obligations to secure a supply of cyanide, reagents, mill balls and other spares.

<sup>&</sup>lt;sup>5</sup> Reclamation provisions - amounts presented in the table represent the undiscounted uninflated future payments for the expected cost of reclamation.

### **OFF-BALANCE SHEET ITEMS**

The Company does not have any off-balance sheet investment or debt arrangements.

### RELATED PARTY TRANSACTIONS

The Company incurred legal fees from Azevedo Sette Advogados ("ASA"), a law firm where Luis Miraglia, a director of Jaguar, is a partner. Fees paid to ASA are recorded at the exchange amount, representing the amount agreed to by the parties and included in general and administrative expenses in the interim condensed consolidated statements of operations and comprehensive loss. Legal fees paid to ASA for the three and nine months ended September 30, 2018, were \$nil and \$42,000, respectively (\$43,000 and \$100,000, respectively, for the three and nine months ended September 30, 2017).

On November 7, 2016, and on September 9, 2017, the Company entered into two secured loan facilities with Sprott Private Resource Lending (Collector) LP, which is an indirectly wholly owned subsidiary of Sprott Inc., of which the Chairman is Mr. Eric Sprott. Mr. Sprott was a shareholder, holding approximately 21.9% of the common shares as at September 30, 2018. On September 28, 2018, the Company fully repaid both secured loan facilities.

#### DEVELOPMENT AND EXPLORATION PROJECTS

# Development Project – Gurupi

Avanco - Gurupi Project Earn-In Agreement

On October 4, 2016, the Company announced that it 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. On September 17, 2017, Jaguar and Avanco agreed to a revised, accelerated earn-in agreement with Avanco, pursuant to which Avanco will earn up to a 100% ownership interest in the Gurupi Project after meeting some short-term milestones and making a series of payments to Jaguar.

#### Main Terms of the Revised Accelerated Earn-in Agreement

Upon the satisfactory completion of certain closing conditions, the agreement provides Avanco with the right to acquire 100% of Jaguar's interest in the Gurupi Project by paying to Jaguar an aggregate cash payment of \$4 million in two installments of \$2 million each (\$2 million, due immediately upon signature and \$2 million due immediately upon transfer of ownership) and committing to a net smelter royalty due to Jaguar. Jaguar received an initial aggregate cash payment of \$4 million, in two installments of \$2 million each in September and October 2017. The Company expects to collect the additional \$5 million from Avanco in a series of 10 instalments of \$500,000 during fiscal year 2019, starting in the month in which Avanco receives "clear title and access" to the project.

Within 24 months of the initial \$4 million payment, Avanco will arrange to have published an Australian Joint Ore Reserve Committee (JORC) code compliant technical report regarding the Project with mineral reserves in excess of 500,000 ounces of gold. Any delay in this milestone will result in a project delay fee payable to Jaguar of \$250,000 per nine months of delayed period. Within 60 months of the initial \$4 million payment, Avanco will aim to commission the Gurupi mine and plant. Any delay in this commissioning milestone will result in a separate project delay fee payable to Jaguar of \$250,000 per nine months of delayed period.

Consistent with the original earn-in agreement, Jaguar will retain a life of mine Net Smelter Return ("NSR") royalty ("Royalty") from production at Gurupi. The royalty will be 1% NSR on the first 500,000 ounces of gold or gold ounce equivalents sold; 2% NSR on sales from 500,001 to 1,500,000 ounces of gold or gold ounce equivalents; and 1% NSR on gold sales exceeding 1,500,000 ounces of gold or gold ounce equivalents.

# **Greenfield Exploration**

Jaguar currently holds approximately 64,000 hectares of mineral rights in Brazil. New mining legislation in Brazil has been tabled and the outcome of any mining law reform is, as of yet, unknown. The Company is currently reviewing its greater tenement portfolio with the aim of highlighting opportunities to unlock and leverage unrealized value that can be attributed to a strategic portfolio of advanced, partially tested or untested exploration targets in these areas. This review will inform discussions on future exploration or divestment decisions for these areas. Holding costs of the assets which are considered strategic remain minimal.

Apart from properties in relatively close proximity to the existing mining operations, the only significant greenfield asset within the exploration portfolio is the Pedra Branca target where good grade surface expressions were identified by mapping and channel samples and have led to some 8,000 metres of exploration drilling to date. Due to prior financial constraints, this prospect has remained dormant but offers opportunity for further exploration should funds be available.

## **Pedra Branca Project**

The Pedra Branca Project is located in the State of Ceará in northeastern Brazil and is currently comprised of 24 exploration licences, totalling 38,926 hectares covering a 38-kilometre section of a regional shear zone. Final exploration reports and a Preliminary Economic Analysis ("PEA") have been delivered to the National Department of Mineral Production (DNPM) for three of these licences. The concessions are located in and around municipal areas with good infrastructure. The mineralized structures are open along strike with potential for significant gold mineralization.

The Pedra Branca Project is 100% owned by Jaguar. Based on the acquisition agreement of the project entered into with Glencore Xstrata plc. ("Glencore"), Glencore holds rights to a NSR of 1% on future gold production and rights of first refusal on any Base Metal Dominant Deposit (as defined in the amendment) discovered which, if exercised, would allow Glencore to hold 70% of equity in a newly formed legal entity to hold such rights upon payment of 300% of the Company's exploration expenditures incurred exclusively on the relevant Base Metal Dominant Area of the property.

# **QUALIFIED PERSON**

Scientific and technical information contained in this MD&A have been reviewed and approved by Jonathan Victor Hill, BSc (Hons) (Economic Geology - UCT), Senior Expert Advisor Geology and Exploration to the Jaguar Mining Management Committee, 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").

# **OUTSTANDING SHARE DATA**

The following are the issued and outstanding common shares and numbers of shares issuable under share-based compensation and warrants:

	As at November 12, 2018
Issued and outstanding common shares	328,644,864
Stock options	9,067,916
Deferred share units	5,748,686
Total	343,461,466

On October 25, 2018, 3,073,411 Finder Warrants were exercised at C\$0.15 per common share and 3,073,411 common shares were issued by the Company, resulting in C\$461,000 (approximately \$351,000) share issuance proceeds to the Company.

## NON-IFRS PERFORMANCE MEASURES

The Company has included the following non-IFRS performance measures in this document: cash operating costs per tonne of ore processed, cash operating costs per ounce of gold sold, all-in sustaining costs per ounce of gold sold, cash operating margin per ounce of gold sold, all-in sustaining margin per ounce sold, adjusted operating cash flow, free cash flow, earnings before tax, depreciation and amortization ("EBITDA"), Working Capital, and adjusted EBITDA. These non-IFRS performance measures do not have any standardized meaning prescribed by IFRS and, therefore, may not be comparable to similar measures presented by other companies.

The Company believes that, in addition to conventional measures prepared in accordance with IFRS, certain investors use this information to evaluate the Company's performance. Accordingly, they are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. More specifically, Management believes that these figures are a useful indicator to investors and management of a mine's performance as they provide: (i) a measure of the mine's cash margin per ounce, by comparison of the cash operating costs per ounce to the price of gold; (ii) the trend in costs as the mine matures; and (iii) an internal benchmark of performance to allow for comparison against other mines. The definitions of these performance measures and reconciliation of the non-IFRS measures to reported IFRS measures are outlined below.

## Reconciliation of Cash Operating Costs, All-In Sustaining Costs and All-In Costs per Ounce Sold

(\$ thousands, except where indicated)	Three mor			Nine months ended September 30,			
(F the second of	2018	2017		2018		2017	
Operating costs (per note 17 of the consolidated FS)	\$ 12,809	\$	16,116	\$ 40,564	\$	53,614	
Cost adjustment <sup>1</sup>	-		403	-		930	
Adjusted operating expenses	12,809		16,519	40,564		54,544	
General & administration expenses	2,258		2,521	7,125		7,736	
Corporate stock-based compensation	417		148	932		850	
Sustaining capital expenditures	7,864		4,624	21,493		15,233	
All-in sustaining cash costs	23,348		23,812	70,114		78,363	
Reclamation - accretion (operating sites)	4		36	47		206	
All-in sustaining costs	\$ 23,352	\$	23,848	\$ 70,161	\$	78,569	
Non-sustaining capital expenditures	641		1,138	2,241		3,401	
Exploration and evaluation costs (greenfield)	125		107	591		686	
Reclamation - accretion (non-operating sites)	16		3	67		47	
Care and maintenance (non-operating sites)	417		310	1,824		995	
All-in costs	\$ 24,551	\$	25,406	\$ 74,884	\$	83,698	
Ounces of gold sold	20,441		20,422	56,908		62,909	
Cash operating costs per ounce sold	\$ 627	\$	809	\$ 713	\$	867	
All-in sustaining costs per ounce sold	\$ 1,142	\$	1,168	\$ 1,233	\$	1,249	
All-in costs per ounce sold	\$ 1,201	\$	1,244	\$ 1,316	\$	1,330	
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Average realized gold price	\$ 1,244	\$	1,276	\$ 1,292	\$	1,250	
Cash operating margin per ounce sold	\$ 617	\$	467	\$ 579	\$	383	
All-in sustaining margin per ounce sold	\$ 102	\$	108	\$ 59	\$	1	

<sup>1</sup> Cost adjustment includes any unusual items recorded during the quarter that do not relate to the current quarter's cost of sales or are non-cash items.

# Reconciliation of Cash Operating Costs, All-In Sustaining Costs per Ounce Sold by Mine Complex/Site

	Three months ended					Nine months ended				
(\$ thousands, except where indicated)	September 30,					Septen	nber 30,			
		2018		2017		2018		2017		
Turmalina Complex										
Operating costs	\$	6,218	\$	6,802	\$	18,308	\$	24,310		
Sustaining capital expenditures		3,952		2,216		12,294		7,273		
All-in sustaining costs <sup>1</sup>	\$	10,170	\$	9,018	\$	30,602	\$	31,583		
Ounces of gold sold		8,609		9,082		24,633		33,433		
Cash operating costs per ounce sold <sup>1</sup>	\$	722	\$	749	\$	743	\$	727		
All-in sustaining cost per ounce sold <sup>1,2</sup>	\$	1,181	\$	993	\$	1,242	\$	945		
Caeté Complex										
Operating costs	\$	6,591	\$	9,706	\$	22,256	\$	30,235		
Sustaining capital expenditures		3,912		2,408		9,199		7,960		
All-in sustaining costs <sup>1</sup>	\$	10,503	\$	12,114	\$	31,455	\$	38,195		
Ounces of gold sold		11,832		11,339		32,275		29,475		
Cash operating costs per ounce sold <sup>1</sup>	\$	557	\$	856	\$	690	\$	1,026		
All-in sustaining cost per ounce sold <sup>1,2</sup>	\$	888	\$	1,068	\$	975	\$	1,296		
Pilar Mine										
Operating costs	\$	6,591	\$	7,891	\$	21,156	\$	25,039		
Sustaining capital expenditures		3,912		2,338		9,199		6,897		
All-in sustaining costs <sup>1</sup>	\$	10,503	\$	10,229	\$	30,355	\$	31,936		
Ounces of gold sold		11,832		9,820		31,381		25,867		
Cash operating costs per ounce sold <sup>1</sup>	\$	557	\$	804	\$	674	\$	968		
All-in sustaining cost per ounce sold <sup>1,2</sup>	\$	888	\$	1,042	\$	967	\$	1,235		

<sup>&</sup>lt;sup>1</sup> Results of individual mines may not add up to the consolidated numbers due to rounding.

## **Reconciliation of Free Cash Flow**

	Three months ended					Nine months ended					
(\$ thousands, except where indicated)		September 30,						September 30,			
	<b>2018</b> 2017			2017		2018	2017				
Cash generated from operating activities	\$	6,566	\$	7,509	\$	16,004	\$	9,583			
Sustaining capital expenditures		(7,864)		(4,624)		(21,493)		(15,233)			
Free cash flow	\$	(1,298)	\$	2,885	\$	(5,489)	\$	(5,650)			
Ounces of gold sold		20,441		20,422		56,908		62,909			
Free cash flow per ounce sold	\$	(63)	\$	141	\$	(96)	\$	(90			

<sup>&</sup>lt;sup>1</sup> Cash operating costs and all-in sustaining costs are all non-gaap financial performance measures with no standard definition under IFRS. Results of individual mines may not add up to the consolidated numbers due to rounding.

 $<sup>^{2}</sup>$  The AISC calculation by mine site does not include allocation of Corporate (Toronto and Belo Office G&A).

## Reconciliation of Net Loss to EBITDA and Adjusted EBITDA

	Three months ended					Nine months ended					
(\$ thousands, except where indicated)	September 30,				30,						
		2018		2017		2018		2017			
Net loss	\$	2,208	\$	(7,664)	\$	(904)	\$	(18,861)			
Income tax expense		12		174		35		1,289			
Finance costs		718		1,034		2,850		4,053			
Depreciation and amortization		4,951		5,949		14,328		17,468			
EBITDA	\$	7,889	\$	(507)	\$	16,309	\$	3,949			
Changes to legal provisions and recoverable VAT		509		617		1,990		2,813			
Foreign exchange (gain)		(318)		638		(1,604)		628			
Stock-based compensation		417		148		932		850			
Financial instruments loss (gain)		412		20		2,178		(327)			
Adjusted EBITDA	\$	8,909	\$	6,094	\$	19,805	\$	14,020			

<sup>&</sup>lt;sup>1</sup> This is a non-gaap financial performance measure with no standard definition under IFRS.

# **RISKS AND UNCERTAINTIES**

The business of the Company involves significant risk due to the nature of mining, exploration and development activities. Certain risk factors are related to the mining industry in general while others are specific to Jaguar. The Company's exposure to risks and other uncertainties are particularly described in the Company's Annual Information Form for the year ended December 31, 2017, filed on SEDAR under the profile of Jaguar Mining Inc. Such risk factors could materially affect the future operating results of the Company and could cause actual events to differ materially from those described in forward-looking statements relating to the Company.

Further exploration on, and development of, the Company's properties will require additional capital. In addition, a positive production decision on any of the Company's development projects would require significant capital for project engineering and construction. Accordingly, the continuing development of the Company's properties will depend upon the Company's ability to either generate sufficient funds internally or to obtain financing through the joint venturing of projects, debt financing, equity financing or other means.

The Company's principal operations and mineral properties are located in Brazil. There are additional business and financial risks inherent in doing business in Brazil as compared to the United States or Canada. Since 1996, Transparency International has published the Corruption Perceptions Index ("CPI") annually ranking countries by their perceived levels of corruption, as determined by expert assessments and opinion surveys. The CPI ranks countries on a scale from 100 (very clean) to 0 (highly corrupt). In 2016 and out of 176 countries in the World, Canada ranked 9th with a CPI score of 82, the United States ranked 18th with a CPI score of 74, and Brazil ranked 79th with a CPI score of 40. For North and South America, the average score on the 2016 Corruption Perceptions Index was 44 out of 100. Anything below 50 indicates governments are failing to tackle corruption and it represents a challenge in those countries requiring extra attention by those who conduct business there.

Corruption does not only occur with the misuse of public, government or regulatory powers; it also can occur in businesses' supplies, inputs and procurement functions (such as illicit rebates, kickbacks and dubious vendor relationships), as well as the inventory and product sales functions (such as inventory shrinkage or skimming). Employees as well as external parties (such as suppliers, distributors and contractors) have opportunities to commit procurement fraud and other wrongs against the Company. While corruption, bribery and fraud risks can never be fully eliminated, the Company reviews and implements controls to reduce the likelihood of these irregularities occurring.

#### CRITICAL ACCOUNTING ESTIMATES

The preparation of the condensed interim consolidated financial statements in conformity with IFRS requires Management to make estimates, judgments, and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the period. Actual results could differ from those estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected. Certain estimates, such as those related to the assessment of recoverability of the carrying amount of property, plant, equipment and mineral exploration projects, royalty receivable, valuation of recoverable taxes, deferred tax assets and liabilities, reclamation provisions, derivatives, liabilities associated with certain long-term incentive plans, measurement of inventory, provisions for legal actions and contingencies, and disclosure of contingent assets and liabilities depend on subjective or complex judgments about matters that may be uncertain. Changes in these estimates could materially impact the Company's condensed interim consolidated financial statements.

The critical accounting estimates, judgments, and assumptions applied in the preparation of the Company's condensed interim consolidated financial statements for the three and nine months ended September 30, 2018, are consistent with those applied and disclosed in the audited annual consolidated financial statements for the year ended December 31, 2017. For details of these estimates, judgments, and assumptions, please refer to the Company's audited annual consolidated financial statements for the year ended December 31, 2017, which are available on the Company's website and on SEDAR.

## **CHANGES IN ACCOUNTING POLICIES**

The accounting policies and estimates applied in these condensed interim consolidated financial statements are consistent with those used in the Company's audited annual consolidated financial statements for the year ended December 31, 2017, except for a change in the units of production depreciation, a definition of the accounting treatment for customer advances, that were effective and adopted as of January 1, 2018:

- Customer advances Significant judgment was required in determining the appropriate accounting treatment for interest-bearing customer advances. The upfront cash deposit received from the customer is accounted for as deferred revenue, as the Company has determined that such will be recognized through the delivery of non-financial products (gold concentrate) rather than cash or financial assets. It is the Company's intentions to settle the advance obligations through its own production and, if this were not possible, this would lead to the advance arrangement becoming a derivative since a cash settlement payment may be required. This would cause a change to the accounting treatment, resulting in the revaluation of the fair value of the agreement through the income statement on a recurring basis.
- Units of production depreciation -As of January 1, 2018, the Company changed the accounting estimates used to depreciate the Caeté's mining properties and mineral exploration projects on a unit-of-production basis from using the expected amount of recoverable reserves to the use of the expected amount of recoverable mineral resources. The change in accounting estimate was made to ensure depreciation reflects management's best estimate of the useful life of the Caeté project and has been accounted for on a prospective basis. Due to the annual updating of recoverable mineral resources, it is impracticable to estimate the impact of the change in estimate in future periods.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this MD&A constitute "forward-looking information" within the meaning of applicable Canadian securities legislation. This forward-looking information includes, but is not limited to, statements concerning the Company's future objectives, Measured and Indicated Mineral Resources, Proven and Probable Mineral Reserves, their average grade, the commencement period of production, cash operating costs per ounce and completion dates of feasibility studies, gold production and sales targets, capital expenditure costs, future profitability and growth in mineral reserves. Forward-looking information 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. Forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results or performance to be materially different from any future results or performance expressed or implied by the forwardlooking information. These factors include the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drilling results and other geological data, fluctuating gold prices and monetary exchange rates, the possibility of project delays and cost overruns or unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future, uncertainties related to production rates, timing of production and the cash and total costs of production, changes in applicable laws including laws related to mining development, environmental protection, and the protection of the health and safety of mine workers, the availability of labour and equipment, the possibility of civil insurrection, labour strikes and work stoppages and changes in general economic conditions. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those contained in forward-looking information, there may be other factors that could cause actions, events or results to differ from those anticipated, estimated or intended.

This forward-looking information represents the Company's views as of the date of this MD&A. The Company anticipates that subsequent events and developments may cause the Company's views to change. The Company does not undertake to update any forward-looking information, either written or oral, that may be made from time to time by, or on behalf of the Company, subsequent to the date of this discussion, other than as required by law. For a discussion of important factors affecting the Company, including fluctuations in the price of gold and exchange rates, uncertainty in the calculation of mineral resources, competition, uncertainty concerning geological conditions and governmental regulations and assumptions underlying the Company's forward-looking information, see "CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS" and "RISK FACTORS" in the Company's Annual Information Form for the year ended December 31, 2017 that can be accessed under the profile of Jaguar Mining Inc. on SEDAR at www.sedar.com. Further information about the Company is available on its corporate website at www.jaguarmining.com.