



## Volcan Compañía Minera S.A.A. and Subsidiaries Management Discussion and Analysis Second Quarter 2017

### Principal Results:

Consolidated Volcan	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Sales Prices</b>							
Zinc (USD/MT)	2,708	2,587	1,883	37.4	2,646	1,777	48.9
Lead (USD/MT)	2,276	2,133	1,701	25.4	2,202	1,734	27.0
Copper (USD/MT)	5,882	5,651	4,756	18.8	5,767	4,764	21.0
Silver (USD/Oz)	17.7	17.1	16.7	2.7	17.4	15.8	10.0
Gold (USD/Oz)	1,221	1,256	1,257	-0.1	1,238	1,209	2.4
<b>Operating Results</b>							
Mineral treatment <sup>1</sup> (thousands MT)	1,917	2,088	1,853	12.6	4,005	3,797	5.5
Zinc Production (thousands FMT)	59.5	65.4	70.2	-6.8	124.9	141.7	-11.8
Lead Production (thousands FMT)	11.2	12.5	13.0	-4.1	23.6	28.1	-15.7
Copper Production (thousands FMT)	1.1	1.3	1.2	3.3	2.4	2.5	-2.5
Silver Production (millions Oz)	3.8	4.5	5.8	-22.5	8.3	11.6	-28.1
Gold Production (thousands Oz)	1.6	1.8	1.4	33.8	3.5	2.9	21.1
Unit Cost (USD/MT)	50.4	48.5	50.7	-4.2	49.4	49.4	0.0
Total Investments (MM USD)	32.4	37.9	26.7	42.0	70.3	45.2	55.6
<b>Financial Results (MM USD)</b>							
<b>Sales before adjustments</b>	<b>199.1</b>	<b>207.5</b>	<b>196.8</b>	<b>5.4</b>	<b>406.6</b>	<b>369.0</b>	<b>10.2</b>
Volcan Production	190.8	201.6	182.3	10.6	392.4	340.9	15.1
Commercialization Business	8.4	5.9	14.5	-59.3	14.2	28.1	-49.3
<b>Sales Adjustments</b>	<b>6.4</b>	<b>-5.4</b>	<b>-0.1</b>		<b>1.0</b>	<b>11.2</b>	<b>-90.9</b>
Settlement of prior period adjustments	5.0	0.1	-2.8		5.1	-9.8	
Adjustments for open positions <sup>2</sup>	-1.5	-5.2	18.8		-6.7	25.3	
Hedging results	2.9	-0.3	-16.1	-98.2	2.6	-4.3	
<b>Sales after adjustments</b>	<b>205.5</b>	<b>202.1</b>	<b>196.8</b>	<b>2.7</b>	<b>407.6</b>	<b>380.2</b>	<b>7.2</b>
<b>Net profit</b>	<b>23.5</b>	<b>15.6</b>	<b>15.4</b>	<b>1.0</b>	<b>39.1</b>	<b>34.7</b>	<b>12.5</b>
Earnings per share - EPS (USD)	0.006	0.004	0.004	1.0	0.010	0.009	12.5
<b>EBITDA</b>	<b>80.2</b>	<b>73.6</b>	<b>63.1</b>	<b>16.6</b>	<b>153.7</b>	<b>138.8</b>	<b>10.7</b>

<sup>1</sup> Includes treated tons at Oxides Plant

<sup>2</sup> Adjustments for open commercial positions refer to shipments without final settlement, which are therefore exposed to possible adjustments from variations of future metals prices. These financial provisions, **embedded derivatives and sales adjustments**, reflect this exposure according to a forward-price curve.

Source: Volcan Cia. Minera

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## 1. Executive Summary

- During 2Q17, the average sales price of the metals produced by the Company improved compared to 2Q16. The average sales price of zinc rose from 1,883 USD/MT in 2Q16 to 2,587 USD/MT in 2Q17 **(+37.4%)**, lead from 1,701 USD/MT to 2,133 USD/MT **(+25.4%)** and silver from 16.7 USD/Oz to 17.1 USD/Oz **(+2.7%)**. It is important to note that prices in 2Q17 were lower than those reported in 1Q17.
- During 2Q17, the volume of ore processed at the plants increased by 12.6% as compared to the same quarter of the previous year. This is mainly explained by polymetallic ore processed from stockpiles at the Cerro de Pasco Unit, and greater treated ore volumes from the Alpamarca open pit, which were partially offset by reduced volumes treated at Chungar and Yauli.
- In 2Q17, production of fines increased for all minerals, as compared to 1Q17. Volcan's production is expected to continue to increase in the following months, in accordance with the annual production estimates. However, in 2Q17, fine zinc production decreased by 6.8%, lead by 4.1% and silver by 22.5% when compared to 2Q16, mainly due to lower head grades at Yauli and Chungar.
- Consolidated unit cost decreased by 4.2%, from 50.7 USD/MT in 2Q16 to 48.5 USD/MT in 2Q17. This is mainly explained by the contribution of low-cost production from the polymetallic stockpiles at Cerro de Pasco and greater production volumes and operating efficiencies at Alpamarca.
- Total investment increased by 42.0%, from USD 26.7 MM in 2Q16 to USD 37.9 MM in 2Q17, due to higher operating investments in explorations, mine development and tailings dams; as well as projects aimed to increase production such the *sorting*<sup>1</sup> project at Cerro de Pasco. Greenfield exploration investments were increased in line with the strategy to expedite the incorporation of resources from our main projects.
- Better average metals prices resulted in an increase in sales from the Company's own concentrate by 10.6%, from USD 182.3 MM in 2Q16 to USD 201.6 MM in 2Q17. In turn, third-party concentrates sales declined by 59.3%, from USD 14.5 MM to USD 5.9 MM. Total sales before adjustments increased by 5.4%, from USD 196.8 MM in 2Q16 to USD 207.5 MM in 2Q17.
- Sales adjustments increased from USD -0.1 MM in 2Q16 to USD -5.4 MM in 2Q17, including provisions related to open commercial positions of USD -5.2 MM, hedging results of USD -0.3 MM, and positive final settlements of USD 0.1 MM. Sales after adjustments increased by 2.7%, from USD 196.8 MM in 2Q16 to USD 202.1 MM in 2Q17.

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<sup>1</sup> The sorting project consists of a technology that separates the high-grade ore from stockpiles, which are then treated at a concentrador plant, obtaining higher recoveries and production.

- Gross margin increased from 27% in 2Q16 to 28% in 2Q17. Net profit increased from USD 15.4 MM in 2Q16 to USD 15.6 MM in 2Q17. EBITDA increased from USD 63.1 MM in 2Q16 to USD 73.6 MM in 2Q17.

## 2. Consolidated Results

### 2.1 Production

**Table 1: Consolidated Production**

Consolidated Production	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Mineral extraction (thousands MT)</b>	<b>1,925</b>	<b>2,093</b>	<b>1,854</b>	<b>12.9</b>	<b>4,017</b>	<b>3,755</b>	<b>7.0</b>
Polymetallic ore	1,746	1,861	1,630	14.2	3,608	3,306	9.1
Oxides ore <sup>1</sup>	178	231	223	3.4	409	449	-8.8
<b>Mineral treatment (thousands MT)</b>	<b>1,917</b>	<b>2,088</b>	<b>1,853</b>	<b>12.6</b>	<b>4,005</b>	<b>3,797</b>	<b>5.5</b>
Concentrator Plants	1,739	1,857	1,630	13.9	3,596	3,348	7.4
Silver Oxides Plant	178	231	223	3.4	409	449	-8.8
<b>Fine Content</b>							
Zinc (thousands FMT)	59.5	65.4	70.2	-6.8	124.9	141.7	-11.8
Lead (thousands FMT)	11.2	12.5	13.0	-4.1	23.6	28.1	-15.7
Copper (thousands FMT)	1.1	1.3	1.2	3.3	2.4	2.5	-2.5
Silver (millions Oz)	3.8	4.5	5.8	-22.5	8.3	11.6	-28.1
Gold (thousands Oz)	1.6	1.8	1.4	33.8	3.5	2.9	21.1

Source: Volcan Cia. Minera

During 2Q17, Volcan increased ore extraction volumes by 12.9% as compared to the same quarter of the previous year. This is mainly explained by the contribution of low-grade polymetallic ore from stockpiles at the Cerro de Pasco Unit, greater ore volumes from Alpamarca open pit (5.9%), partially offset by lower extracted ore volumes in Yauli (-2.5%). Similarly, in 2Q17, treated volumes increased 12.6%, from 1,853 thousand MT in 2Q16 to 2,088 thousand MT in 2Q17. Year-to-date, extraction volume increased by 7.0% compared to the same period a year earlier, while treated volume increased 5.5%.

Although treated volumes were higher in 2Q17, the production of fine zinc decreased by 6.8%, from 70.2 thousand FMT in 2Q16 to 65.4 thousand FMT during 2Q17. Production of fine lead decreased by 4.1%, from 13.0 thousand FMT to 12.5 thousand FMT, while silver decreased by 22.5%, from 5.8 million ounces to 4.5 million ounces, mainly due to lower head grades at Yauli and Chungar. Meanwhile, fine copper production increased by 3.3%, from 1.2 thousand FMT in 2Q16 to 1.3 thousand FMT in 2Q17, and gold by 33.8%, from 1.4 thousand ounces to 1.8 thousand ounces.

It is important to note that, in 2Q17, production of fines increased for all metals, as compared to 1Q17. Production of fine zinc increased from 59.5 thousand FMT in 1Q17 to 65.4 thousand FMT in 2Q17, lead increased from 11.2 thousand FMT in 1Q17 to 12.5 thousand FMT in 2Q17, and silver from 3.8 million ounces to 4.5 million ounces.

## 2.2 Production Cost

**Table 2: Consolidated Production Cost**

Consolidated Production Cost	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Production Cost (MM USD)</b>	<b>96.8</b>	<b>101.4</b>	<b>93.9</b>	<b>8.0</b>	<b>198.2</b>	<b>186.4</b>	<b>6.3</b>
Mine Cost	52.9	53.9	52.8	2.2	106.8	104.9	1.8
Plant and Other Cost	43.9	47.5	41.1	15.5	91.4	81.5	12.1
<b>Unit Cost (USD/MT)</b>	<b>50.4</b>	<b>48.5</b>	<b>50.7</b>	<b>-4.2</b>	<b>49.4</b>	<b>49.4</b>	<b>0.0</b>
Mine Cost	27.5	25.8	28.5	-9.5	26.6	27.9	-4.8
Plant and Other Cost	22.9	22.8	22.2	2.5	22.8	21.5	6.3

Source: Volcan Cia. Minera

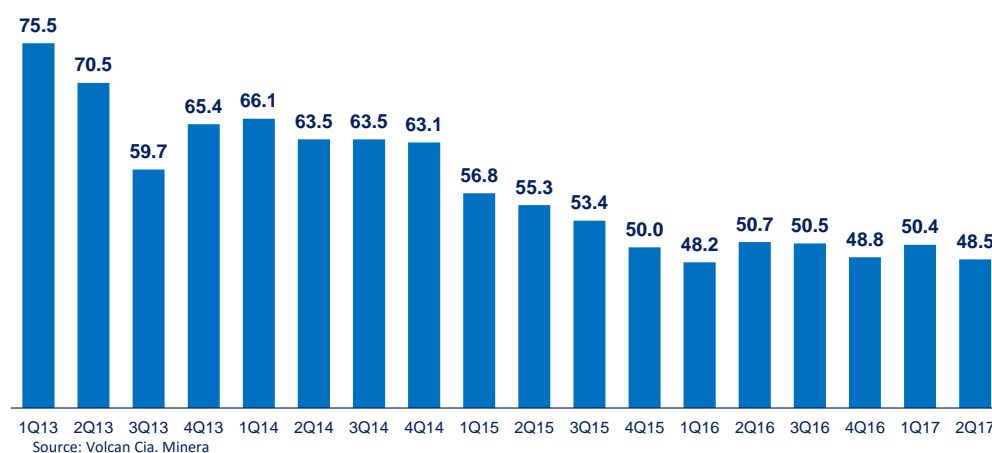
Consolidated unit cost decreased by 4.2%, from 50.7 USD/MT in 2Q16 to 48.5 USD/MT in 2Q17. This is mainly explained by the lower-cost production from stockpiles at Cerro de Pasco and greater production volumes and operating efficiencies at Alpamarca, partially offset by the increased unit cost at Yauli and Chungar as a consequence of lower extraction and treatment volumes at these units.

The cost of production in absolute terms increased by 8.0%, from USD 93.9 MM in 2Q16 to USD 101.4 MM in 2Q17. This is mainly explained by the increase of mine preparations at Yauli and Chungar, the treatment of low-grade polymetallic ore from stockpiles in Cerro de Pasco and the revaluation of the Sol in relation to the US Dollar.

The unit cost during 1H17 was 49.4 USD/MT, similar to the accumulated unit cost of 1H16. The absolute cost of production increased by 6.3%, from 186.4 MM in 1H16 to 198.2 MM in 1H17.

The Company is permanently focused on controlling and reducing operating costs across all units. Specific opportunities for fixed-costs reductions and operating efficiency improvement have been identified and will be executed in the following months.

The evolution of quarterly unit cost since 2013 is shown in the chart below.

**Chart 1: Evolution of the Unit Cost of Production (USD/MT)**

## 2.3 Total Investment

**Table 3: Consolidated Investment**

Consolidated Investment (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Mining</b>	<b>32.1</b>	<b>37.8</b>	<b>24.4</b>	<b>55.1</b>	<b>69.9</b>	<b>41.1</b>	<b>70.1</b>
<b>Mining Units</b>	<b>30.6</b>	<b>35.6</b>	<b>23.6</b>	<b>51.0</b>	<b>66.2</b>	<b>39.7</b>	<b>66.7</b>
Local Exploration	2.1	4.8	2.1	132.0	6.9	2.1	224.3
Development	15.8	17.3	10.5	64.6	33.1	20.1	65.0
Plants and Tailings Facilities	5.6	7.4	3.4	115.7	12.9	5.1	155.5
Mine and Infrastructure	5.3	4.6	6.9	-34.3	9.9	11.1	-10.8
Energy in Units	1.1	0.6	0.1	325.6	1.6	0.6	161.1
Support and Others	0.7	1.0	0.5	97.4	1.7	0.8	131.1
<b>Regional Explorations</b>	<b>1.5</b>	<b>1.8</b>	<b>0.5</b>	<b>259.7</b>	<b>3.3</b>	<b>0.9</b>	<b>258.5</b>
<b>Growth and Others</b>	<b>0.0</b>	<b>0.4</b>	<b>0.3</b>	<b>35.3</b>	<b>0.4</b>	<b>0.4</b>	<b>-9.5</b>
<b>Energy</b>	<b>0.3</b>	<b>0.1</b>	<b>2.3</b>	<b>-94.3</b>	<b>0.4</b>	<b>4.1</b>	<b>-90.1</b>
<b>Total</b>	<b>32.4</b>	<b>37.9</b>	<b>26.7</b>	<b>42.0</b>	<b>70.3</b>	<b>45.2</b>	<b>55.6</b>

Source: Volcan Cia. Minera

Total mining investment grew by 55.1%, from USD 24.4 MM in 2Q16 to USD 37.8 MM in 2Q17, with the purpose of increasing the Company's mineral resources and improving the operations' flexibility.

Operating investment increased by 51.0%, from USD 23.6 MM in 2Q16 to USD 35.6 MM in 2Q17, mainly in mine development (+65%), plants & tailings dams (+116%) and local exploration (+132%). Regional exploration investments (greenfield or early-stage projects) increased by 259.7%, from USD 0.5 MM in 2Q16 to USD 1.8 MM in 2Q17, in line with the strategy to expedite the incorporation of resources from our main projects.

Energy investment in 2Q17 were USD 0.1 MM versus USD 2.3 MM in 2Q16, mainly due to the completion of the construction of the Rucuy Hydroelectric Plant. Total investment increased by 42.0%, from USD 26.7 MM in 2Q16 to USD 37.9 MM in 2Q17.

Year-to-date, operating investment grew by 66.7%, from USD 39.7 MM in 1H16 to USD 66.2 MM in 1H17, and regional explorations by 258.5%, from USD 0.9 MM in 1H16 to USD 3.3 MM in 1S17. In the energy business, year-to-date investment totaled USD 0.4 MM in 1H17 as compared to USD 4.1 MM in 1H16.

## 2.4 Income Statement

Table 4: Income Statement

Income Statement (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Sales before adjust.</b>	<b>199.1</b>	<b>207.5</b>	<b>196.8</b>	<b>5.4</b>	<b>406.6</b>	<b>369.0</b>	<b>10.2</b>
<i>Sett. of prior periods adjust.</i>	5.0	0.1	-2.8		5.1	-9.8	
<i>Adj. open positions</i>	-1.5	-5.2	18.8		-6.7	25.3	
<i>Hedging</i>	2.9	-0.3	-16.1	-98.2	2.6	-4.3	
<b>Sales after adjust.</b>	<b>205.5</b>	<b>202.1</b>	<b>196.8</b>	<b>2.7</b>	<b>407.6</b>	<b>380.2</b>	<b>7.2</b>
<b>Cost of Goods Sold</b>	<b>-138.3</b>	<b>-145.1</b>	<b>-142.8</b>	<b>1.7</b>	<b>-283.4</b>	<b>-278.6</b>	<b>1.7</b>
<b>Gross Profit</b>	<b>67.2</b>	<b>57.0</b>	<b>54.0</b>	<b>5.6</b>	<b>124.2</b>	<b>101.6</b>	<b>22.2</b>
<b>Gross Margin</b>	<b>33%</b>	<b>28%</b>	<b>27%</b>	<b>1 pp</b>	<b>30%</b>	<b>27%</b>	<b>4 pp</b>
Administrative Expenses	-10.5	-11.6	-11.1	5.3	-22.1	-20.4	8.6
Sales Expenses	-7.7	-7.3	-8.9	-17.5	-15.0	-15.5	-3.0
Other Income (Expenses) <sup>1</sup>	-1.6	-1.1	-4.0	-73.0	-2.7	5.8	
<b>Operating Profit</b>	<b>47.4</b>	<b>37.0</b>	<b>30.0</b>	<b>23.0</b>	<b>84.3</b>	<b>71.5</b>	<b>17.9</b>
<b>Operating Margin</b>	<b>23%</b>	<b>18%</b>	<b>15%</b>	<b>3 pp</b>	<b>21%</b>	<b>19%</b>	<b>2 pp</b>
Financial Income (Expense)	-9.4	-7.6	-7.5	1.3	-17.1	-16.1	6.0
Exchange Difference (net)	0.1	1.2	0.3	332.9	1.3	0.9	38.0
Royalties	-3.8	-3.0	-2.6	18.2	-6.8	-4.0	69.7
Income Tax	-10.7	-11.9	-4.8	146.0	-22.6	-17.6	28.7
<b>Net Profit</b>	<b>23.5</b>	<b>15.6</b>	<b>15.4</b>	<b>1.0</b>	<b>39.1</b>	<b>34.7</b>	<b>12.5</b>
<b>Net Margin</b>	<b>11%</b>	<b>8%</b>	<b>8%</b>	<b>0 pp</b>	<b>10%</b>	<b>9%</b>	<b>0 pp</b>
<b>EBITDA</b>	<b>80.2</b>	<b>73.6</b>	<b>63.1</b>	<b>16.6</b>	<b>153.7</b>	<b>138.8</b>	<b>10.7</b>
<b>EBITDA Margin</b>	<b>39%</b>	<b>36%</b>	<b>32%</b>	<b>4 pp</b>	<b>38%</b>	<b>37%</b>	<b>1 pp</b>

<sup>1</sup> Includes the sales and cost of sales of the energy division. In 1H16, other income include extraordinary income of USD 13.5 MM associated with the partial repurchase of the international bonds

Source: Volcan Cia. Minera

**Table 5: Financial Results by Business**

Income Statement by Business (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Volcan Production</b>							
Sales	194.7	193.9	185.1	4.8	388.6	353.9	9.8
Cost of Goods Sold	-130.9	-139.9	-128.8	8.6	-270.8	-252.5	7.3
<b>Gross Profit</b>	<b>63.8</b>	<b>54.0</b>	<b>56.2</b>	<b>-4.0</b>	<b>117.8</b>	<b>101.4</b>	<b>16.2</b>
<i>Gross Margin</i>	33%	28%	30%	-3 pp	30%	29%	2 pp
<b>Net Profit</b>	<b>21.4</b>	<b>13.6</b>	<b>17.4</b>	<b>-21.7</b>	<b>35.0</b>	<b>35.4</b>	<b>-1.1</b>
<b>EBITDA<sup>1</sup></b>	<b>76.9</b>	<b>70.7</b>	<b>65.8</b>	<b>7.5</b>	<b>147.6</b>	<b>139.5</b>	<b>5.9</b>
<i>EBITDA Margin</i>	40%	36%	36%	1 pp	38%	39%	-1 pp
<b>Commercialization Business</b>							
Sales	10.8	8.3	11.7	-29.3	19.0	26.3	-27.5
Cost of Goods Sold	-7.4	-5.3	-13.9	-62.2	-12.7	-26.1	-51.5
<b>Gross Profit</b>	<b>3.4</b>	<b>3.0</b>	<b>-2.3</b>		<b>6.4</b>	<b>0.2</b>	
<i>Gross Margin</i>	31%	36%	-19%	56 pp	33%	1%	33 pp
<b>Net Profit</b>	<b>2.2</b>	<b>1.9</b>	<b>-2.0</b>		<b>4.1</b>	<b>-0.6</b>	
<b>EBITDA</b>	<b>3.2</b>	<b>2.9</b>	<b>-2.7</b>		<b>6.1</b>	<b>-0.6</b>	
<i>EBITDA Margin</i>	30%	35%	-23%	58 pp	32%	-2%	34 pp
<b>Other Business</b>							
Sales	205.5	202.1	196.8	2.7	407.6	380.2	7.2
Cost of Goods Sold	-138.3	-145.1	-142.8	1.7	-283.4	-278.6	1.7
<b>Gross Profit</b>	<b>67.2</b>	<b>57.0</b>	<b>54.0</b>	<b>5.6</b>	<b>124.2</b>	<b>101.6</b>	<b>22.2</b>
<i>Gross Margin</i>	33%	28%	27%	1 pp	30%	27%	4 pp
<b>Net Profit</b>	<b>23.5</b>	<b>15.6</b>	<b>15.4</b>	<b>1.0</b>	<b>39.1</b>	<b>34.7</b>	<b>12.5</b>
<b>EBITDA<sup>1</sup></b>	<b>80.2</b>	<b>73.6</b>	<b>63.1</b>	<b>16.6</b>	<b>153.7</b>	<b>138.8</b>	<b>10.7</b>
<i>EBITDA Margin</i>	39%	36%	32%	4 pp	38%	37%	1 pp

<sup>1</sup> In 1H16, includes the extraordinary income of USD 13.5 MM associated with the partial repurchase of the international bonds

Source: Volcan Cia. Minera

- Sales Analysis**

**Table 6: Average Sales Prices**

Sales Prices	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Zinc (USD/MT)	2,708	2,587	1,883	37.4	2,646	1,777	48.9
Lead (USD/MT)	2,276	2,133	1,701	25.4	2,202	1,734	27.0
Copper (USD/MT)	5,882	5,651	4,756	18.8	5,767	4,764	21.0
Silver (USD/Oz)	17.7	17.1	16.7	2.7	17.4	15.8	10.0
Gold (USD/Oz)	1,221	1,256	1,257	-0.1	1,238	1,209	2.4

Source: Volcan Cia. Minera

**Table 7: Fine Contents Sales Volumes**

Fines Sales		Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Volcan Production	Zinc (thousands FMT)	60.5	65.1	69.0	-5.7	125.6	138.6	-9.4
	Lead (thousands FMT)	11.4	12.3	14.3	-13.8	23.7	29.5	-19.8
	Copper (thousands FMT)	0.8	0.7	0.9	-19.0	1.5	1.9	-18.4
	Silver (millions Oz) <sup>1</sup>	4.1	4.4	6.1	-27.1	8.5	12.0	-29.0
	Gold (thousands Oz) <sup>1</sup>	2.2	2.1	3.2	-34.1	4.3	6.7	-35.7
Commerciali- zation Business	Zinc (thousands FMT)	1.6	0.6	7.6	-92.4	2.2	14.9	-85.1
	Lead (thousands FMT)	0.1	0.1	0.3	-70.3	0.2	0.9	-76.6
	Copper (thousands FMT)	0.4	0.5	0.4	25.7	0.9	0.7	28.9
	Silver (millions Oz)	0.2	0.2	0.3	-31.7	0.4	0.5	-26.4
	Gold (thousands Oz)	0.0	0.1	0.0	378.5	0.1	0.0	150.9
Total	Zinc (thousands FMT)	62.2	65.7	76.7	-14.3	127.9	153.6	-16.7
	Lead (thousands FMT)	11.5	12.4	14.7	-15.1	23.9	30.5	-21.5
	Copper (thousands FMT)	1.2	1.2	1.3	-6.5	2.4	2.6	-5.8
	Silver (millions Oz)	4.3	4.6	6.4	-27.3	8.9	12.5	-28.9
	Gold (thousands Oz)	2.2	2.2	3.3	-32.7	4.4	6.8	-34.8

**Table 8: Sales in USD**

Sales (millions USD)		Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Volcan Production	Zinc	109.6	114.5	79.6	43.8	224.0	145.5	54.0
	Lead	19.4	21.2	16.7	26.8	40.7	35.3	15.1
	Copper	2.3	2.5	1.9	29.0	4.7	3.8	23.5
	Silver	58.0	62.1	81.9	-24.1	120.1	151.5	-20.7
	Gold	1.5	1.3	2.2	-40.1	2.8	4.8	-41.0
	Sales before adjust.	190.8	201.6	182.3	10.6	392.4	340.9	15.1
	Sett. of prior period adjust.	4.6	-1.6	-2.5	-35.7	3.0	-9.0	
	Adjust. for open positions	-2.8	-5.8	17.0		-8.6	22.5	
	Hedging results	2.1	-0.3	-11.7	-97.2	1.8	-0.5	
	Sales after adjust.	194.7	193.9	185.1	4.8	388.6	353.9	9.8
Commerciali- zation Business	Zinc	3.6	1.2	10.3	-88.2	4.8	19.8	-75.9
	Lead	0.2	0.2	0.4	-55.9	0.4	1.1	-61.4
	Copper	1.8	1.8	0.9	91.8	3.6	1.8	107.0
	Silver	2.7	2.7	2.8	-5.1	5.4	5.4	-1.5
	Gold	0.0	0.0	0.0	8.1	0.0	0.0	281.3
	Sales before adjust.	8.4	5.9	14.5	-59.3	14.2	28.1	-49.3
	Sett. of prior period adjust.	0.4	1.7	-0.3		2.1	-0.8	
	Adjust. for open positions	1.3	0.6	1.8	-65.8	1.9	2.8	-31.2
	Hedging results	0.7	0.0	-4.4		0.7	-3.8	
	Sales after adjust.	10.8	8.3	11.7	-29.3	19.0	26.3	-27.5
Total	Zinc	113.1	115.7	89.9	28.7	228.8	165.2	38.5
	Lead	19.6	21.4	17.2	24.7	41.1	36.4	12.8
	Copper	4.1	4.3	2.9	49.6	8.4	5.6	49.7
	Silver	60.7	64.8	84.7	-23.5	125.5	156.9	-20.0
	Gold	1.5	1.3	2.2	-40.0	2.8	4.8	-40.4
	Sales before adjust.	199.1	207.5	196.8	5.4	406.6	369.0	10.2
	Sett. of prior period adjust.	5.0	0.1	-2.8		5.1	-9.8	
	Adjust. for open positions	-1.5	-5.2	18.8		-6.7	25.3	
Hedging results	2.9	-0.3	-16.1	-98.2	2.6	-4.3		
Sales after adjust.	205.5	202.1	196.8	2.7	407.6	380.2	7.2	

Source: Volcan Cia. Minera



For 2Q17, total sales before adjustments were USD 207.5 MM, 5.4% higher than the USD 196.8 MM reported in 2Q16. This result is attributable to the increase in the average sales price of zinc by 37.4%, lead by 25.4%, copper by 18.8% and silver by 2.7%. The increase in sales of the Company's own concentrate (+10.6%) were partially offset by lower third-party concentrates sales, where sales before adjustments decreased from USD 14.5 MM in 2Q16 to USD 5.9 MM in 2Q17.

During 2Q17, Volcan recorded adjustments related to open commercial positions of USD 5.2 MM, hedging results of USD -0.3 MM, and positive final settlements of USD 0.1 MM.

Therefore, during 2Q17 sales after adjustments totaled USD 202.1 MM, a 2.7% increase when compared to the USD 196.8 MM reported in 2Q16. Year-to-date, sales after adjustments grew by 7.2%, from USD 380.2 MM in 1H16 to USD 407.6 MM in 1H17.

- **Cost of Goods Sold**

**Table 9: Cost of Goods Sold**

<b>Cost of Goods Sold (millions USD)</b>	<b>Jan-Mar 2017</b>	<b>Apr-Jun 2017</b>	<b>Apr-Jun 2016</b>	<b>var %</b>	<b>Jan-Jun 2017</b>	<b>Jan-Jun 2016</b>	<b>var %</b>
<b>Volcan Production</b>	<b>130.9</b>	<b>138.3</b>	<b>126.7</b>	<b>9.2</b>	<b>269.2</b>	<b>249.6</b>	<b>7.9</b>
Volcan Production Cost	96.8	101.4	93.9	8.0	198.2	186.4	6.3
D&A from Production Cost	29.6	33.7	28.7	17.2	63.3	58.7	7.8
Ore Purchase	0.0	1.6	0.0		1.6	0.0	
Extraordinary Costs	0.6	0.5	0.2	218.1	1.1	0.6	84.8
Variation of Inventories	3.9	1.0	3.8	-73.2	4.9	3.8	29.9
<b>Commercialization Business</b>	<b>7.1</b>	<b>5.0</b>	<b>14.1</b>	<b>-64.5</b>	<b>12.1</b>	<b>26.1</b>	<b>-53.4</b>
Concentrates Purchase	6.4	4.5	14.1	-68.3	10.9	26.3	-58.5
Variation of Inventories	0.7	0.6	0.1		1.3	-0.2	
<b>Workers Participation</b>	<b>0.3</b>	<b>1.8</b>	<b>2.0</b>	<b>-8.9</b>	<b>2.1</b>	<b>2.9</b>	<b>-28.9</b>
<b>Total</b>	<b>138.3</b>	<b>145.1</b>	<b>142.8</b>	<b>1.7</b>	<b>283.4</b>	<b>278.6</b>	<b>1.7</b>

Source: Volcan Cia. Minera

Total cost of goods sold increased by 1.7%, from USD 142.8 MM in 2Q16 to USD 145.1 MM in 2Q17. This is mainly explained by a higher cost of production of USD 7.5 MM and greater depreciation of USD 5.0 MM, mainly in the treatment of ore from stockpiles at Cerro de Pasco, in Chungar and Alpamarca. Purchases of third-party concentrates were reduced by USD 9.6 MM and total inventories by USD 2.3 MM.

Year-to-date, the total cost of goods sold increased from USD 278.6 MM in 1H16 to USD 283.4 MM in 1H17.

- **Gross Margin and Gross Profit**

The Company's gross margin increased from 27% in 2Q16 to 28% in 2Q17. This is explained by better metals prices that were offset by negative sales adjustments and higher depreciation in 2Q17, as compared to 2Q16. Total gross profit in 2Q17 grew by 5.6%, from USD 54.0 MM in 2Q16 to USD 57.0 MM in 2Q17.

Year-to-date, gross margin increased from 27% in 2016 to 30% in 2017. Gross profit increased from USD 101.6 MM in 1H16 to USD 124.2 MM in 2H17.

- **Administrative and Sales Expenses**

Administrative expenses in 2Q17 totaled USD 11.6 MM, 5.3% higher than the USD 11.1 MM recorded in 2Q16, mainly due to personnel expenses provisions. Year-to-date, administrative expenses increased from USD 20.4 MM in 1H16 to USD 22.1 MM in 1H17.

Sales expenses during 2Q17 decreased by 17.5%, from USD 8.9 MM in 2Q16 to USD 7.3 MM. This was mainly due to a reduction in shipping expenses achieved by a gain in logistic and business efficiencies. Year-to-date, sales expenses decreased from USD 15.5 MM in 1H16 to USD 15.0 MM in 1H17.

- **Other Income and Expenses**

In 2Q17, the net amount of other income and expenses was negative, USD 1.1 MM versus negative USD 4.0 MM in 2Q16. This reduction is related to lower depreciation explained by the reallocation of Cerro de Pasco depreciation to the cost of production, attributable to the treatment of stockpiles.

- **Financial Expenses and Exchange-Rate Difference**

In 2Q17, net financial expenses totaled USD 7.6 MM, a figure similar to the USD 7.5 MM recorded in 2Q16. Moreover, exchange-rate variation gains totaling USD 1.2 MM were registered in 2Q17, higher than the exchange-rate gains reported in 2Q16 (USD 0.3 MM).

- **Net Profit and EBITDA**

Net profit grew by 1.0%, from USD 15.4 MM in 2Q16 to USD 15.6 MM in 2Q17. EBITDA grew by 16.6%, from USD 63.1 MM in 2Q16 to USD 73.6 MM in 2Q17.

Year-to-date, the net profit increased from USD 34.7 MM in 1H16 to USD 39.1 MM in 1H17. EBITDA increased from USD 138.8 MM in 1H16 to USD 153.7 MM in 1H17.

## **2.5 Liquidity and Creditworthiness**

In 2Q17, cash generated by mining operations totaled USD 53.1 MM. Operating and exploration investments, as well as growth investments in the mining business, totaled USD 36.5 MM, while energy investments totaled USD 0.2 MM. Moreover, interests paid totaled USD 2.5 MM, and other investments amounted to USD 19.5 MM, mainly related to the Chancay port project. Financing for the period was USD 6.1 MM.

The resulting total cash flow during 2Q17 was USD 0.8 MM, and the total cash balance as of June 30, 2017, was USD 201.3 MM.

At the end of 2Q17, the net debt/EBITDA ratio was 1.91.

For a more complete analysis, the table below shows debt, cash balance and EBITDA pertaining to the mining division separately from the energy division. The energy division is comprised of subsidiary companies Hidroelectrica Huanchor S.A.C.,

Compañía Hidroeléctrica Tingo S.A. and Empresa de Generación Eléctrica Río Baños S.A.C.

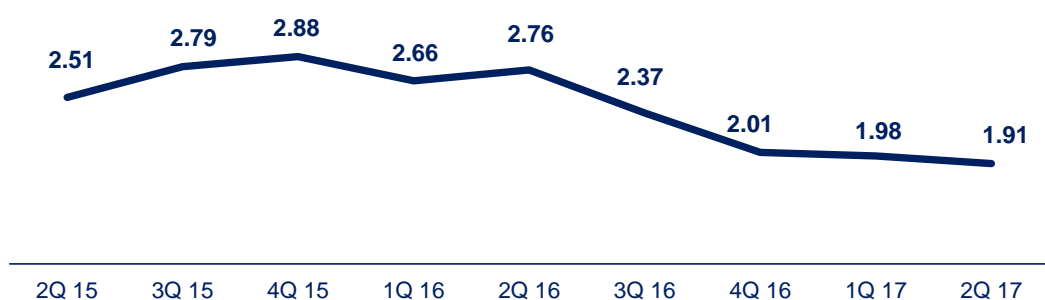
**Table 10: Net Debt / EBITDA Ratio**

Net Debt/EBITDA Ratio	Mining	Energy	Consolidated 2Q17
Gross Debt (MM USD)	786.2	21.6	807.8
Cash Balance (MM USD)	193.2	8.1	201.3
<b>Net Debt (MM USD)</b>	<b>593.0</b>	<b>13.5</b>	<b>606.5</b>
<b>EBITDA<sup>1</sup> (MM USD)</b>	<b>310.5</b>	<b>7.3</b>	<b>317.8</b>
<b>Ratio</b>	<b>1.91</b>	<b>1.85</b>	<b>1.91</b>

<sup>1</sup> EBITDA for the last 12 months.

Source: Volcan Cia. Minera

**Chart 2: Evolution of Net Debt / EBITDA**



Fuente: Volcan Cía. Minera

### 3. Results by Operating Unit

#### 3.1 Yauli Unit Operating Results

**Table 11: Yauli Production**

Yauli Production	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Mineral extraction (thousands MT)	804	877	900	-2.5	1,681	1,847	-9.0
Mineral treatment (thousands MT)	805	888	898	-1.2	1,693	1,883	-10.1
<b>Fines Content</b>							
Zinc (thousands FMT)	33.1	38.7	43.3	-10.7	71.8	89.3	-19.6
Lead (thousands FMT)	4.3	4.6	6.0	-22.7	8.9	13.4	-33.6
Copper (thousands FMT)	0.6	0.7	0.7	-7.8	1.3	1.5	-12.0
Silver (million Oz)	1.6	1.9	3.2	-40.3	3.5	6.4	-44.7
Gold (thousands Oz)	1.0	1.2	0.5	144.5	2.3	1.1	111.2

Source: Volcan Cia. Minera

In 2Q17, the ore extracted at the Yauli Unit declined by 2.5% as compared to the same period of the previous year, mainly due to the depletion of the Carahuacra Norte Open Pit, lower ore volumes at San Cristóbal Mine, and lower contribution by Andaychagua Mine, as a result of the reduction of the width of its veins at depth. This reduction was partially offset by greater contributions from the Carahuacra and Ticlio mines. As a consequence, the volume of ore treated at the Yauli Unit concentrator plants decreased by 1.2% in 2Q17, compared to the same period of the previous year.

In 2Q17, fine zinc production decreased by 10.7% as compared to 2Q16, silver by 40.3%, lead by 22.7%, and copper by 7.8%, as a result of reduced treatment volumes and lower average head grades.

It is important to note that, in 2Q17, production increased as compared to previous quarters, mainly due to the recovery of the San Cristóbal Mine and the increase of production at Carahuacra Mine through explorations, mine development and preparations executed in recent months.

**Table 12: Yauli Production Cost**

Yauli Production Cost	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Production Cost (MM USD)</b>	<b>56.4</b>	<b>58.4</b>	<b>54.6</b>	<b>7.0</b>	<b>114.8</b>	<b>108.2</b>	<b>6.1</b>
Extraction Cost	34.4	35.0	33.2	5.5	69.5	66.0	5.3
Treatment Cost	22.0	23.4	21.4	9.4	45.3	42.3	7.3
<b>Unit Cost (USD/MT)</b>	<b>70.1</b>	<b>66.3</b>	<b>60.7</b>	<b>9.2</b>	<b>68.1</b>	<b>58.2</b>	<b>17.1</b>
Extraction Cost	42.8	39.9	36.9	8.2	41.3	35.7	15.7
Treatment Cost	27.3	26.3	23.8	10.7	26.8	22.4	19.3

Source: Volcan Cia. Minera

In 2Q17, in absolute terms, production cost increased by 7.0%, from USD 54.6 MM in 2Q16 to USD 58.4 MM in 2Q17, mainly explained by the increase of mine preparations at the San Cristóbal, Carahuacra and Ticlio mines, and the increase in workforce cost. The operation's unit cost increased by 9.2%, from 60.7 USD/MT in 2Q16 to 66.3 USD/MT in 2Q17, mainly due to a higher absolute cost and lower extracted and treated volumes.

Year-to-date, in absolute terms, production cost increased by 6.1%, from USD 108.2 MM in 1H16 to USD 114.8 MM in 1H17. The operation's unit cost increased by 17.1%, from 58.2 USD/MT in 1H16 to 68.1 USD/MT in 1H17.

**Table 13: Yauli Operating Investment**

Yauli Operating Investment (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Local Exploration	1.5	2.7	1.2	130.3	4.2	1.2	241.2
Mine Development	11.5	13.2	6.1	117.0	24.7	11.7	111.2
Plants and Tailings Dams	1.9	2.9	2.8	4.8	4.8	4.2	13.3
Mine and Infrastructure	2.5	2.3	3.5	-35.0	4.7	5.0	-6.1
Energy	0.7	0.5	0.1	835.7	1.2	0.5	122.9
Support and Others	0.3	0.5	0.4	11.8	0.8	0.6	43.6
<b>Total</b>	<b>18.4</b>	<b>22.1</b>	<b>14.0</b>	<b>57.4</b>	<b>40.5</b>	<b>23.3</b>	<b>73.5</b>

Source: Volcan Cia. Minera

Operating investment increased by 57.4%, from USD 14.0 MM in 2Q16 to USD 22.1 MM in 2Q17, including additional investment in local development and exploration, in line with the current plan to increase production levels.

Year-to-date, operating investments increased by 73.5%, from USD 23.3 MM in 2H16 to USD 40.5 MM in 2H17.

It is worth noting that the construction of the integration tunnel between San Cristobal and Carahuacra mines has begun. This infrastructure that will allow for significant operating efficiencies and the reduction of transportation costs.

### 3.2 Chungar Unit Operating Results

**Table 14: Chungar Production**

Chungar Production	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Mineral extraction (thousands MT)	477	499	500	-0.1	976	1,001	-2.5
Mineral treatment (thousands MT)	473	486	504	-3.7	959	1,014	-5.5
<b>Fines Content</b>							
Zinc (thousands FMT)	21.8	22.0	24.5	-10.2	43.8	47.4	-7.6
Lead (thousands FMT)	4.6	5.4	5.3	1.9	10.0	11.1	-9.9
Copper (thousands FMT)	0.4	0.5	0.4	28.7	0.8	0.7	17.1
Silver (million Oz)	0.8	1.0	1.1	-7.8	1.8	2.2	-15.8

Source: Volcan Cia. Minera

In 2Q17, the ore extracted from the Chungar Unit was similar to 2Q16. The reduction of ore extracted at the Islay Mine was offset by larger volumes extracted at the Animón Mine. The ore processed at the concentrator plant declined by 3.7%.

During 2Q17, the production of fine zinc and silver decreased by 10.2% and 7.8%, respectively, as compared to 2Q16, as a consequence of lower ore volumes at the Islay Mine, and lower zinc and silver grades at the Animón Mine. Meanwhile, fine copper production increased by 28.7%, due to higher grades and metallurgical recoveries.

It is worth noting that the construction of the integration tunnel between Animón and Islay mines began this year. This will result in the improved efficiency of current operations, and lower transportation and pumping costs, among others. In addition, this tunnel will facilitate the exploration of the Islay 4 concession, which shows significant evidence of mineralization and may lead to the future production growth at the Chungar Unit.

**Table 15: Chungar Production Cost**

Chungar Production Cost	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Production Cost (MM USD)</b>	<b>25.7</b>	<b>26.6</b>	<b>25.6</b>	<b>4.1</b>	<b>52.3</b>	<b>49.9</b>	<b>4.8</b>
Extraction Cost	15.6	16.3	15.9	2.4	31.9	31.1	2.4
Treatment Cost	10.1	10.3	9.6	6.8	20.4	18.8	8.7
<b>Unit Cost (USD/MT)</b>	<b>54.1</b>	<b>53.9</b>	<b>51.0</b>	<b>5.6</b>	<b>54.0</b>	<b>49.6</b>	<b>8.8</b>
Extraction Cost	32.7	32.7	31.9	2.5	32.7	31.1	5.1
Treatment Cost	21.4	21.2	19.1	10.8	21.3	18.5	15.0

Source: Volcan Cia. Minera

In 2Q17, in absolute terms, production cost increased by 4.1%, from USD 25.6 MM in 2Q16 to USD 26.6 MM in 2Q17. This increase is explained by the mine preparation and developments carried out at the Animón Mine. The operation's unit cost increased by 5.6%, from 51.0 USD/MT in 2Q16 to 53.9 USD/MT in 2Q17, mainly due to a higher absolute cost and lower treated volumes.

Year-to-date (, in absolute terms, production cost increased from 4.8%, from USD 49.9 MM in 1H16 to USD 52.3 MM in 1H17. The operation's unit cost increased by 8.8%, from 49.6 USD/MT in 1H16 to 54.0 USD/MT in 1H17.

**Table 16: Chungar Operating Investment**

Chungar Operating Investment (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Local Exploration	0.6	1.8	0.9	111.3	2.4	0.9	176.6
Mine Development	4.3	4.2	4.5	-6.8	8.5	8.4	0.8
Plants and Tailings Dams	2.8	2.5	0.3	876.3	5.2	0.3	1745.6
Mine and Infrastructure	2.1	1.5	2.8	-47.0	3.6	3.5	3.3
Energy	0.4	0.1	0.1	-34.5	0.4	0.1	386.1
Support and Others	0.1	0.3	0.1	443.7	0.4	0.1	203.4
<b>Total</b>	<b>10.3</b>	<b>10.3</b>	<b>8.5</b>	<b>20.6</b>	<b>20.6</b>	<b>13.3</b>	<b>54.8</b>

Source: Volcan Cia. Minera

In 2Q17, operating investment increased by 20.6%, from USD 8.5 MM in 2Q16 to USD 10.3 MM in 2Q17. This is mainly due to additional investments in explorations and tailings dams.

Year-to-date, operating investment increased by 54.8%, from USD 13.3 MM in 1H16 to USD 20.6 MM in 1H17, due to the increase in explorations and investment in tailings dams.

### 3.3 Alparmarca Unit Operating Results

**Table 17: Alparmarca Production**

Alparmarca Production	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Mineral extraction (thousands MT)	238	244	231	5.9	483	457	5.5
Mineral treatment (thousands MT)	234	242	227	6.5	475	451	5.3
<b>Fines Content</b>							
Zinc (thousands FMT)	2.7	2.8	2.4	15.0	5.6	4.9	12.4
Lead (thousands FMT)	1.6	1.7	1.7	2.0	3.3	3.6	-6.5
Copper (thousands FMT)	0.1	0.1	0.1	-4.7	0.3	0.3	-2.1
Silver (million Oz)	0.5	0.5	0.5	6.5	1.0	0.9	7.0

Source: Volcan Cia. Minera

In 2Q17, ore volumes extracted at the Alparmarca Unit grew by 5.9% compared to the same quarter of the previous year, while treated volumes increased by 6.5%.

During 2Q17, the production of fine zinc, lead and silver rose by 15.0%, 2.0% and 6.5%, respectively, while copper production decreased by 4.7%. The increase in zinc production is mainly explained by higher treated ore volumes and head grades.

**Table 18: Alparmarca Production Cost**

Alparmarca Production Cost	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Production Cost (MM USD)</b>	<b>4.9</b>	<b>4.2</b>	<b>5.4</b>	<b>-21.6</b>	<b>9.1</b>	<b>11.0</b>	<b>-17.3</b>
Extraction Cost	2.0	1.3	2.5	-47.2	3.3	5.4	-38.1
Treatment Cost	2.9	2.9	2.8	1.3	5.8	5.6	2.6
<b>Unit Cost (USD/MT)</b>	<b>20.8</b>	<b>17.3</b>	<b>23.4</b>	<b>-26.1</b>	<b>19.0</b>	<b>24.2</b>	<b>-21.4</b>
Extraction Cost	8.4	5.5	11.0	-50.2	6.9	11.7	-41.3
Treatment Cost	12.4	11.8	12.4	-4.8	12.2	12.5	-2.6

Source: Volcan Cia. Minera

In 2Q17, in absolute terms, production cost reached USD 4.2 MM, 21.6% lower than the USD 5.4 MM figure for the same quarter of the previous year. Unit cost was reduced by 26.1%, from 23.4 USD/MT in 2Q16 to 17.3 USD/MT in 2Q17. The reduction in unit cost is due to operating efficiencies achieved in the extraction of ore from the open pit.

Year-to-date, in absolute terms, production cost increased by 17.3%, from USD 11.0 MM in 1H16 to USD 9.1 MM in 1H17. The operation's unit cost decreased by 21.4%, from 24.2 USD/MT in 1H16 to 19.0 USD/MT in 1H17.

**Table 19: Alparmarca Operating Investment**

Alparmarca Operating Investment (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Plants and Tailings Dams	0.2	0.7	0.2	208.0	0.9	0.3	225.9
Mine and Infrastructure	0.1	0.2	0.1	30.6	0.3	0.3	8.9
Support and Others	0.1	0.1	0.0	299.1	0.2	0.0	516.3
<b>Total</b>	<b>0.3</b>	<b>1.0</b>	<b>0.4</b>	<b>149.1</b>	<b>1.4</b>	<b>0.6</b>	<b>141.9</b>

Source: Volcan Cia. Minera



Operating investment increased by 149.1%, from USD 0.4 MM in 2Q16 to USD 1.0 MM in 2Q17, mainly explained by the expansion of the tailings dam.

Year-to-date, operating investment increased by 141.9%, from USD 0.6 MM in 1H16 to USD 1.4 MM in 1H17.

### 3.4 Cerro de Pasco Unit Operating Results

**Table 20: Cerro de Pasco Production**

Cerro de Pasco Production	Jan-Mar 2017	Apr-Jun 2017	Jan-Jun 2017
Mineral extraction (thousands MT)	228	241	469
Mineral treatment (thousands MT)	228	241	469
<b>Fines Content</b>			
Zinc (thousands FMT)	1.8	2.0	3.8
Lead (thousands FMT)	0.7	0.7	1.4
Silver (million Oz)	0.1	0.1	0.2

Source: Volcan Cia. Minera

In 2Q17, treated volumes of polymetallic ore from stockpiles amounted to 241 thousand MT, producing 2.0 thousand FMT of zinc, 0.7 thousand FMT of lead and 0.1 million silver ounces. Year-to-date, in 1H17, the volumes of treated ore amounted to 469 thousand MT, producing 3.8 thousand FMT of zinc, 1.4 thousand FMT of lead and 0.2 million silver ounces.

The sorting technology that separates the highest grade ore from the stockpiles will begin its preliminary tests in 3Q17. This technology will allow increasing fine production at Cerro de Pasco in the following months.

**Table 21: Cerro de Pasco Production Cost**

Cerro de Pasco Production Cost	Jan-Mar 2017	Apr-Jun 2017	Jan-Jun 2017
Production Cost (MM USD)	3.0	3.4	6.4
Extraction Cost	0.0	0.0	0.0
Treatment Cost	3.0	3.4	6.4
Unit Cost (USD/MT)	13.3	14.2	13.7
Extraction Cost	0.0	0.1	0.0
Treatment Cost	13.3	14.1	13.7

Source: Volcan Cia. Minera

During 2Q17, the absolute cost of production amounted to USD 3.4 MM and the unit cost was 14.2 USD/MT. Year-to-date, the absolute cost totaled USD 6.4 MM, and unit cost was 13.7 USD/MT.

**Table 22: Cerro de Pasco Operating Investment**

Cerro de Pasco Operating Inv. (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Jan-Jun 2017
Local Exploration	0.0	0.2	0.2
Plants and Tailings Dams	0.6	1.2	1.8
<b>Total</b>	<b>0.6</b>	<b>1.4</b>	<b>2.0</b>

Source: Volcan Cia. Minera



During 2Q17, operating investment totaled USD 1.4 MM and was used for maintenance of the San Expedito plant and the execution of the sorting project. Year-to-date, operating investment totaled USD 2.0 MM.

### 3.5 Oxides Plant Operating Results

**Table 23: Oxides Plant Production**

Oxides Plant Production	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Mineral treatment (thousands MT)</b>	178	231	223	3.4	409	449	-8.8
<b>Fines Content</b>							
Silver (million Oz)	0.8	1.0	1.1	-2.7	1.8	2.1	-12.9
Gold (Oz)	608	615	874	-29.6	1,224	1,807	-32.3

Source: Volcan Cia. Minera

In 2Q17, the treated ore volumes from the oxides stockpiles increased by 3.4% as compared to 2Q16.

In 2Q17, silver and gold production decreased by 2.7% and 29.6%, respectively, as compared to 2Q16, mainly due to lower treated ore grades.

Year-to-date, in 1H17, silver production declined by 12.9% as compared to 1H16, due to the 17-day suspension of production resulting from the blockage of the plant's access road by a group of people and vehicles from the community company ECOSERM Rancas during 1Q17.

**Table 24: Oxides Plant Production Cost**

Oxides Plant Production Cost	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Production Cost (MM USD)</b>	6.7	8.8	8.4	4.7	15.6	17.3	-10.0
Extraction Cost	0.9	1.2	1.1	11.7	2.1	2.4	-12.5
Treatment Cost	5.9	7.6	7.3	3.7	13.5	14.9	-9.6
<b>Unit Cost (USD/MT)</b>	37.8	38.1	37.6	1.3	38.0	38.5	-1.3
Extraction Cost	4.8	5.4	5.0	8.0	5.1	5.3	-4.0
Treatment Cost	33.0	32.7	32.7	0.3	32.9	33.1	-0.8

Source: Volcan Cia. Minera

In 2Q17, in absolute terms, production cost increased by 4.7%, from USD 8.4 MM in 2Q16 to USD 8.8 MM in 2Q17. The operation's unit cost increased by 1.3%, from 37.6 USD/MT in 2Q16 to 38.1 USD/MT in 2Q17.

Year-to-date, in absolute terms, production cost decreased by 10.0%, from USD 17.3 MM in 1H16 to USD 15.6 MM in 1H17. The operation's unit cost decreased by 1.3%, from 38.5 USD/MT in 1H16 to 38.0 USD/MT in 1H17, due to the reduced use of reagents and improved leaching efficiency.

**Table 25: Oxides Plant Operating Investment**

Oxides Plant Operating Inv. (MM USD)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Plants and Tailings Dams	0.1	0.1	0.1	-55.6	0.2	0.3	-19.6
Mine and Infrastructure	0.6	0.6	0.5	29.4	1.2	2.3	-45.7
Support and Others	0.2	0.1	0.0		0.3	0.0	
<b>Total</b>	<b>1.0</b>	<b>0.8</b>	<b>0.6</b>	<b>27.6</b>	<b>1.7</b>	<b>2.5</b>	<b>-31.8</b>

Source: Volcan Cia. Minera

Operating investment increased by 27.6%, from USD 0.6 MM in 2Q16 to USD 0.8 MM in 2Q17. Year-to-date, operating investment decreased by 31.8%, from USD 2.5 MM in 1H16 to USD 1.7 MM in 1H17.

## 4. Energy

**Table 26: Volcan's Electric Power Balance**

Electric Balance (GWh)	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
<b>Energy generation</b>	<b>113.5</b>	<b>82.6</b>	<b>77.0</b>	<b>7.3</b>	<b>196.2</b>	<b>147.2</b>	<b>33.3</b>
Chungar	43.0	42.0	34.4	22.0	85.0	73.1	16.4
Tingo	2.2	2.3	2.3	0.2	4.6	4.6	-1.6
Huanchor	33.7	38.4	40.3	-4.8	72.1	69.5	3.7
Rucuy	34.6	0.0	0.0		34.6	0.0	
<b>Energy consumption</b>	<b>166.1</b>	<b>181.6</b>	<b>156.2</b>	<b>16.3</b>	<b>347.8</b>	<b>308.0</b>	<b>12.9</b>
<b>Energy purchase</b>	<b>120.9</b>	<b>139.7</b>	<b>119.5</b>	<b>16.9</b>	<b>260.5</b>	<b>230.3</b>	<b>13.1</b>

Source: Volcan Cia. Minera

During 2Q17, Volcan's total consumption of electric power reached 181.6 GWh, with a maximum demand of 91 MW.

The 10 hydroelectric plants that belong to the Chungar Unit generated 42 GWh. This accounted for 23% of the Company's total consumption, at an average cost of 19 USD/MWh, including operating, maintenance and transmission costs.

Volcan purchased 139.7 GWh from the national central grid system (the SEIN) in order to meet its total consumption demand, at an average unit cost of 79 USD/MWh.

The Huanchor Hydroelectric Plant produced 38.4 GWh and Tingo Hydroelectric Plant generated 2.3 MWh. All of this power was sold to third parties.

As a consequence of the coastal El Niño in March, the operations at the Rucuy Hydroelectric Plant remain suspended due to damage to part of the penstock and a section of the transmission line. The Company reported this event to the COES<sup>2</sup> and to its insurance company and began repairs in order to resume operations at this plant as quickly as possible.

<sup>2</sup> Comité de Operación Económica del Sistema Interconectado Nacional.

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## 5. Final Comments

- In 2Q17, the Company's production was higher than in 1Q17 as consequence of the increase in production at its principle mines and the Oxides Plant operating without interruption. It is worth noting that in 1Q17, the Oxides Plant suffered a 17-day paralyzation resulting from the access road to the plant being blocked in a protest by the community company ECOSERM Rancas.
- In the following months, the improvement in production will consolidate to be in line with stated guidance. The recovery of production at Yauli is complemented by the increase in production at Cerro de Pasco through the execution of the sorting project, which will begin preliminary tests in 3Q17.
- The Company is permanently focused on the controls and reduction of operating cost. The construction of the integration tunnels between the San Cristóbal and Carahuacra mines in Yauli and the Animón and Islay mines in Chungar has begun, which will foster important operating efficiencies and significant savings in transportation and pumping costs. Additionally, the Animon-Islay integration tunnel will allow the exploration of the Islay 4 concession, which shows significant evidence of mineralization and may lead to the future increase in production at the Chungar Unit. New initiatives for operating improvements and cost reduction were identified across all units and will be implemented in the following months.
- The exploration programs at Company operating units and the main growth projects are being carried out as planned. These programs will allow for the expansion of the resources of the mines in operation and for the definition of resources at our most important projects, such as Romina 2 (Alpamarca), where diamond drilling continues to increase resources and measure reserves, in parallel with the development of the project's technical-economic assessment. The Palma project (greenfield project) identified approximately 5 million MT of ore with a 7% average head grade of zinc, in addition to lead, silver and copper. There are plans to perform additional detailed drilling to allow the preparation of a pre-feasibility study.
- Operation of the Rucuy Hydroelectric Plant was suspended in March due to damage to part of the penstock and a section of the transmission line as a consequence of the coastal El Niño. Repairs began during 2Q17.
- The Company continues with the development of the Chancay Port project, having begun the preliminary works. During 1H17, USD 20.7 MM was disbursed to this project. The Company continues with search process for a strategic partner.
- For a better analysis of net income, it is worth noting that the positive adjustments to sales were USD 10.2 MM lower in 1H17, compared to 1H16. Likewise, the depreciation of cost of goods sold in 1H17 was USD 4.6 MM higher than 1H16; while income tax and royalties were USD 7.8 MM higher compared to 1H16.

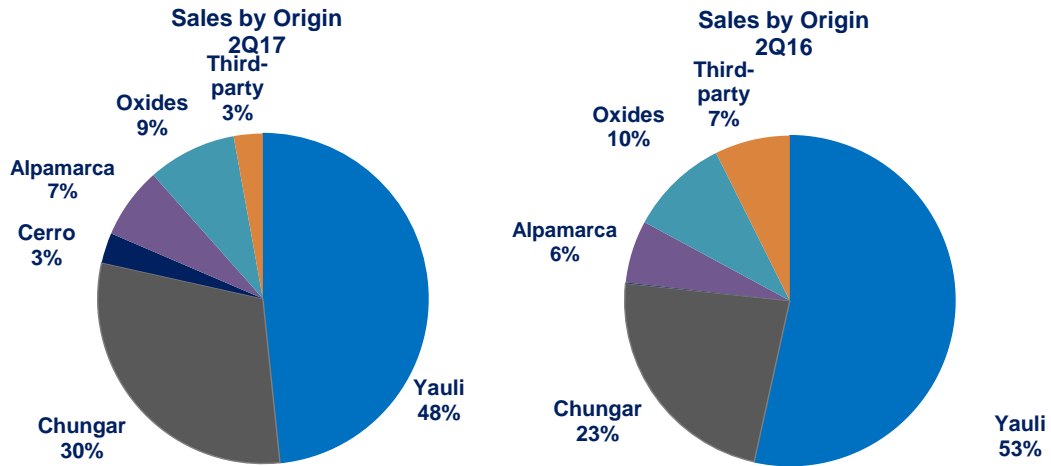


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- Fewer financial obligations and improved EBITDA resulted in continued reduction of leverage. Net debt/EBITDA fell to 1.91 in 2Q17. The Company is firmly focused on further reductions to its debt in a favorable environment of metals prices.

**Annexes**

**Annex 1: Sales Breakdown**

**Chart 5: Sales by Origin (percentage of value in USD)**

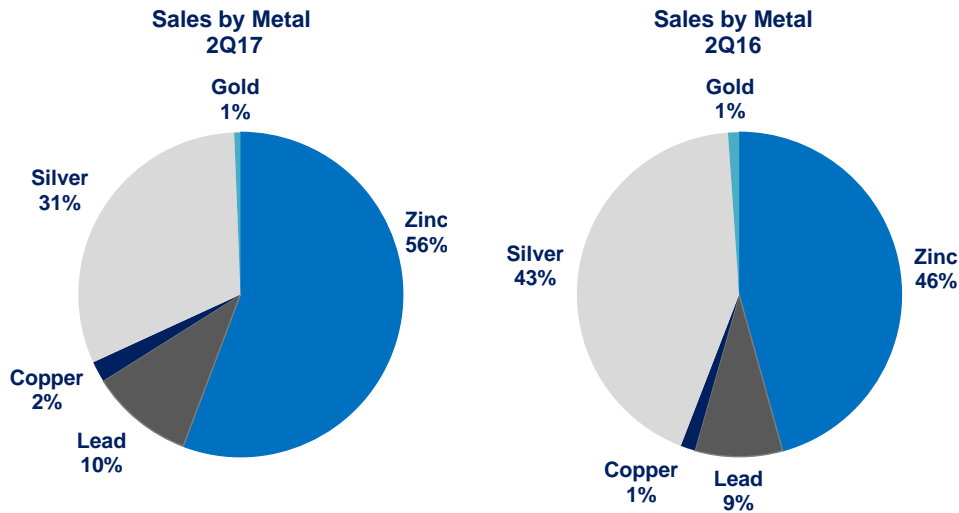


Source: Volcan Cia. Minera

Source: Volcan Cia. Minera

The distribution of sales by origin reflects a decline in the contribution of third-party concentrates in total sales, from 7% in 2Q16 to 3% in 2Q17.

**Chart 6: Sales by Metal (percentage of value in USD)**



Source: Volcan Cia. Minera

Source: Volcan Cia. Minera

The distribution of sales by metal in 2Q17 reflects the growth in the contribution of zinc, as a result of the increase in the price of this metal.

## Annex 2: Average Spot Prices

Spot Prices	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Zinc (USD/MT)	2,781	2,598	1,915	35.7	2,690	1,796	49.8
Lead (USD/MT)	2,279	2,165	1,719	25.9	2,222	1,731	28.4
Copper (USD/MT)	5,834	5,663	4,730	19.7	5,748	4,699	22.3
Silver (USD/Oz)	17.4	17.3	16.8	2.9	17.3	15.8	9.7
Gold (USD/Oz)	1,219	1,258	1,258	0.0	1,238	1,219	1.6

Source: London Metal Exchange

## Annex 3: Macroeconomic Indicators

Macroeconomic Indicators	Jan-Mar 2017	Apr-Jun 2017	Apr-Jun 2016	var %	Jan-Jun 2017	Jan-Jun 2016	var %
Exchange Rate (S/ x USD)	3.29	3.26	3.32	-1.6	3.28	3.38	-3.2
Inflation	3.97	2.73	3.34	-18.2	2.73	3.34	-18.2

<sup>1</sup> Inflation of the last 12 months

Source: Central Reserve Bank of Peru

## Annex 4: Domestic Peruvian Metal Production

National Production	Jan - Mar 2016	Apr-May 2017	Apr-May 2016	var %	Jan - May 2017	Jan - May 2016	var %
Silver (Thousands Oz)	32,681	23,556	23,530	0.1	56,238	57,977	-3.0
Zinc (FMT)	332,580	249,415	198,093	25.9	581,995	517,712	12.4
Lead (FMT)	72,333	51,626	51,865	-0.5	123,959	129,782	-4.5
Copper (FMT)	563,989	401,208	400,462	0.2	965,197	914,940	5.5
Gold (Thousands Oz)	1,141	784	834	-6.1	1,924	2,073	-7.2

Source: Ministry of Energy and Mines