

# MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE SECOND QUARTER ENDED JUNE 30, 2016

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# MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE SECOND QUARTER ENDED JUNE 30, 2016

This Management's Discussion and Analysis ("MD&A") should be read in conjunction with the condensed interim consolidated financial statements for the three and six months ended June 30, 2016 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 <a href="www.sedar.com">www.sedar.com</a>). 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 August 9, 2016.

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 2016	January 1, 2016 – June 30, 2016	YTD 2015	January 1, 2015 – June 30, 2015
Q1 2016	January 1, 2016 – March 31, 2016	Q1 2015	January 1, 2015 – March 31, 2015
Q2 2016	April 1, 2016 – June 30, 2016	Q2 2015	April 1, 2015 – June 30, 2015

## **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 ("Mineração Turmalina Ltda" or "MTL") and Caeté Gold Mine Complex ("Mineração Serras do Oeste Ltda" or "MSOL") which combined produce more than 90,000 ounces of gold annually. The MSOL legal entity also owns the Paciência Gold Mine Complex, which has been on care and maintenance since 2012.

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

We benefit from the exploration and development of the Company's existing brownfield land package and from mineral concessions comprising approximately 25,000 hectares, proximal 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, more than 131,000 hectares of mineral concessions in the State of Maranhão, where the Company's Gurupi Project is located, and approximately 35,000 hectares in the State of Ceará, where the Company's Pedra Branca Project is located, provide significant future upside potential. The Company may consider the acquisition, exploration, development, and operation of other gold properties.

## **Q2 2016 FINANCIAL & OPERATING HIGHLIGHTS**

(\$ thousands, except where indicated)	For the three months June 30,			s ended	For the six months ended June 30,			
	<b>2016</b> 2015				2016		2015	
Financial Data								
Revenue	\$	29,996	\$	22,820	\$	56,660	\$	51,567
Operating expenses		17,887		16,808		35,466		36,941
Depreciation		8,389		3,233		16,091		9,637
Gross margin		3,720		2,779		5,103		4,989
Gross margin (excluding depreciation) <sup>1</sup>		12,109		6,012		21,194		14,626
Loss on conversion option embedded in convertible debt		25,189		-		45,944		(3)
Net loss		(26,866)		(4,383)		(41,867)		(17,328)
Per share ("EPS")		(0.24)		(0.04)		(0.38)		(0.16)
EBITDA <sup>1</sup>		(18,044)		(137)		(23,904)		(1,646)
Adjusted EBITDA <sup>1,2</sup>		8,859		2,208		14,075		7,277
Adjusted EBITDA per share <sup>1</sup>		0.08		0.02		0.13		0.07
Cash operating costs (per ounce sold) <sup>1</sup>		758		876		750		850
All-in sustaining costs (per ounce sold) <sup>1</sup>		1,203		1,203		1,134		1,174
Average realized gold price (per ounce) <sup>1</sup>		1,251		1,190		1,209		1,188
Cash generated from operating activities		10,435		1,638		19,961		13,815
Sustaining capital expenditures <sup>1,3</sup>		7,865		2,518		12,876		7,307
Non-sustaining capital expenditures 1,3		1,245		678		1,629		1,270
Total capital expenditures <sup>3</sup>		9,110		3,196		14,505		8,577

<sup>&</sup>lt;sup>1</sup> Average realized gold price, sustaining and non-sustaining capital expenditures, cash operating costs and all-in sustaining costs, EBITDA  $and\ Adjusted\ EBITDA, Adjusted\ EBITDA\ per\ share,\ and\ gross\ margin\ (excluding\ depreciation)\ are\ non-IFRS\ financial\ performance\ measures$  $with no standard definition under IFRS.\ Refer to the Non-IFRS Financial Performance Measures section of the MD\&A.$ 

 $<sup>^3\,</sup> These\, amounts\, are\, presented\, on\, accrual\, basis.\,\, Capital\, expenditures\, are\, included\, in\, our\, calculation\, of\, all-in\, sustaining\, costs.$ 

	For the three		d For the six months ended June 30,		
	2016	2015	2016	2015	
Operating Data					
Gold produced (ounces)	24,222	20,682	45,419	42,018	
Gold sold (ounces)	23,970	19,184	46,851	43,412	
Primary development (metres)	1,857	951	3,018	1,657	
Secondary development (metres)	1,317	<b>1,317</b> 467		773	
Definition, infill, and exploration drilling (metres)	9,486	<b>9,486</b> 11,416		20,384	

#### **Cash and Gold Bullion**

	June 30,	De	cember 31,
(\$ thousands)	2016		2016
Cash and equivalents	\$ 17,535	\$	15,319
Gold bullion	-		
Total cash and gold bullion	\$ 17,535	\$	15,319

<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.

#### **Financial Highlights**

#### Revenue, Net Income (Loss), and External Factors

- Gold ounces sold for the three and six months ended June 30, 2016 were 23,970 and 46,851 ounces, respectively, compared with 19,184 and 43,412 ounces sold for the comparative 2015 periods.
- Revenue for Q2 2016 increased 31% to \$30.0 million, compared with \$22.8 million in Q2 2015, due to a 5% year-over-year increase in the average realized gold price to \$1,251 in Q2 2016 compared with \$1,190 in Q2 2015, and a 25% increase in ounces sold.
- Net loss for the six months ended June 30, 2016 was impacted negatively due to the change in the fair value of the convertible debentures (\$45.9 million) based on the significant increase in the share price from December 31, 2015 to June 30, 2016, which was partially offset by a decrease in the litigation provision amounting to \$7.9 million primarily due to a change in the estimate. Adjusted EBITDA (excluding non-cash items) for Q2 2016 was \$8.9 million compared to \$2.2 million for Q2 2015, while adjusted EBITDA for the first half of 2016 was \$14.1 million compared to \$7.3 million for the first half of 2015.
- The convertible debentures cumulative inception-to-date non-cash valuation loss of \$50.8 million will reverse on conversion or redemption. The Company is reviewing alternatives to exercise its right to provide notice of redemption of the convertible debentures on the anniversary date of October 27, 2016.
- The average exchange rate during Q2 2016 was R\$3.51 per US dollar compared to R\$3.07 per US dollar in Q2 2015. The closing exchange rate as at June 30, 2016 was R\$3.21 per US dollar compared to R\$3.90 per US dollar as at December 31, 2015.

#### Cash Operating Costs, Capital Expenditures, and All-In-Sustaining Costs ("AISC")

- Cash operating costs decreased 13% to \$758 per ounce of gold sold in Q2 2016, compared to \$876 per ounce during Q2 2015, and have decreased 12% to \$750 per ounce on a year-to-date basis.
- AISC remained consistent at \$1,203 per ounce of gold sold in Q2 2016, compared to \$1,203 per ounce sold during Q2 2015
- In Q2 2016, sustaining capital expenditures totaled \$7.9 million and focused on increasing primary development and exploration drilling across all three mines compared to \$2.5 million in Q2 2015.
- Operating cash flow (excluding cash tax refunds) was \$10.4 million for Q2 2016, compared to \$0.3 million in Q2 2015. For the YTD 2016, operating cash flow (excluding cash tax refunds) was \$19.0 million compared to \$6.5 million for YTD 2015
- Free cash flow was \$1.3 million for Q2 2016 based on operating cash flow (excluding cash tax refunds) less total capital expenditures, compared to negative \$2.9 million in Q2 2015.

## Cash Position, Working Capital, TSX Listing, and Operational Excellence

- As at June 30, 2016, the Company had a cash position of \$17.5 million, an increase of \$2.2 million over cash of \$15.3 million as at December 31, 2015.
- Working capital declined to \$0.9 million as at June 30, 2016 compared to \$2.0 million as at December 31, 2015, reflecting
  increased capital spending including year-to-date increases of 82% in primary development and 206% in secondary
  development.
- On August 3, 2016, the Company's common shares and senior secured convertible debentures commenced trading on the Toronto Stock Exchange ("TSX") and were delisted from the TSX Venture Exchange; an important step in the evolution of the Company by providing more visibility and a broader base of retail and institutional shareholders.
- After a diagnostic review during Q1 2016, the Company entered into a commercial agreement in April 2016 with the
  Aquila Group to launch a mine-wide Operational Excellence Program at Turmalina. The program will aim to identify and
  eliminate waste, lower costs, and improve productivities with the end goal of creating and delivering results in order to
  establish sustainable growth.

#### **Operational Highlights**

#### Strong Gold Production, Recovery, and Primary and Secondary Development

- Consolidated gold production increased 17% to 24,222 ounces in Q2 2016 compared to 20,682 ounces in Q2 2015 and is on track to achieve 2016 full year guidance of 90,000 to 95,000 ounces of gold production.
- Gold recovery increased to 91.4% in Q2 2016 compared to 90.2% in Q1 2016 and 90.0% in Q2 2015.
- Turmalina produced 15,083 ounces of gold in Q2 2016, up 45%, with average grade of 4.10 g/t, up 5% compared to Q2 2015. In the first half of 2016, Turmalina has produced 30,855 ounces, an increase of 39% over the first half of 2015.
- The Company completed 1,857 metres of primary development during Q2 2016, an increase of 95% over 951 metres in Q2 2015, and has completed a total of 3,018 metres in the first six months of 2016, an increase of 82% compared to 1,657 metres in the first six months of 2015.
- The Company also completed 1,317 metres of secondary development during Q2 2016 (Q2 2015 467 metres), for a total of 2,363 metres in the first half of 2016, an increase of 206% over 773 metres in the first half of 2015, to increase the number of available underground working areas across all mines.

#### **Improving Consolidated Grades**

- Consolidated average head grade increased 10% to 3.76 g/t in Q2 2016 versus 3.41 g/t in Q2 2015, and has improved 13% to 3.77 g/t in the first half of 2016 compared to 3.33 g/t in the first half of 2015.
- Total processing was 217,000 tonnes in Q2 2016 (Q2 2015 210,000 tonnes) at an average head grade of 3.76 g/t (Q2 2015 - 3.41 g/t).
  - o In Q2 2016, Turmalina processed 124,000 tonnes (Q2 2015 94,000 tonnes) at an average head grade of 4.10 g/t  $(Q2\ 2015 - 3.91\ g/t)$ .
  - Caeté processed 93,000 tonnes in Q2 2016 (Q2 2015 116,000 tonnes) at an average head grade of 3.30 g/t (Q2 2015 - 3.00 g/t).
- Total processing for YTD 2016 was 413,000 tonnes, a 5% decrease from 436,000 tonnes processed in the first half of 2015.

#### Positive Drill Results at Turmalina

- On July 13, 2016, the Company announced multiple high-grade drill intercepts generated from 46 infill drill holes (7,310 metres from a total of a 7,842 metre program) designed to test the current indicated and inferred resource envelope of Orebody A at Turmalina.
  - Significant drill intercepts include 21.66 g/t Au over 8.48 metres (estimated true width ("ETW") 7.1 metres), 18.26 g/t Au over 8.39 metres (ETW - 5.9 metres), and 12.87 g/t Au over 20.70 metres (ETW - 17.5 metres), including 29.48 g/t Au over 6.64 metres (ETW – 5.6 metres) and 22.24 g/t Au over 2.94 metres (ETW – 2.5 metres).
- The Company completed 9,486 metres of definition, infill, and exploration drilling during Q2 2016 (Q2 2015 11,416 metres), for a total of 21,377 metres of drilling in the first half of 2016, an increase of 5% over 20,333 metres in the first half of 2015.

## OUTLOOK

Looking ahead, the Company continues to be focused on delivering positive and sustainable physical performance, profitability, and cost optimization. The Company has established the following strategic initatives that are expected to create significant shareholder value:

- Safe and Sustainable Physical Results: Safely delivering on the near-term mine plans to drive positive physical results and ensure a sustainable production performance.
- Cost Reduction and Optimization: Developing a value-driven culture that will identify and eliminate waste, lower costs, and improve productivities with the end goal of creating and delivering results. Cost control measures will be reviewed and implemented across the operations to centralize and streamline various functions company-wide.

- Generating Positive Cash Flow: Operations are focused on generating cash flow, after sustaining capital, with mine plans focused on achieving the right amount of tonnes, at the right grade and with exploration programs that ensure sustainability. Management is focused on expanding operational excellence programs and developing a value-driven culture to increase operating cash flow.
- Strategic Investment: Investment in exploration and development will be prioritized to targets that increase the mineral reserve base around the operating assets and build confidence in our mine plans in the near to medium term. Expanding brownfield exploration programs to grow organically and take advantage of the underutilized processing capacity currently installed.
- Divesting of Non-Core Assets: Reviewing opportunities to divest non-core assets and land positions across all sites to minimize carrying costs of these assets.

#### 2016 Guidance

The following is the Company's production and cost guidance for 2016 and represents achievable results from operations:

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

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

#### **BACKGROUND**

Jaguar is a junior gold producer focused on the operation and development of gold assets in Brazil. The Company has two operating units being the Turmalina and Caeté Gold Mine Complexes. The Paciência Gold Mine Complex, comprised of one processing facility and mine, is on care and maintenance. Additionally, the Gurupi development project continues to be reviewed. The Company holds mineral rights over approximately 191,000 hectares.

On December 16, 2015, Mr. Rodney Lamond was appointed as Chief Executive Officer. Prior to becoming the CEO of Jaguar, Mr. Lamond was a board director of Jaguar. Mr. Lamond is a Professional Mining Engineer who brings more than 27 years of mining experience and has held senior management positions overseeing or stationed at operations in Peru, Chile, Honduras, Mexico, USA, Canada, and Australia. From 2013 to 2015, Mr. Lamond was the President and Chief Executive Officer of Crocodile Gold Corp. before the July 2015 business combination of Crocodile Gold Corp. and Newmarket Gold Inc.

On June 24, 2016, Mr. Hashim Ahmed was appointed as Chief Financial Officer after serving as Interim Chief Financial Officer of Jaguar since February 2016. Mr. Ahmed joined the Company in August 2014 and has previously served as Jaguar's Vice President of Finance.

Management believes there is excellent potential to decrease the operating cost profile of Jaguar in a reasonable timeframe; however, success is dependent on the prudent deployment of capital spending to advance drilling and development ahead of operations. Management's belief is supported by confidence in the geological endowment of the Company's existing land positions surrounding its current mining operations.

The Company is focused on optimizing existing mining operations through increasing confidence in the mineral reserve base to deliver positive and sustainable physical and financial performance. Over time and through exploration, the Company will focus on prudently increasing production and taking advantage of the underutilized processing capacity currently installed.

#### REVIEW OF OPERATING AND FINANCIAL RESULTS

## **Turmalina Gold Mine Complex**

#### **Turmalina Quarterly Production**

(\$ thousands, except where indicated)	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014	Q3 2014
Tonnes of ore processed ('000)	124,000	128,000	100,000	101,000	94,000	111,000	117,000	107,000
Average head grade (g/t) <sup>1</sup>	4.10	4.29	4.79	4.77	3.91	3.59	3.60	3.69
Average recovery rate (%)	91%	90%	91%	91%	90%	90%	90%	91%
Gold (ozs)								
Produced	15,083	15,772	14,449	13,994	10,420	11,796	12,067	11,336
Sold	15,035	16,635	15,527	13,485	9,610	13,196	11,243	11,710
Cash operating cost (per oz sold) <sup>2</sup>	\$ 586	\$ 590	\$ 483	\$ 587	\$ 717	\$ 756	\$ 655	\$ 801
Cash operating cost (R\$ per tonne) <sup>2</sup>	\$ 249	\$ 299	\$ 288	\$ 277	\$ 225	\$ 258	\$ 160	\$ 199

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

During the second quarter of 2016, Turmalina produced 15,083 ounces of gold compared to 10,420 ounces in the corresponding 2015 period, an increase of 45% or 4,663 ounces. The increase in ounces produced was a result of a 5% increase in the average head grade from 3.91 g/t in Q2 2015 to 4.10 g/t in Q2 2016 and a 32% increase in the tonnes processed from 94,000 in Q2 2015 to 124,000 in Q2 2016.

The cash operating costs per ounce sold for the second quarter of 2016 decreased by 18%, or \$131 per ounce, as compared to the same period in 2015, due to the net impact of a 5% increase in average head grade, an increase in recovery, the devaluation of the Brazilian Real, an increase in the cost of materials due to inflation, and an increase in electricity tariffs. The cash operating costs per ounce sold for Q2 2016 remained consistent with Q1 2016 due to the net impact of a 4% decrease in average head grade, a 3% decrease in tonnes processed, and a decrease in the costs from the allocation of a greater amount of the mine-site fixed overheads to capital expenditures due to a 60% increase in primary development from Q1 2016 to Q2 2016.

After a diagnostic review during Q1 2016, the Company entered into a commercial agreement in April 2016 with the Aquila Group to launch a mine-wide Operational Excellence Program at Turmalina. The program will aim to identify and eliminate waste, lower costs, and improve productivities with the end goal of creating and delivering results in order to establish sustainable growth.

<sup>&</sup>lt;sup>2</sup> Cash operating costs is 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**

(\$ thousands)	Three mon June		Six months ended June 30,			
	2016	2015	2016	2015		
Sustaining capital <sup>1</sup>						
Primary development	\$ 3,034	\$ 1,995	\$ 5,357	\$ 3,692		
Brownfield exploration	360	107	392	304		
Mine-site sustaining	729	9	1,539	1,325		
Total sustaining capital <sup>1</sup>	4,123	2,111	7,288	5,321		
Total non-sustaining capital <sup>1</sup>	977	24	1,023	118		
Total capital expenditures	\$ 5,100	\$ 2,135	\$ 8,311	\$ 5,439		

<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 in included in our calculation of all-in sustaining costs and all-in costs.

(metres)	Three mor		Six mont	hs ended e 30,
	2016	2015	2016	2015
Primary development	1,166	885	1,897	1,542
Secondary development	693	467	1,531	773
Total development	1,859	1,352	3,428	2,315
Definition drilling	1,277	4,133	2,100	5,410
Infill drilling	3,849	813	7,036	2,359
Exploration drilling	125	<b>125</b> 1,158		2,699
Total definition, infill, and exploration drilling	5,251	<b>5,251</b> 6,104		10,469

Primary development at the Turmalina mine totaled 1,166 and 1,897 metres for the three and six months ended June 30, 2016, respectively, compared to 885 and 1,542 metres in the comparative 2015 periods. On a per metre basis, the cost of primary development for the first half of 2016 increased compared to the first half of 2015.

#### Mining

The mining method utilized at the Turmalina underground mine is sublevel open stoping with backfill. Our priority is to reduce costs by focusing on ore grade control, minimizing dilution and minimizing the extraction of non-profitable or marginal material. A focus on grade control, along with a number of mining and process initiatives, is intended to lower cash operating costs per ounce and improve the overall operating performance. Cost reduction initatives include decreasing the length of development needed from the primary ramp to access ore, postponing the mining of low grade narrow ore bodies that may require additional development, and extraction of high-grade ore by the selective removal of pillars. There is also a push to improve stope blasting techniques to reduce dilution.

A specialized development contractor arrived on site in August 2015 to accelerate the mining of both the new Orebody C ramp to surface and to extend the Orebody A ramp to open up additional resources. In the fourth quarter of 2015, the development contractor completed the Orebody C ramp to surface. This reduced ore haulage and congestion in the top section of the ramp. At the end of Q2 2016, the Company ended the contractor's work after advancing the Orebody A ramp to reach Level AN10SN1, which is the bottom stoping level for 2017.

The previous mining design of stopes separated by rib pillars (developed prior to 2015) resulted in significant quantities of ore being left behind and not mined. With footwall drifts and primary and secondary stopes being installed in 2015 below Level 8, there is now a need for cemented backfill in the primary stopes. Successful trials on surface indicated the ability to backfill primary stopes with good quality cemented rockfill (CRF) exists. There were some concerns regarding fill rates with CRF underground, but a trial carried out in Level 9 of the mine showed that rapid fill rates could be achieved and the filling of other primary stopes and mining of secondary stopes with CRF on both sidewalls has confirmed that good quality CRF can be installed quickly and efficiently. A system for producing filter cake and then re-mixing to paste is in place, but to ensure consistent quality paste, a batching process with a controlled shear mixer is expected to be commissioned at the end of Q3 2016. Because of the desire to avoid hauling development waste to surface, it is planned that CRF will be used to fill the bulk of the primary stopes with paste only installed in the upper stoping sub-level to allow for the 100% extraction of stopes immediately below the sill pillars.

On July 13, 2016, the Company announced multiple high-grade drill intercepts generated from 46 infill drill holes (7,310 metres from a total of a 7,842 metre program) designed to test the current indicated and inferred resource envelope of Orebody A at Turmalina. The drill intercepts completed confirm the continuation of high-grade gold mineralization downplunge of Orebody A, 170 metres below the current production workings, while also increasing confidence in the geological model of Orebody A through increased drill density. Significant drill intercepts include 21.66 g/t Au over 8.48 metres (estimated true width ("ETW") – 7.1 metres), 18.26 g/t Au over 8.39 metres (ETW – 5.9 metres), and 12.87 g/t Au over 20.70 metres (ETW – 17.5 metres), including 29.48 g/t Au over 6.64 metres (ETW – 5.6 metres) and 22.24 g/t Au over 2.94 metres (ETW - 2.5 metres).

#### **Processing**

Ore produced at the Turmalina mine is transported to the adjacent Carbon-In-Leach ("CIL") processing plant. The Turmalina plant consists of three ball mills, having total capacity of 3,000 tonnes per day, of which two have been operating since January 2016 (Mills #1 and #2) at 1,500 - 1,600 tonnes per day. During Q2 2016, the plant processed 124,000 tonnes at an average grade of 4.10 g/t compared to 94,000 tonnes at 3.91 g/t in Q2 2015. Overall, the processing plant maintained a recovery rate of 91.4% during Q2 2016, which is a significant improvement over the 89.8% recovery rate for Q2 2015. Work is ongoing to refurbish Mill #3, which will provide uninterrupted ore processing during shutdowns of Mill #2, but more importantly will provide additional capacity.

## **Caeté Gold Mine Complex**

#### <u>Caeté Quarterly Production</u>

(\$ thousands, except where indicated)	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014	Q3 2014
Tonnes of ore processed (t)	93,000	68,000	116,000	122,000	116,000	115,000	141,000	142,000
Average head grade (g/t) <sup>1</sup>	3.30	2.83	2.59	3.17	3.00	3.16	2.57	2.71
Average recovery rate (%)	91%	90%	90%	89%	90%	89%	88%	88%
Gold (ozs)								
Produced	9,139	5,425	8,720	11,241	10,262	9,540	10,389	11,038
Sold	8,935	6,246	8,889	11,674	9,574	11,032	10,157	10,971
Cash operating cost (per oz sold) <sup>2</sup>	\$ 1,049	\$ 1,146	\$ 888	\$ 854	\$ 1,036	\$ 918	\$ 938	\$ 1,199
Cash operating cost (R\$ per tonne) <sup>2</sup>	\$ 354	\$ 411	\$ 262	\$ 304	\$ 250	\$ 253	\$ 172	\$ 211

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

The Caeté Gold Mining Complex has two underground mines (Pilar and Roça Grande). Pilar primarily uses sub-level open stoping with backfill, while Roça Grande ("RG") exclusively uses the mechanized horizontal cut and fill mining method. The Pilar mine provides 1,000 tonnes per day, or two-thirds of the Caeté complex ore, while the RG mine provides 500 tonnes per day from the underground RG-1 deposit.

Ore produced from these mines is transported to the 2,200 tonnes per day gravity, flotation and CIL treatment of flotation concentrate processing plant adjacent to the Roça Grande mine, a total distance of approximately 50 kilometres by road from

<sup>&</sup>lt;sup>2</sup> Cash operating costs is 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.

the Pilar mine. This haulage expense is a significant cost and during Q2 2016, management continued to investigate and complete feasibility work for an XRF Ore Sorting system for waste removal to reduce haulage costs for the Pilar mine.

During Q2 2016, the Caeté plant achieved gold recovery of 91.4% utilizing gravity, flotation, and CIL treatment of flotation concentrate. Optimization of the plant offers opportunities for both increased gold extraction and reduced unit processing costs. Various options are being explored and evaluated to better use the currently underutilized processing facility.

#### Pilar Quarterly Production

(\$ thousands, except where indicated)	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014	Q3 2014
Tonnes of ore processed (t)	72,000	56,000	77,000	78,000	75,000	79,000	94,000	94,000
Average head grade (g/t) <sup>1</sup>	3.62	2.89	2.83	3.70	3.30	3.24	2.72	2.85
Average recovery rate (%)	91%	90%	90%	89%	90%	89%	88%	88%
Gold (ozs)								
Produced	7,804	4,552	6,278	8,340	7,314	7,310	7,283	7,725
Sold	7,622	5,369	6,389	7,622	6,835	8,433	7,213	7,681
Cash operating cost (per oz sold) <sup>2</sup>	\$ 958	\$ 1,096	\$ 822	\$ 735	\$ 940	\$ 829	\$ 877	\$ 1,165
Cash operating cost (R\$ per tonne) <sup>2</sup>	\$ 356	\$ 410	\$ 262	\$ 303	\$ 250	\$ 254	\$ 171	\$ 217

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

During the second quarter of 2016, Pilar produced 7,804 ounces of gold compared to 7,314 ounces in Q2 2015, an increase of 7%. Operational delays occurred in Q1 2016 due to the shortage of alternative stopes as the primary focus during the quarter was on increasing development to access newly defined reserves. Due to this focus on development in Q1 2016, as well as a 25% increase in the average head grade, production increased 71% in Q2 2016 compared with Q1 2016.

The cash operating costs per ounce sold for the second quarter of 2016 increased by 2%, or \$18 per ounce, as compared to Q2 2015 and decreased by 13%, or \$138 per ounce, as compared to Q1 2016, largely as a result of the significantly lower ounces produced in Q1 2016 and the increased costs associated with the recent restart of secondary development.

#### **Pilar Capital Expenditures**

(\$ thousands, except where indicated)	Three mor June	ths ended 30,	Six months ended June 30,		
	2016	2015	2016	2015	
Sustaining capital <sup>1</sup>					
Primary development	\$ 2,103	\$ 114	\$ 3,158	\$ 402	
Brownfield exploration	389	87	406	848	
Mine-site sustaining	747	125	996	244	
Total sustaining capital <sup>1</sup>	3,239	326	4,560	1,494	
Total non-sustaining capital <sup>1</sup>	35	360	64	685	
Total capital expenditures	\$ 3,274	\$ 686	\$ 4,624	\$ 2,179	

<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 in included in our calculation of all-in sustaining costs and all-in costs.

<sup>&</sup>lt;sup>2</sup> Cash operating costs is 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 mon		Six mont June	hs ended e 30,
	2016	2015	2016	2015
Primary development	600	48	912	59
Secondary development	267	-	291	-
Total development	867	48	1,203	59
Definition drilling	375	-	504	460
Infill drilling	1,311	2,039	2,960	2,928
Exploration drilling	1,545	1,670	2,274	4,127
Total definition, infill, and exploration drilling	3,231	3,709	5,738	7,515

Primary development at Pilar was suspended during Q4 2014 and was restarted in Q1 2016 due to the success of the exploration drilling program initiated in 2015. Primary development totaled 600 and 912 metres in the three and six months ended June 30, 2016 compared to 48 and 59 metres in the comparative 2015 periods.

#### Mining

Historically, significantly higher tonnage, including lower grade material, was fed to the plant from Pilar which had a diluting effect on the grade and profitability. During 2015, grade improvement at Pilar was achieved through the discontinuation of mining ore below the marginal cut-off grade and by modifying the shape of the sub-level open stopes to minimize the inclusion of waste at the edge of the plunging ore-shoots. Previous initiatives to reduce dilution from overbreak had proven successful and there were some gains from the update of the geological model.

Exploration drilling results for Pilar from 2015 enabled the Company to announce a 310% increase in total Mineral Reserves to 172,000 ounces at Pilar, with a 63% increase in grade to 4.39 g/t Au, in its 2015 year-end mineral resources and mineral reserve estimate announced March 4, 2016. Based on the strong exploration drilling results and increased reserves and resources, primary and secondary development that had been suspended during Q4 2014 was resumed at Pilar during Q1 2016.

Mine production was 71,000 mined tonnes at an average grade of 3.65 g/t compared to 74,000 tones at 3.33 g/t in Q2 2015. The small decrease in production was a result of the focus on increasing development to access the newly defined reserves below current mining levels. During the quarter, mine development advanced a total of 867 metres (averaging 289 metres per month) compared to a total of 48 metres in Q2 2015. Definition, infill, and exploration drilling totaled 3,231 metres in Q2 2016 compared to 3,709 metres in Q2 2015, which was when a large part of the drilling that led to the increase in the 2015 year-end reserve estimate occurred.

During most of 2016, stoping ore grade will be dominated by ore from the B Ore Body above Level 7. The focus in 2016 is in getting the ramp down to Level 10 by year end, while providing access on the levels to the high-grade BFII Ore Body that starts to dominate the ore production below Level 7.

#### **Processing**

During Q2 2016, the Caeté plant processed 72,000 tonnes from Pilar at an average grade of 3.62 g/t compared to 75,000 tonnes at 3.30 g/t in Q2 2015. Recovery for the quarter was 91.4%, which was higher than the Q2 2015 recovery of 90.2%.

#### **Roça Grande Quarterly Production**

(\$ thousands, except where indicated)	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014	Q3 2014
Tonnes of ore processed (t)	21,000	12,000	39,000	44,000	41,000	36,000	47,000	48,000
Average head grade (g/t) <sup>1</sup>	2.18	2.53	2.11	2.26	2.46	2.20	2.27	2.36
Average recovery rate (%)	91%	90%	90%	89%	90.2%	89%	88%	88%
Gold (ozs)								
Produced	1,335	873	2,442	2,901	2,948	2,230	3,106	3,313
Sold	1,313	877	2,500	3,033	2,739	2,599	2,944	3,290
Cash operating cost (per oz sold) <sup>2</sup>	\$ 1,578	\$ 1,454	\$ 1,058	\$ 1,195	\$ 1,274	\$ 1,207	\$ 1,091	\$ 1,277
Cash operating cost (R\$ per tonne) <sup>2</sup>	\$ 346	\$ 415	\$ 261	\$ 306	\$ 248	\$ 250	\$ 174	\$ 199

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

During the second quarter of 2016, RG produced 1,335 ounces of gold compared to 2,948 ounces in the corresponding 2015 period, a decrease of 55% or 1,613 ounces. Operational delays have occurred in the first half of 2016 due to the shortage of developed stopes as the primary focus has been on infill drilling and development in an effort to extend mine life.

The cash operating costs per ounce sold for the second quarter of 2016 increased by 24% compared to Q2 2015 and increased 9% compared to Q1 2016, largely as a result of the increased costs related to the restart of secondary development during the first half of 2016.

#### Roça Grande Capital Expenditures

(\$ thousands, except where indicated)	Th		nths ended e 30,	Six months ended June 30,			
		2016	2015	2016		2015	
Sustaining capital <sup>1</sup>							
Primary development	\$	295	\$ 74	\$ 684	\$	176	
Brownfield exploration		142	7	240		316	
Mine-site sustaining		66	-	104		-	
Total sustaining capital <sup>1</sup>		503	81	1,028		492	
Total non-sustaining capital <sup>1</sup>		-	150	30		217	
Total capital expenditures	\$	503	\$ 231	\$ 1,058	\$	709	

<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 in included in our calculation of all-in sustaining costs and all-in costs.

(metres)	Three mor	nths ended e 30,	Six mont June	hs ended 30,
	2016	2015	2016	2015
Primary development	91	18	209	56
Secondary development	357	-	541	-
Total development	<b>448</b> 18		750	56
Definition drilling	-	-	_	-
Infill drilling	860	1,603	4,497	1,603
Exploration drilling	144	-	1,200	797
Total definition, infill, and exploration drilling	1,004	1,603	5,697	2,400

<sup>&</sup>lt;sup>2</sup> Cash operating costs is 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.

Primary development at RG was suspended during Q4 2014 and the decision to keep RG operating through 2016 meant the restart of development in Q1 2016 in order to provide access to the orebody, with a focus on proving up the higher grade/thickness targets. Primary development for Q2 2016 was 91 metres for a total of 209 metres at RG for the six months ended June 30, 2016 versus 18 and 56 metres for the comparative 2015 periods, respectively.

#### Mining

The Roça Grande mining activity has historically focused on surface exposures of gold deposits, where the orebody outcropped. The outcrops were mined using open-pit mining techniques, with exploration focused solely on the immediate down-dip projection of gold mineralization, and minimal exploration along strike between the outcrops.

Underground, the RG operations team continues to evaluate more effective methods to mine the 1.0 to 2.0 metre wide veins without excessive dilution, using a frontal-attack mechanised cut-and-fill mining method. A targeted exploration program has helped identify sufficient resources to continue mining to the end of 2016 and ore development has been advanced in Q2 2016 to access potential resources to continue mining into the second half of 2017. Ore in Q1 2016 was generated primarily from ore development, but for Q2 2016 stoping returns were the dominant ore source. Continued exploration drilling is now focused on proving up the potential resources being accessed by development and generating resources for 2017 and beyond. The exceptional exploration potential along strike and in the down-dip extension of related multiple orebodies that have only open pits at present, justifies treating the Roça Grande operation as an "incremental ore" producer until the other orebodies can be brought into production.

In Q2 2016, mine production was 21,000 mined tonnes at an average grade of 2.25 g/t compared to 40,000 tonnes at 2.48 g/t in Q2 2015. The decrease in production was due to a focus on proving up higher grade development targets as development was restarted in Q1 2016. Mine development advanced at an average monthly rate of 149 metres during Q2 2016 compared to a total of 18 metres in Q2 2015, while definition, infill, and exploration drilling totaled 1,004 metres for Q2 2016 compared to 1,603 metres in Q2 2015.

#### Processing

During Q2 2016, the Caeté plant processed 21,000 tonnes from RG at an average grade of 2.18 g/t compared to 41,000 tonnes at 2.46 g/t in Q2 2015. Recovery for the quarter was 91.4%, which was higher than the Q2 2015 recovery of 90.2%.

#### **CONSOLIDATED FINANCIAL RESULTS**

## Selected Quarterly Financial Information<sup>1</sup>

(\$ thousands, except where indicated)	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014	Q3 2014
Revenue	\$ 29,996	\$ 26,664	\$ 26,820	\$ 28,126	\$ 22,820	\$ 28,747	\$ 25,766	\$ 29,015
Cost of sales (excluding depreciation) <sup>2</sup>	(17,887)	(17,579)	(15,397)	(17,892)	(16,808)	(20,133)	(23,508)	(22,312)
Gross margin (excluding depreciation) <sup>2</sup>	12,109	9,085	11,423	10,234	6,012	8,614	2,258	6,703
Net (loss) income	(26,866)	(15,001)	1,670	4,445	(4,383)	(12,946)	(90,530)	(9,491)
Cash flows from operating activities	10,435	9,526	6,786	3,660	1,652	12,151	(1,156)	(253)
Total assets	189,554	184,996	183,409	174,500	179,496	181,131	195,264	293,356
Total liabilities	139,665	108,349	90,624	83,949	94,077	91,648	93,676	101,325
Average realized gold price (per ounce) <sup>2</sup>	\$ 1,251	\$ 1,165	\$ 1,098	\$ 1,118	\$ 1,190	\$ 1,187	\$ 1,204	\$ 1,279
Cash operating cost (per oz sold) <sup>2</sup>	\$ 758	\$ 742	\$ 630	\$ 731	\$ 850	\$ 831	\$ 789	\$ 993

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

MD&A - Second Quarter Ended June 30, 2016

<sup>&</sup>lt;sup>2</sup> Average realized gold price, gross margin (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.

The continued increase in the global gold market continued to positively impact the Company's revenue and gross margin in Q2 2016. However, the impact of the higher gold prices was largely offset by the strengthening of the Brazilian Real as compared to the US dollar. The net loss for Q2 2016 primarily reflects the impact of the revaluation of the convertible debentures as at June 30, 2016, as well as an increase in the labour litigation provision during the quarter.

Current assets increased \$6.5 million as at June 30, 2016 compared to December 31, 2015, primarily as a result of an increase in recoverable taxes. Current liabilities increased from year-end primarily due to an increase in accounts payable and accrued liabilities at quarter-end and as a result of the strengthening Brazilian Real. The increase in non-current liabilities represents the net impact of the decrease in the labour litigation provision (\$7.8 million), the increase in the reclamation provision, and the revaluation of the convertible debentures at June 30, 2016, which resulted in a loss due to the significant increase in the share price from December 31, 2015 to June 30, 2016.

#### Revenue

		Thre	onths ended	Six months ended							
(\$ thousands, except where indicated)	June 30,							June 30,			
		2016		2015	Change		2016		2015	Change	
Revenue	\$	29,996	\$	22,820	31%	\$	56,660	\$	51,567	10%	
Ounces sold		23,970		19,184	25%		46,851		43,412	8%	
Average realized gold price <sup>1</sup>	\$	1,251	\$	1,190	5%	\$	1,209	\$	1,188	2%	

<sup>&</sup>lt;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 Measures section of the MD&A.

Revenue for the second quarter of 2016 increased 31%, compared to the same period in 2015, due to a 25% increase in ounces sold and a 5% improvement in the average realized gold price. Revenue for the six months ended June 30, 2016 increased 10% over the comparative 2015 period, primarily as a result of an 8% increase in ounces sold.

The market price of gold is the primary driver of our profitability and our ability to generate free cash flow. During the three months ended June 30, 2016, the market price of gold (London PM Fix) traded in a range of \$1,212 to \$1,325, averaged \$1,259 per ounce, and closed at \$1,321 per ounce on June 30, 2016. The average market price during the second quarter of 2016 increased 6% as compared to the average market price of \$1,190 per ounce for the second quarter of 2015.

#### **Production**

A total of 217,000 tonnes were processed in Q2 2016 (Q2 2015 - 210,000 tonnes) at an average head grade of 3.76 g/t (Q2 2015 – 3.41 g/t), a 10% increase in average head grade compared to the same period in 2015. Total tonnes processed for the first half of 2016 decreased 5%, compared to the same period in 2015, primarily due to an increased focus on mining higher grade, especially in Q1 2016.

#### **Consolidated Production Costs**

(\$ thousands, except where indicated)	Three months ended Six n June 30,							nonths ended June 30,			
	2016		2015	Change		2016		2015	Change		
Direct mining and processing cost	\$ 16,650	\$	16,230	3%	\$	32,579	\$	35,375	(8%)		
Mining	10,217		9,873	3%		20,014		22,058	(9%)		
Processing	6,433		6,357	1%		12,565		13,317	(6%)		
Royalties, production taxes and others	1,237		578	114%		2,887		1,566	84%		
Royalty expense and CFEM taxes	969		613	58%		1,999		1,593	25%		
NRV adjustment and others	268		(35)	(866%)		888		(27)	(3389%)		
Total operating expenses	\$ 17,887	\$	16,808	6%	\$	35,466	\$	36,941	(4%)		
Depreciation	8,389		3,233	159%		16,091		9,637	67%		
Total cost of sales	\$ 26,276	\$	20,041	31%	\$	51,557	\$	46,578	11%		

Total operating expenses decreased 3% from \$36.9 million in the first half of 2015 to \$35.7 million in the six months ended June 30, 2016. The decrease was due to the impact of the devaluation of the Brazilian Real and the decrease in tonnes processed, offset by an increase in the cost of materials in local currency due to inflation and higher electricity tariffs. The net realizable value ("NRV") adjustment for the first half of 2016 was a result of the increase in the depreciation expense for Caeté, which increased due to the impairment reversal recorded as at December 31, 2015 for Caeté in relation to the increase in Pilar's mineral reserves.

## **Operating Expenses**

(\$ thousands)	Three	 onths ende ne 30,	d	Six months ended June 30,				
	2016	2015	Change	2016		2015	Change	
Changes to legal and recoverable tax provisions	\$ 1,686	\$ 1,075	57%	\$ (8,542)	\$	8,845	(197%)	
General and administration expenses	2,306	3,067	(25%)	4,425		5,348	(17%)	
Exploration and evaluation costs	15	29	(48%)	17		78	(78%)	
Care & maintenance costs (Paciência mine)	256	292	(12%)	463		576	(20%)	
Stock-based compensation	108	180	(40%)	224		364	(38%)	
Restructuring costs	-	-	0%	567		-	100%	
Amortization	19	238	(92%)	42		481	(91%)	
Other operating expenses	103	429	(76%)	516		1,355	(62%)	
Total operating expenses (recoveries)	\$ 4,493	\$ 5,310	(15%)	\$ (2,288)	\$	17,047	(113%)	

## Care & Maintenance Costs – Paciência Gold Complex

The Paciência mining complex remained on care and maintenance during the second quarter of 2016. No gold has been produced since the third quarter of 2012, when the mine was put on care and maintenance. No underground development or drilling work was carried out by the Company at the Paciência mine during the first six months of 2016. The complex has been secured and the facilities are preserved and patrolled. A limited maintenance staff periodically turns the mills and equipment to maintain the plant in working order.

## **General and Administration Expenses**

The general and administration ("G&A") expenses exclude mine-site administrative costs which 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.

	Three	onths ende	d	Six months ended					
(\$ thousands)		ne 30,		June 30,					
	2016		2015	Change	2016		2015	Change	
Director's fees	\$ 158	\$	229	(31%)	\$ 248	\$	465	(47%)	
Audit related and insurance	245		256	(4%)	324		382	(15%)	
Corporate office (Toronto)	619		781	(21%)	1,386		1,730	(20%)	
Belo Horizonte office	1,284		1,801	(29%)	2,467		2,771	(11%)	
Total G&A expenses	\$ 2,306	\$	3,067	(25%)	\$ 4,425	\$	5,348	(17%)	

For the three and six months ended June 30, 2016, the total G&A expenses were 25% and 17% lower, respectively, as compared to the same periods in 2015. Costs associated with the Belo Horizonte office were 29% and 11% lower in the three and six months ended June 30, 2016, respectively, due to the net impact of the reallocation of certain activities from the mine sites to the Belo Horizonte corporate office in Q4 2015, general cost cutting measures, and the devaluation of the Brazilian Real. Costs for the corporate office in Toronto were lower in the first half of 2016 compared to the first half of 2015 due to general cost cutting measures adopted by management. Management will continue its cost reduction focus for both Toronto and Belo Horizonte corporate office expenses into the second half of 2016.

## **Restructuring Costs**

(\$ thousands)	Three	e months end June 30,	ed	Six months ended June 30,					
	2016	2015	Change	2016	2015	Change			
Restructuring costs	\$ -	\$ -	0% :	\$ 567	\$ -	100%			

Restructuring costs in the six months ended June 30, 2016 represent the severance payments for former management. No restructuring costs were incurred in Q2 2016.

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

	Three months ended						Six months ended					
(\$ thousands)		June 30,					June 30, June 30,					
	2016		<b>2016</b> 2015		Change		2016	2015		Change		
Changes to legal provisions	\$	1,532	\$	1,540	(1%)	\$	(7,877)	\$	8,200	(196%)		
Changes to recoverable taxes provision		154		(465)	(133%)		(665)		645	(203%)		
Changes to legal and recoverable taxes provisions	\$	1,686	\$	1,075	57%	\$	(8,542)	\$	8,845	(197%)		

## **Legal Provisions**

As at June 30, 2016, there were 496 employee-initiated active lawsuits against the Company, largely related to disputed wages. Based on management's assessment of the likelihood of loss related to 413 lawsuits, the Company has recorded approximately \$10.5 million as labour legal contingencies as at June 30, 2016 (\$5.2 million is classified as a current liability as at June 30, 2016).

During Q1 2016, management in conjunction with external counsel revised its estimate in regards to the labour litigation contingencies in order for the provision to be more representative of the likelihood of loss. The change in estimates was derived from applying certain percentages to the potential loss claim amounts based on the stage of each lawsuit. This change in estimates resulted in a decrease of \$9.4 million from the provision recorded as at December 31, 2015.

During Q2 2016, 26 new lawsuits were initiated. The Company paid approximately \$284,000 in appeal deposits, \$317,000 in settlements instalments, \$170,000 with respect to final decisions, and \$156,000 for other costs such as social security, income tax, legal fees, and expert fees. The total amount spent in Q2 2016 was \$927,000 in comparison to \$809,000 in Q2 2015.

#### **Recoverable Taxes Provision**

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 includes assessment of the tax credits for offset against taxes otherwise payable and restitution in cash.

A valuation provision for recoverable taxes is prepared on a quarterly basis. The calculation takes into account various factors including the limited methods to recover such taxes, the length of time it will take to recover such taxes and the estimated operating tenure of the Company. Any provision reduces the net carrying value of recoverable taxes to their estimated present value based on the manner and timing of expected recovery.

In 2014, the Company initiated procedures in respect of recovery of its Brazilian Federal Value Added Tax ("VAT") input tax credits with respect to the years 2008 to 2011. As a result of these ongoing efforts, during Q1 2016, the Company obtained a VAT cash refund of approximately \$1.0 million (R\$3.5 million) relating to the MSOL legal entity. 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. The court order will determine the deadline the tax authority will have to issue the tax report.

The movement in the provision for recoverable taxes during the six months ended June 30, 2016 considers the cash refund received and the possibility of additional refunds and offsets of certain income taxes payable. In Q2 2016, the Company has engaged a consultant to properly request approval for the tax credits with respect to the years 2012 to 2015, for both MTL and MSOL, which is expected to be completed by the end of 2016.

As at June 30, 2016, gross recoverable taxes (which are primarily denominated in Brazilian Reais) and also include Canadian HST recoverable of \$1.4 million, amounted to \$29.9 million (December 31, 2015 – \$23.3 million). Also as at June 30, 2016, the provision for recoverable taxes was approximately \$6.2 million (December 31, 2015 - \$6.3 million). Consequently, the book value of recoverable taxes as at June 30, 2016 was \$23.7 million (December 31, 2015 – \$17.0 million).

#### **Impairment and Impairment Reversal**

The Turmalina, Paciência, and Caeté complexes are each 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 six months ended June 30, 2016, there were no indicators of impairment or reversal of past impairment charges.

## **Non-Operating Expenses**

	Three	onths ende	d	Six months ended					
(\$ thousands)		Jui	ne 30,		June 30,				
	2016		2015	Change		2016		2015	Change
Foreign exchange loss (gain)	\$ 234	\$	1,708	(86%)	\$	2,592	\$	(216)	(1300%)
Financial instruments loss (gain)	25,189		(618)	(4176%)		44,624		(38)	(117532%)
Finance costs	1,109		1,059	5%		2,332		2,183	7%
Other non-operating expenses (recoveries)	256		(13)	(2069%)		212		(40)	(630%)
Non-operating expenses	\$ 26,788	\$	2,136	1154%	\$	49,760	\$	1,889	2534%

During the three and six months ended June 30, 2016, finance costs represent interest on debt and accretion expense.

#### **Accounting for Convertible Senior Secured Debentures**

On October 27, 2015, the Company closed financing of the Convertible Senior Secured Debentures (the "Debentures") at a price of \$1,000 per Debenture, for aggregate proceeds of \$21.5 million. The Debentures will mature on December 27, 2018 and bear an interest rate of 12% per annum, payable in cash on a quarterly basis. The Debentures are convertible at the holder's option into common shares of the Company, at a ratio of 8,781 common shares per \$1,000 of the principal amount. The Debentures can be redeemed after 12 months (October 28, 2016 or the "Call Date"), and prior to the maturity date, in cash in whole or in part. The redemption price is 120% of the principal amount of the Debentures outstanding within one year after the Call Date, and 110% thereafter, plus, in each case, any accrued and unpaid interest thereon. The Debentures include a general security agreement over all of the Company's and its subsidiaries' present and future assets, delivery of the shares of the Company's subsidiaries, and loan guarantees by the Company's subsidiaries. Within 30 days following the occurrence of a Change in Control, the Company shall be obligated to offer to purchase all of the Debentures then outstanding. The offer price shall be 120% of the principal amount plus accrued interest to-date if the payment date occurs prior to October 27, 2016, or 110% thereafter.

The Company has chosen to designate the Debentures to be measured at fair value through profit or loss. Upon initial recognition, the Company recorded the Debentures at their fair value of \$21.5 million which was the consideration received for the instrument at the inception date. The transaction costs of \$2.1 million, which include \$0.8 million of cash finder's fee, \$0.2 million of finder's warrants, and \$1.1 million of legal costs, were immediately charged as an expense upon closing. Subsequent to the initial measurement, at each reporting period the financial liability is measured at fair value in its entirety.

In 2016, the Company revised its methodology to the finite difference method in order to calculate a more representative valuation of the financial liability due to significant changes in inputs during the period. The use of the finite difference method would not have any impact on the valuation of the financial liability as at December 31, 2015. The following inputs were used to value the financial liability as at June 30, 2016:

	June 30, 2016
Remaining contractual life (in years)	2.33
Share price at period end (C\$/share)	0.50
Credit spread (%)	36.2%
Volatility	60%
Risk free discount rate (%)	0.52%

The change in the fair value of the financial liability in the amount of \$25.2 million and \$45.9 million for the three and six months ended June 30, 2016, respectively, was recorded as an expense through profit or loss (three and six months ended June 30, 2015 – \$nil). All other variables remaining the same, in subsequent periods a change in the share price, discount rate, and reduction in the remaining contractual life of the liability at each reporting period will cause a change in the fair value of the financial instrument. An increase or decrease in the period-end share price by C\$0.01 will result in an increase or decrease in the fair value of the option of approximately \$1.4 million.

#### Taxes

#### **Brazilian Taxes**

Brazilian tax regulation involves three jurisdictions and tax collection levels: the Federal, State, and Municipal levels. 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.

#### **Government Royalty**

A federal 1% royalty, Compensação Financeira pela Exploração de Recursos Minerais ("CFEM"), is levied on gold sales. The rate is calculated on the gross gold sale proceeds less refining charges and insurance, as well as any applicable sales taxes.

## **Income and Deferred Taxes Expenses**

(\$ thousands)	Three months ended June 30,					Six	_	nths ended ne 30,	
		2016		2015	Change	<b>2016</b> 2015			Change
Current income tax expense	\$	784	\$	13	5931%	\$ 2,072	\$	685	202%
Deferred income tax (recovery) expense		(1,479)		(297)	398%	(2,574)		2,696	(195%)
Income tax (recovery) expense	\$	(695)	\$	(284)	145%	\$ (502)	\$	3,381	(115%)

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 as discussed above, 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 June 30, 2016 was \$85.8 million (of which \$72.3 million was the fair value of the Debentures), compared to \$41.2 million as at December 31, 2015 (of which \$26.3 million was the fair value of the Debentures).

#### **Convertible Senior Secured Debentures**

On October 27, 2015, the Company closed an over-subscribed financing of the Convertible Senior Secured Debentures. The Company raised aggregate gross proceeds of \$21.5 million, of which approximately \$8.4 million was paid to Renvest to transfer its interest in its credit facility and security interest with the Company to the lendors in the financing, which facility was amended and restated under the indenture governing the debentures.

The Company is using the remainder of the net proceeds of the financing of approximately \$11.2 million, after paying the legal and closing costs, to advance asset optimization plans in conjunction with the Company's ongoing development and production activities, and for general corporate purposes.

## **Liquidity and Cash Flow**

The Company had working capital of \$0.9 million as at June 30, 2016 (\$2.0 million as at December 31, 2015). As at June 30, 2016, the Company had cash and cash equivalents of \$17.5 million compared to \$15.3 million as at December 31, 2015.

	June 30,	December 31,
	2016	2015
Cash and cash equivalents	\$ 17,535	\$ 15,319
Gold bullion	-	
Cash and gold bullion	\$ 17,535	\$ 15,319
Non-cash working capital		
Other current assets:	23,455	19,149
Inventory	11,728	12,038
Recoverable taxes	10,366	3,161
Others	1,361	3,950
Current liabilities:	(40,098)	(32,489)
Accounts payable and accrued liabilities	(20,795)	(12,991)
Notes payable	(12,260)	(13,582)
Other provisions and liabilities	(5,205)	(5,338)
Other current liabilities	(1,838)	(578)
Working capital	\$ 892	\$ 1,979

The Company will continue to review and implement cost control measures across the operations and corporate offices to improve operating cash flow and enhance the Company's working capital position.

The use of funds during the three and six months ended June 30, 2016 is outlined below:

	Three mon	nths	ended	Six months ended				
(\$ thousands)	June	30	,	June 30,				
	2016		2015		2016		2015	
Cash generated from operating activities	\$ 10,435	\$	1,638	\$	19,961	\$	13,815	
Investing activities								
Capital expenditures on equipment and brownfield exploration	\$ (9,110)	\$	(3,196)	\$	(14,505)	\$	(8,577)	
Net proceeds from asset sales	21		4		21		41	
Cash used in investing activities	\$ (9,089)	\$	(3,192)	\$	(14,484)	\$	(8,536)	
Financing activities								
Net change in debt	\$ (734)	\$	(3,200)	\$	(1,350)	\$	(6,400)	
Interest paid	(885)		(555)		(1,792)		(1,273)	
Deferred share units redeemed	-		-		(41)		-	
Other	-		14		-		(12)	
Cash used in financing activities	\$ (1,619)	\$	(3,741)	\$	(3,183)	\$	(7,685)	
Effect of exchange rate	(208)		(187)		(78)		21	
Increase (decrease) in cash and equivalents	\$ (481)	\$	(5,482)	\$	2,216	\$	(2,385)	

The \$8.8 million increase in operating cash flows for Q2 2016 compared to the same period in 2015 is primarily due to the decrease in cash operating costs from \$876 in Q2 2015 to \$768 in Q2 2016 and the 25% increase in the ounces sold. The \$2.1 million and \$4.5 million improvements in financing outflows for the three and six months ended June 30, 2016 relate to the repayments of the Renvest credit facility in the first half of 2015.

Overall, capital expenditures increased significantly in Q2 2016 compared to Q2 2015 due to the Company's focus on carrying out its development and capital investment programs at Turmalina and Caeté in the first half of 2016. In Q2 2016, the

Company completed 3,218 metres of total development compared to 1,442 metres in Q2 2015, while the capital investment program included the completion of the Pilar development objective of accessing the high grade BFII Orebody, testing for an XRF Ore Sorting system expected to reduce haulage costs for Pilar, and advancing a newly designed paste-fill plant at Turmalina.

A brief summary of capital spending is outlined below:

		Three mon	iths ended	Six mont	Six months ended				
(\$ thousands)		June	30,	June	<b>30</b> ,				
		2016	2015	2016	2015				
Sustaining capital <sup>1</sup>									
Primary development	5	5,432	\$ 2,183	\$ 9,199	\$ 4,270				
Brownfield exploration		891	201	1,038	1,468				
Mine-site sustaining									
Engineering		1,011	17	1,134	22				
Equipment		531	117	1,505	1,547				
Total sustaining capital		7,865	2,518	12,876	7,307				
Non-sustaining capital (including capital projects) <sup>1</sup>									
Gurupi		211	141	369	242				
Turmalina		977	24	1,023	118				
Caete		35	510	94	902				
Others		22	3	143	8				
Total non-sustaining capital <sup>1</sup>		1,245	678	1,629	1,270				
Total capital expenditures	5	9,110	\$ 3,196	\$ 14,505	\$ 8,577				

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 in included in our calculation of all-in sustaining costs and all-in costs.

## **Contractual Obligations and Commitments**

The Company's contractual obligations as at June 30, 2016 are summarized as follows:

	Le	ess than 1	1 - 3 years		3 - 5 years	Mo	re than 5	Total
(\$ thousands, except where indicated)		year	1 - 5 years		o - o years		years	IUtai
Financial Liabilities								
Notes payable								
Principal								
Bank indebtedness	\$	11,776	\$ -	\$	-	\$	-	\$ 11,776
Vale note		500	1,000		750		-	2,250
Convertible debentures		-	21,500		-		-	21,500
Interest		2,652	3,440		-		-	6,092
Total financial liabilities	\$	14,928	\$ 25,940	\$	750	\$	-	\$ 41,618
Other Commitments								
Operating lease agreements	\$	108	\$ -	\$	-	\$	-	\$ 108
Suppliers' agreements 1,2		689	-		-		-	689
Other provisions and liabilities		5,205	7,187		-		-	12,392
Reclamation provisions <sup>3</sup>		1,828	5,677		6,033		11,205	24,743
Total other commitments	\$	7,830	\$ 12,864	\$	6,033	\$	11,205	\$ 37,932
Total	\$	22,758	\$ 38,804	\$	6,783	\$	11,205	\$ 79,550

<sup>&</sup>lt;sup>1</sup> The Company has the contractual right to cancel the mine operation contracts with 30 days advance notice. The amount included in the commitments table represents the contractual amount due within 30 days.

## **CAPITAL STRUCTURE**

The capital structure of the Company as at June 30, 2016 is outlined below:

All amounts in \$ thousands, except number of common shares	As at June 30, 2016
Bank indebtedness	\$ 11,776
Convertible debentures (fair value)	72,264
Vale note	1,809
Total debt	\$ 85,849
Less: cash and cash equivalents	(17,535)
Total net debt <sup>1</sup>	\$ 68,314
Number of common shares outstanding	111.1 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. We reduce gross indebtedness by cash and cash equivalents on the basis that they could be used to pay down debt.

## **OFF-BALANCE SHEET ITEMS**

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

<sup>&</sup>lt;sup>2</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.

 $<sup>^3</sup>$  Reclamation provisions - amounts presented in the table represent the undiscounted uninflated future payments for the expected cost of reclamation.

## 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 – being the amount agreed to by the parties and included in general and administration expenses in the statements of operations and comprehensive loss – and amount to \$52,000 and \$79,000 for the three and six months ended June 30, 2016, respectively (three and six months ended June 30, 2015 – \$16,000 and \$39,000, respectively).

## **HEALTH, SAFETY, AND ENVIRONMENT**

## **Health and Safety**

Jaguar places high priority on the safety and welfare of its employees. We recognize that our employees are our most valuable asset. We have a code of conduct that is strictly enforced. While our accidents rate has reduced over the past few years, we strive for improving it further in future. We have an integrated management system in place that promotes open communication at all levels. Over the past few years, the health and safety team has expanded in order to meet compliance and regulatory requirements, and also to improve our operating standards. Our training program for new employees is extensive and includes the participation of experienced professionals that act as mentors, providing hands-on guidance and conducting periodical reviews.

During the second quarter of 2016, the Lost Time Incidents ("LTIs") decreased to zero as compared to three incidents during the same period in 2015. For each incident, management identifies the likely causes and develops remediation plans to prevent future recurrences. The overall LTI frequency rate is calculated as the number of lost-time injuries per million hours worked. All accidents are analyzed and the underlying causes are identified to implement corrective actions. Proposed actions include the reinforcement of safe behavior with the Loss Prevention Program, thus aiming to strengthen the safety culture at Jaguar.

#### **Environment**

Jaguar is environmentally focused and continuously strives to improve our practices. In our commitment to the resources, land, and stakeholders, we work closely with surrounding communities, governments, and other partners to continuously improve the Company's sustainable development programs. Jaguar's programs ensure its operations and development efforts protect the environment and surrounding natural resources.

Jaguar's operations are subject to environmental regulation in Brazil. The Company has not been in full compliance with all environmental laws and regulations or held, or been in full compliance with, all required environmental and health and safety permits at all times. The Company is currently subject to a number of reclamation and remediation liabilities and may have civil or criminal fines or penalties imposed for alleged violations of applicable laws or regulations in Brazil. The Company has implemented and prioritized control structures and monitoring programs to address environmental non-compliance, and a reclamation plan for its mining/project sites is being prepared.

During the fourth quarter of 2015, Jaguar updated the reclamation plans for all Company's assets in the Iron Quadrangle that were closed in the previous years. The reclamation plans were developed by Jaguar's environmental team along with Agroflor Engenharia e Meio Ambiente ("Agroflor"), a Brazilian company with expertise in environmental studies and identification of liabilities. In Q1 2016, Agroflor completed reclamation plan reports on the Caeté Complex that include Camará, Catita, Serra Paraiso, and Sabará. Agroflor has also completed field vists for CPA (Ouro Fino, Rio de Peixe, Santa Isabel and Palmital) and MTL (Faina) and the reports for these assets will be concluded in the second half of 2016.

In December 2015, the State Regional Environmental Regulation Agency ("SUPRAM") started the evaluation of the renewal request for the Operating Licence ("LO") for MTL, that was filed in 2012. The operating licence for MTL continues to be valid even after the initial expiration date (June 19, 2012), as the Company has applied for renewal within the legal time frame.

## LITIGATION AND CONTINGENCIES

#### **Labour Practices**

Brazilian labour law is a complex system of statutes and regulations, which in general has a favourable approach to employees of the Company. As such, corporate labour compliance is a key success factor in Brazilian-based operations to minimize the impact of labour claims. The Company has historically not been in full compliance of labour regulations nor did it have the proper procedures in place to support labour claims defences, which led to the bulk of the litigation contingencies recorded.

In March 2013, management retained external counsel to review the Company's labour practices in Brazil to determine areas of improvement. As a result, management received a report which identified 48 labour law violations in the Company's legacy human resource practices capable of generating financial liability. Management has been tracking these 48 violations and has since implemented changes in procedures to eliminate those issues going forward and made significant progress during the last three years in addressing the deficiencies. The Company's human resource and legal departments have been continually reviewing the Company's practices and establishing action plans to improve labour practices and both departments continue to monitor the implementation of actions to remediate the legacy deficiencies.

#### DEVELOPMENT AND EXPLORATION PROJECTS

## **Gurupi - Development Project**

The Gurupi Project, wholly owned by the Company, is located in the State of Maranhão, Brazil, and comprises a total area of 140,332 hectares made of 33 mineral claims. Jaguar received its the Preliminary License ("LP") for the Gurupi project in June 2011. After the LP was granted, Jaguar completed part of the detailed engineering required to obtain the Installation License ("LI"). In January 2012, Jaguar received the LI, which authorizes the construction of Gurupi's processing plant. On November 20, 2013, Jaguar became aware that the Public Prosecutor in Brazil filed a lawsuit against MCT aiming at suspending the environmental licenses based on a number of unsupported allegations. In the preliminary decision, the judge decided to: (i) suspend the environmental licenses granted to MCT, (ii) prohibit any construction at the gold beneficiation plant, and (iii) stop any kind of negotiation with settlers without the participation of the National Institute for Colonization and Agrarian Reform ("INCRA").

During the fourth quarter of 2015, Jaguar Mining was formally notified about this injunction. The appeal of the injunction was filed in Q1 2016 as required by the law. The main point of the injunction is that MCT wants to develop a mine on land that was designated as an agricultural settlement project by INCRA. However, the mineral rights for the region are from the 1980's and 1990's, while INCRA established an "Agricultural Settlement" in 2005. Mineral Production under the National Department for Mineral Production ("DNPM") has the same level of importance as agricultural development under Brazilian law.

The main part of Jaguar's defense against the injunction is that there is very little to no agricultural work occurring in the areas of Chega Tudo and Cipoeiro and only large scale "garimpeiro" (illegal artisanal miners) mining is being carried out. In FY 2015, DNPM officially published information regarding eight mineral rights belonging to Jaguar. This publication will require Jaguar to complete mineral exploration and deliver a final exploration report to the DNPM within three years. Failure to identify and report mineralization during this period may likely result in a loss of these mineral rights.

Jaguar has continued the detailed planning for the resumption of limited mineral exploration in order to retain its mineral rights. In Q2 2016, the project development team continued preliminary works that are supporting the start of the socioeconomic research and the implementation of a stakeholder management plan. These works will support proposed solutions regarding land issues with INCRA surrounding the area affected by the project.

During Q2 2016, the Company also continued its interactions and engagement with stakeholders at Gurupi, including senior national government officials and ministries. Discussions have been positive and officials appear supportive of advancing economic activity, including mining, in Maranhão. Meetings with INCRA in Maranhão are ongoing and are critical to resolve the land issues surrounding the project area.

## **Greenfield Exploration**

Jaguar currently holds approximately 191,000 hectares of mineral rights. New mining legislation in Brazil has been tabled and the outcome of any mining law reform is, as of yet, unknown. The Company intends to assess its holdings in due course, to establish a disposition plan of certain assets in the context of any change to holding cost, which are currently 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 18 exploration licences, totaling 34,855 hectares covering a 38 kilometre section of a regional shear zone. Final exploration reports and a Preliminary Economic Analysis ("PEA") have been delivered to 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.

Further work on the Pedra Branca Project, has been delayed as the Company focuses its efforts on the Turmalina and Caeté operations. Consequently, the Company made only those expenditures required to maintain the claims and land tenure in good standing.

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 Net Smelter Royalty of one percent (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 three hundred percent (300%) of the Company's exploration expenditures incurred exclusively on the relevant Base Metal Dominant Area of the property.

## Turmalina – Zona Basal Project

During 2013, the Company completed the final exploration report on the southeastern portion of the Zona Basal target, located 3 kilometres west of the Turmalina plant facility and filed it with the DNPM. The Company has subsequently applied for the mining permit.

#### SPECIAL COMMITTEE

On February 27, 2015, the Company announced that its board of directors (the "Board") had formed a special committee ("Special Committee") with a mandate to explore alternatives for the enhancement of shareholder value and to oversee the financing process. The review considered various alternatives for the Company, including: merger opportunities, the potential sale of some of the Company's assets, potential partnership or joint venture agreements, and other transactions to maximize value for the Company's shareholders and to provide appropriate liquidity.

Subsequent to the completion of the convertible debenture financing in October 2015, the Special Committee reduced its activity level and is presently in a standby mode in the event that it is needed to oversee and evaluate a potential transaction. No material expenses have been incurred by the Special Committee since the completion of the convertible debenture financing.

There can be no assurance that it will become necessary for the Special Committee to become more active in the future or that this process will result in any transaction. The current members of the Special Committee are Messrs. Reeser and Miraglia. Mr. Reeser is the Chairman of the Special Committee.

## **QUALIFIED PERSON**

The technical contents of this MD&A have been reviewed and verified by Marcos Dias Alvim, BSc Geo., MAusIMM (CP), Project Development Manager, who is an employee of Jaguar Mining Inc., and is a "qualified person" as such term is defined in National Instrument 43-101 ("NI 43-101").

## **OUTSTANDING SHARE DATA**

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

	As at August 8, 2016
Issued and outstanding common shares	111,136,038
Stock options	7,525,788
Deferred share units	4,283,805
Finder's warrants	6,607,833
Convertible debentures	188,795,223
Total	318,348,687

Effective August 3, 2016, the common shares and convertible senior secured debentures of Jaguar commenced trading on the Toronto Stock Exchange ("TSX") under the symbols "JAG" and "JAG.DB.U", respectively. Concurrent with the TSX listing, the common shares of the Company were delisted from the TSX Venture Exchange ("TSX-V").

Subsequent to June 30, 2016, 1,500,000 deferred share units that were granted in 2015, vested when the volume weighted average trading price of the common shares of the Company for 20 trading days exceeded C\$0.44.

## **NON-IFRS PERFORMANCE MEASURES**

The Company has included the following non-IFRS performance measures: 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, earnings before tax, depreciation and amortization ("EBITDA"), and adjusted EBITDA in this document. 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 as follows:

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

		Three mor	ıths	ended	Six months ended						
(\$ thousands, except where indicated)	June 30,					June 30,					
	2016			2015		2016		2015			
Operating expenses (per note 13 of the consolidated FS)	\$	17,887	\$	16,808	\$	35,466	\$	36,941			
Cost adjustment <sup>1</sup>		290		-		(314)		(31)			
Adjusted operating expenses		18,177		16,808		35,152		36,910			
General & administration expenses		2,306		3,067		4,425		5,348			
Corporate stock-based compensation		108		180		224		364			
Sustaining capital expenditures		7,865		2,518		12,876		7,307			
All-in sustaining cash costs		28,456		22,573		52,677		49,929			
Reclamation - accretion (operating sites)		377		504		429		1,038			
All-in sustaining costs	\$	28,833	\$	23,077	\$	53,106	\$	50,967			
Non-sustaining capital expenditures		1,245		678		1,629		1,270			
Exploration and evaluation costs (greenfield)		15		29		17		78			
Reclamation - accretion (non-operating sites)		271		189		461		102			
Care and maintenance (non-operating sites)		256		292		463		576			
All-in costs	\$	30,620	\$	24,265	\$	55,676	\$	52,993			
Ounces of gold sold		23,970		19,184		46,851		43,412			
Cash operating costs per ounce sold	\$	758	\$	876	\$	750	\$	850			
All-in sustaining costs per ounce sold	\$	1,203	\$	1,203	\$	1,134	\$	1,174			
All-in costs per ounce sold	\$	1,277	\$	1,265	\$	1,188	\$	1,221			
Average realized gold price	\$	1,251	\$	1,190	\$	1,209	\$	1,188			
Cash operating margin per ounce sold	\$	493	\$	314	\$	459	\$	338			
All-in sustaining margin per ounce sold	\$	48	\$	(13)	\$	75	\$	14			

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

(\$ thousands, except where indicated)	Three months ended Six months ended June 30, June 30,							
(\$ thousands, except where mareated)	<b>2016</b> 2015				2016	<del>,</del> 2015		
Turmalina Complex								
Operating costs	\$	8,806	\$	6,891	\$	18,623	\$	16,868
Sustaining capital expenditures		4,123		2,111		7,288		5,321
All-in sustaining costs <sup>1</sup>	\$	12,929	\$	9,002	\$	25,911	\$	22,189
Ounces of gold sold		15,035		9,610		31,670		22,806
Cash operating costs per ounce sold <sup>1</sup>	\$	586	\$	717	\$	588	\$	740
All-in sustaining cost per ounce sold <sup>1,2</sup>	\$	860	\$	937	\$	818	\$	973
Caeté Complex								
Operating costs	\$	9,372	\$	9,916	\$	16,530	\$	20,041
Sustaining capital expenditures	Ą	3,742	٦	407	Ą	5,588	۲	1,986
All-in sustaining costs <sup>1</sup>	\$		\$	10,323	\$	22,118	\$	22,027
Ounces of gold sold	7	8,935	Ţ	9,574	Ţ	15,181	Ţ	20,606
Cash operating costs per ounce sold <sup>1</sup>	\$	1,049	\$	1,036	\$	1,089	\$	973
All-in sustaining cost per ounce sold <sup>1,2</sup>	\$	1,468	\$	1,078	\$	1,457	\$	1,069
Pilar Mine				c	_			40.44=
Operating costs	\$	7,299	\$	6,427	\$	13,184	\$	13,415
Sustaining capital expenditures		3,239	_	326	_	4,560	_	1,494
All-in sustaining costs <sup>1</sup>	\$		\$	6,753	\$	17,744	\$	14,909
Ounces of gold sold		7,622	_	6,835	_	12,991	<u>,</u>	15,268
Cash operating costs per ounce sold <sup>1</sup>	\$	958	\$	940	\$	1,015	\$	879
All-in sustaining cost per ounce sold <sup>1,2</sup>	\$	1,383	\$	988	\$	1,366	\$	976
RG Mine								
Operating costs	\$	2,072	\$	3,489	\$	3,347	\$	6,625
Sustaining capital expenditures		503		81		1,028		492
All-in sustaining costs <sup>1</sup>	\$	2,575	\$	3,570	\$	4,375	\$	7,117
Ounces of gold sold		1,313		2,739		2,190		5,338
Cash operating costs per ounce sold <sup>1</sup>	\$	1,578	\$	1,274	\$	1,528	\$	1,241

<sup>&</sup>lt;sup>1</sup> 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 mor	nths	ended	Six months ended						
(\$ thousands, except where indicated)	June	30,			,					
	2016		2015		2016		2015			
Net loss	\$ (26,866)	\$	(4,383)	\$	(41,867)	\$	(17,328)			
Income tax expense	(695)		(284)		(502)		3,381			
Finance costs	1,109		1,059		2,332		2,183			
Depreciation and amortization	8,408		3,471		16,133		10,118			
EBITDA	\$ (18,044)	\$	(137)	\$	(23,904)	\$	(1,646)			
Changes to legal provisions and recoverable VAT	1,686		1,075		(8,542)		8,845			
Foreign exchange loss (gain)	234		1,708		2,592		(216)			
Stock-based compensation	108		180		224		364			
Net realizable value adjustment	(314)		-		(919)		(32)			
Financial instruments loss (gain)	25,189		(618)		44,624		(38)			
Adjusted EBITDA	\$ 8,859	\$	2,208	\$	14,075	\$	7,277			

#### **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, 2015 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.

#### 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, and equipment and mineral exploration projects, 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 six months ended June 30, 2016 are consistent with those applied and disclosed in the audited annual consolidated financial statements for the year ended December 31, 2015. 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, 2015, which are available on the Company's website and on SEDAR.

## CHANGES IN ACCOUNTING POLICIES INCLUDING INITIAL ADOPTION

The accounting policies applied in the condensed interim consolidated financial statements as at June 30, 2016 are consistent with those used in the Company's annual audited consolidated financial statements for the year ended December 31, 2015. The following are recent pronouncements approved by the IASB that are pending adoption. These new standards are not yet effective and have not been applied in preparing the consolidated financial statements, however, they may impact future periods:

- IFRS 2 Share-based Payment ("IFRS 2") In June 2016, the IASB issued amendments to IFRS 2 Share-based Payment, covering the measurement of cash-settled share-based payments, classification of share-based payments settled net of tax withholdings, and accounting for a modification of a share-based payment from cash-settled to equity-settled. The new requirements could affect the classification and/or measurement of these arrangements, and potentially the timing and amount of expense recognized for new and outstanding awards. The amendments apply for annual periods beginning on or after January 1, 2018, with early adoption permitted. The impact of the amendments to IFRS 2 on the Company's consolidated financial statements has not yet been determined.
- IFRS 9 Financial Instruments ("IFRS 9") In July 2014, the IASB issued the final version of IFRS 9 Financial Instruments, bringing together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39 Financial Instruments: Recognition and Measurement. The mandatory effective date of IFRS 9 would be annual periods beginning on or after January 1, 2018, with early adoption permitted. The impact of IFRS 9 on the Company's financial instruments has not yet been determined.
- IFRS 15 Revenue from Contracts with Customers ("IFRS 15") In May 2014, the IASB issued IFRS 15, which covers principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing, and uncertainty of revenue and cash flows arising from a contract with a customer. In September 2015, the IASB deferred the effective date of the standard to annual reporting periods beginning on or after January 1, 2018, with earlier application permitted. The impact of IFRS 15 on the Company's consolidated financial statements has not yet been determined.
- IFRS 16 Leases ("IFRS 16") In January 2016, the IASB issued IFRS 16, which requires lessees to recognize assets and liabilities for most leases. Application of the standard is mandatory for annual reporting periods beginning on or after January 1, 2019, with earlier application permitted, provided the new revenue standard, IFRS 15, has been applied or is applied at the same date as IFRS 16. The impact of IFRS 16 on the Company's consolidated financial statements has not yet been determined.

# DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

Management of the Company is responsible for establishing and maintaining a system of disclosure controls and procedures to provide reasonable assurance that all material information relating to the Company is gathered and reported to senior management on a timely basis so that appropriate decisions can be made regarding public disclosure.

Management is also responsible for establishing and maintaining adequate internal controls over financial reporting (as such term is defined under National Instrument 52-109 as issued by the Canadian Securities Administrator). Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

There have been no changes during the three and six months ended June 30, 2016 that, in management's view, would have materially affected, or that are reasonably likely to materially affect, the Company's internal controls over financial reporting.

## 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, 2015 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.