

Volcan Compañía Minera S.A.A. and Subsidiaries Management Discussion and Analysis Third Quarter 2019

Principal Results:

Consolidated Volcan	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Sales Prices¹								
Zinc (USD/MT)	2,694	2,760	2,348	2,549	-7.9	2,600	3,007	-13.5
Lead (USD/MT)	2,042	1,873	1,997	2,123	-5.9	1,953	2,334	-16.3
Copper (USD/MT)	6,400	6,128	5,800	6,123	-5.3	6,078	6,580	-7.6
Silver (USD/Oz)	15.5	14.8	16.6	15.0	10.1	15.6	16.1	-3.1
Gold (USD/Oz)	1,307	1,305	1,466	1,215	20.7	1,354	1,279	5.8
Operating Results								
Mineral treatment ² (thousands MT)	1,969	2,202	2,254	2,110	6.8	6,425	5,946	8.1
Zinc Production (thousands FMT)	53.9	60.3	60.0	65.3	-8.2	174.2	180.6	-3.5
Lead Production (thousands FMT)	11.5	11.8	12.3	12.1	1.6	35.6	34.9	1.9
Copper Production (thousands FMT)	1.0	1.2	1.2	1.3	-8.4	3.4	3.5	-4.5
Silver Production (millions Oz)	3.4	3.8	4.0	4.4	-9.0	11.2	12.8	-12.9
Gold Production (thousands Oz)	4.7	6.4	4.8	3.1	53.0	15.9	8.5	86.2
Unit Cost (USD/MT) ³	46.1	45.3	44.3	45.8	-3.3	45.2	47.2	-4.2
Total Investments (MM USD) ³	37.3	47.2	46.7	45.6	2.3	131.1	124.8	5.1
Financial Results (MM USD)								
Sales before adjustments	169.0	205.2	174.4	202.5	-13.9	548.6	652.2	-15.9
Sales Adjustments	12.6	-19.8	-5.1	-13.2	-61.3	-12.4	-50.2	-75.3
Settlement of prior period adjustments	-0.2	6.0	-11.1	-11.8	-6.4	-5.2	-14.4	-63.7
Adjustments for open positions ⁴	12.7	-25.8	6.0	-5.4		-7.1	-21.8	-67.2
Hedging results	0.0	0.0	0.0	4.0	-100.0	0.0	-14.0	
Sales after adjustments	181.6	185.4	169.3	189.3	-10.6	536.3	602.1	-10.9
Net profit	8.4	-4.9	-20.8	1.3		-17.3	41.3	
EBITDA⁵	73.7	47.3	51.5	64.6	-20.3	172.5	238.0	-27.5

¹ These prices are the initial billing prices, which are provisional, as the adjustments are made when settlements of prior periods are received from customers.

² Includes treated tons at Oxides Plant

³ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 5.0 MM in 1Q19 and USD 4.3 MM in 2Q19. These amounts are reflected in the operational investments now.

⁴ 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.

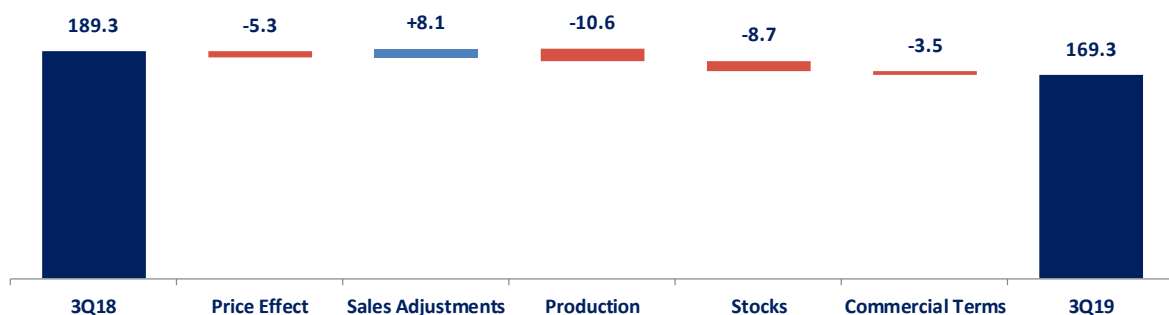
⁵ Does not consider exceptional adjustments or the expenses associated with the closing of the sale of the Chancay port project.

Source: Volcan Cia. Minera

1. Executive Summary

- In 3Q19, the prices of metals produced by the Company showed a different behavior. With regard to base metals, the price of zinc decreased by 7.9% (-201 USD/MT), from 2,549 USD/MT in 3Q18 to 2,348 USD/MT in 3Q19; lead by 5.9% (-126 USD/MT), from 2,123 USD/MT to 1,997 USD/MT; and copper by 5.3% (-324 USD/MT), from 6,123 USD/MT to 5,800 USD/MT. Meanwhile, the price of precious metals increased. Silver price increased by 10.1% (+1.5 USD/Oz), from 15.0 USD/Oz to 16.6 USD/Oz and gold by 20.7% (+251 USD/Oz), from 1,215 USD/Oz in 3Q18 to 1,466 USD/Oz in 3Q19.
- Production in 3Q19 was affected by lower volumes and head grades at the Carahuacra and Ticlio mines and more than seven days of suspended operations at the Chungar Unit with the purpose of ensuring compliance with the Company's safety standards. The suspension and gradual restart of operations prevented the extraction of 60 thousand MT of ore, and caused an impact on production of approximately 2 thousand FMT of Zn and 80 thousand Oz of Ag. However, the consolidated treated volume increased by 6.8%, from 2.1 MM MT in 3Q18 to 2.3 MM MT in 3Q19, mainly due to greater treatment of stockpiles at Cerro de Pasco. Also at a consolidated level, zinc production decreased by 8.2%, from 65.3 thousand FMT in 3Q18 to 60.0 thousand FMT in 3Q19, lead production increased by 1.6%, from 12.1 thousand FMT to 12.3 thousand FMT, copper production decreased by 8.4%, from 1.3 thousand FMT to 1.2 thousand FMT, silver decreased by 9.0% from 4.4 MM Oz to 4.0 MM Oz, and gold production increased by 53%, from 3.1 thousand Oz in 3Q18 to 4.8 thousand Oz in 3Q19. This is explained by the run-of-mine ore with higher gold grade processed at the Oxides Plant.
- Sales after adjustments decreased by 10.6%, from USD 189.3 MM in 3Q18 to USD 169.3 MM in 3Q19, mainly due to: i) lower base metals prices; ii) lower production due to suspended operations at Chungar and delays at Carahuacra and Ticlio; iii) temporary increase of concentrate inventories at Cerro de Pasco, Carahuacra and Chungar; iv) less favorable commercial terms.

Figure 1: 3Q19 vs 3Q18 variations impact on net sales (USD MM)

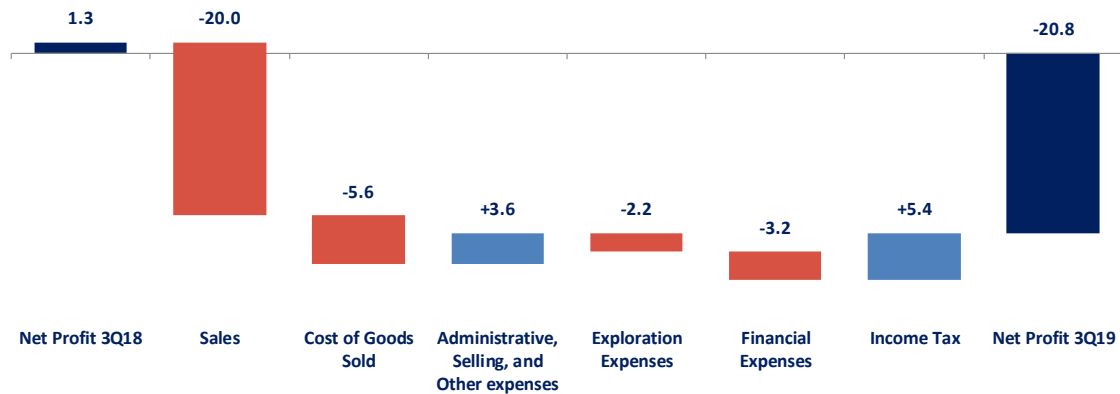


Source: Volcan Cía. Minera

- Consolidated unit cost decreased by 3.3%, from 45.8 USD/MT in 3Q18 to 44.3 USD/MT in 3Q19. This is mainly explained by increased lower-cost treated ore from stockpiles at Cerro de Pasco and the reclassification of operating leases, from cost to investment, in accordance with IFRS 16.

- The reduction of net profit from USD 1.3 MM in 3Q18 to USD -20.8 MM in 3Q19, is mainly due to: i) the decrease of sales as explained above, ii) increased cost of goods sold due to the USD 11.7 MM increase of depreciation as a result of greater capitalization of ongoing works and the reclassification of operating leases, from cost to investment, in accordance with IFRS 16; iii) greater exploration expenses; iv) greater financial expenses arising from the accounting treatment of interests of operating leases (IFRS 16) and present value of variations of mine closure plans. The variation is explained in the figure below.

Figure 2: 3Q19 vs 3Q18 variations impact on net profit (USD MM)



Source: Volcan Cia. Minera

- Similarly, the decrease of EBITDA, from USD 64.6 MM in 3Q18 to USD 51.5 MM in 3Q19, is explained by lower sales (lower base metals prices, lower production due to suspended operations at Chungar and delays at Carahuacra and Ticlio, greater temporary concentrate inventories, and deterioration of commercial terms) and greater exploration expenses.
- Year-to-date (Jan-Sept), sales before adjustments decreased from USD 652.2 MM in 2018 to USD 548.6 MM in 2019, and sales after adjustments decreased from USD 602.1 MM in 2018 to USD 536.3 MM in 2019. Net profit decreased from USD 41.3 MM in 2018 to USD -17.3 MM in 2019, while EBITDA decreased from USD 238.0 MM in 2018 to USD 172.5 MM in 2019.
- Total investments increased from USD 45.6 MM in 3Q18 to USD 46.7 MM in 3Q19. Year-to-date, total investments increased from USD 124.8 MM in 2018 to USD 131.1 MM in 2019. It is worth noting that, for the January-June 2019 period, the amortization of operating leases was reclassified from cost to investment, in accordance with IFRS 16. They amounted to USD 5.0 MM in 1Q19 and USD 4.3 MM in 2Q19.

2. Consolidated Results

2.1 Production

Table 1: Consolidated Production

Consolidated Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mineral extraction (thousands MT)	1,957	2,201	2,238	2,157	3.7	6,395	5,971	7.1
Polymetallic ore	1,758	1,963	2,003	1,928	3.9	5,724	5,296	8.1
Oxides ore	198	237	235	229	2.5	671	675	-0.7
Mineral treatment (thousands MT)	1,969	2,202	2,254	2,110	6.8	6,425	5,946	8.1
Concentrator Plants	1,770	1,965	2,019	1,880	7.4	5,754	5,270	9.2
Silver Oxides Plant	198	237	235	229	2.5	671	675	-0.7
Fine Content								
Zinc (thousands FMT)	53.9	60.3	60.0	65.3	-8.2	174.2	180.6	-3.5
Lead (thousands FMT)	11.5	11.8	12.3	12.1	1.6	35.6	34.9	1.9
Copper (thousands FMT)	1.0	1.2	1.2	1.3	-8.4	3.4	3.5	-4.5
Silver (millions Oz)	3.4	3.8	4.0	4.4	-9.0	11.2	12.8	-12.9
Gold (thousands Oz)	4.7	6.4	4.8	3.1	53.0	15.9	8.5	86.2

Source: Volcan Cia. Minera

In 3Q19, extracted ore volumes increased by 3.7% compared to the same quarter of the previous year, from 2.157 MM MT in 3Q18 to 2.238 MM MT in 3Q19. Similarly, treated volumes increased by 6.8%, from 2.110 MM MT in 3Q18 to 2.254 MM MT in 3Q19. This increase is mainly explained by greater treatment of stockpiles at Cerro de Pasco, offset by lower production volumes at Chungar due to more than seven days of suspended operations to ensure compliance with the Company's safety standards, and lower production at Yauli resulting from the reformulation of mining plans and delays in mining operations at Carahuacra and Ticlio.

Zinc production decreased by 8.2%, from 65.3 thousand FMT in 3Q18 to 60.0 thousand FMT in 3Q19, lead production increased by 1.6%, from 12.1 thousand FMT to 12.3 thousand FMT, copper production decreased by 8.4%, from 1.3 thousand FMT to 1.2 thousand FMT, silver decreased by 9.0% from 4.4 MM Oz to 4.0 MM Oz, and gold production increased by 53%, from 3.1 thousand Oz in 3Q18 to 4.8 thousand Oz in 3Q19. This is explained by the run-of-mine ore with higher gold grade processed at the Oxides Plant.

Year-to-date (Jan-Sept), the extraction volume increased by 7.1% as compared to the same period in the previous year, while treated volume increased by 8.1%, from 5.946 MM MT in 2018 to 6.425 MM MT in 2019.

2.2 Cost of Production

Table 2: Consolidated Cost of Production

Consolidated Production Cost	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Production Cost (MM USD)¹	90.5	99.7	99.5	97.8	1.8	289.7	281.0	3.1
Mine Cost	44.6	49.1	50.6	51.5	-1.9	144.3	145.7	-1.0
Plant and Other Cost	45.9	50.5	49.0	46.2	5.9	145.4	135.3	7.5
Unit Cost (USD/MT)¹	46.1	45.3	44.3	45.8	-3.3	45.2	47.2	-4.2
Mine Cost	22.8	22.3	22.6	23.9	-5.5	22.6	24.4	-7.6
Plant and Other Cost	23.3	22.9	21.7	21.9	-0.9	22.6	22.8	-0.5

¹ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 5.0 MM in 1Q19 and USD 4.3 MM in 2Q19. These amounts are reflected in the operational investments now.

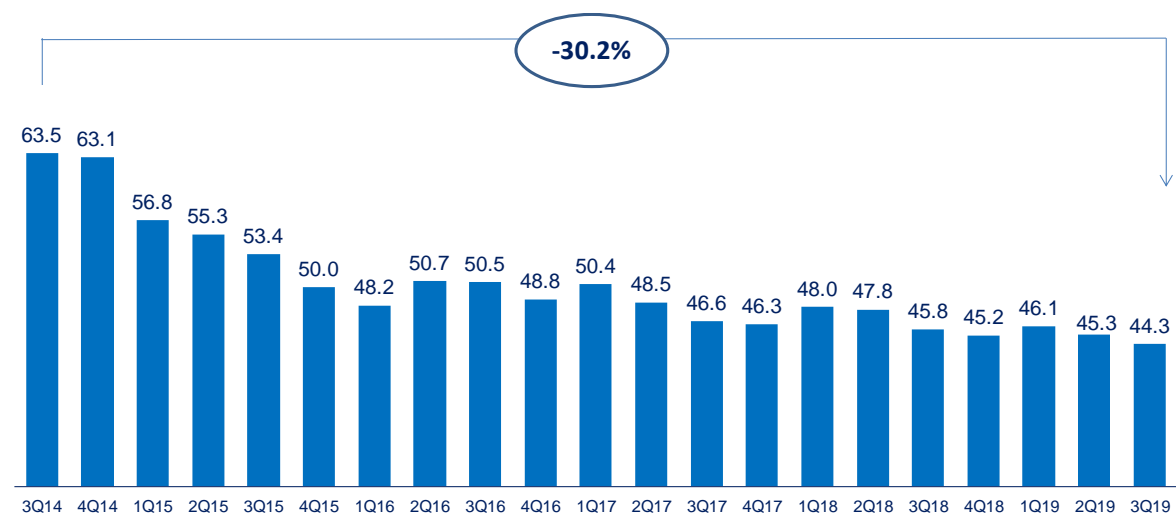
Source: Volcan Cia. Minera

The absolute cost of production rose by 1.8%, from USD 97.8 MM in 3Q18 to USD 99.5 MM in 3Q19, mainly due to greater extracted and treated volumes. Consolidated unit cost decreased by 3.3%, from 45.8 USD/MT in 3Q18 to 44.3 USD/MT in 3Q19. This is mainly explained by increased lower-cost treated ore from stockpiles at Cerro de Pasco and the reclassification of operating leases, from cost to investment, in accordance with IFRS 16.

Year-to-date, the absolute cost of production increased by 3.1%, from USD 281.0 MM in 2018 to USD 289.7 MM in 2019, while the unit cost decreased from 47.2 USD/MT in 2018 to 45.2 USD/MT in 2019.

The Company is permanently generating initiatives to control and reduce operating costs across all operating units. The figure below shows a **30.2%** unit cost decrease between 3Q14 and 3Q19.

Figure 3: Evolution of the Unit Cost of Production (USD/MT)



Source: Volcan Cia. Minera

2.3 Total Investments

Table 3: Consolidated Investment

Consolidated Investment (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mining	36.5	46.5	45.9	44.9	2.4	128.9	122.3	5.4
Mining Units	35.2	44.0	43.5	44.0	-1.0	122.7	120.6	1.7
Local Exploration	5.0	6.4	5.7	6.5	-13.1	17.1	15.9	7.5
Development	15.7	18.7	19.1	18.4	4.1	53.5	57.3	-6.6
Plants and Tailings Facilities	4.5	4.7	7.1	11.7	-39.1	16.3	22.3	-26.9
Mine and Infrastructure	7.0	10.1	7.0	4.7	48.5	24.1	16.8	43.3
Electrical Infrastructure in Units	0.5	1.4	1.5	1.3	15.8	3.4	4.2	-20.0
Support and Others	2.4	2.8	3.1	1.4	128.1	8.3	4.0	106.2
Regional Explorations	0.3	1.0	1.9	0.4	365.4	3.1	0.5	550.2
Growth and Others	1.0	1.5	0.6	0.5	14.9	3.1	1.2	147.6
Energy	0.8	0.7	0.7	0.7	-2.5	2.2	2.5	-10.9
Total¹	37.3	47.2	46.7	45.6	2.3	131.1	124.8	5.1

¹ The investments include the operating leases fee in 2019 according to NIIF 16: USD 5.0 MM in 1Q19, USD 4.3 MM in 2Q19 and USD 4.5 MM in 3Q19.

Source: Volcan Cia. Minera

In 3Q19, total mining investments increased by 2.4%, from USD 44.9 MM in 3Q18 to USD 45.9 MM in 3Q19. Investment in operating units remained at a similar level, USD 44.0 MM in 3Q18 and USD 43.5 MM in 3Q19. Regional explorations and growth investments totaled USD 2.5 MM in 3Q19, mainly related to the Romina Project.

Investments in the energy business in 3Q19 were similar to those recorded in the same period of the previous year and amounted to USD 0.7 MM.

Total investments increased by 2.3%, from USD 45.6 MM in 3Q18 to USD 46.7 MM in 3Q19. Year-to-date, total investments increased by 5.1%, from USD 124.8 MM in 2018 to USD 131.1 MM in 2019. It is important to note that, as a result of the application of IFRS 16, in 2019, the operating lease installments that were recorded under costs in the previous years are now reported as operating investments.

2.4 Income Statement

Table 4: Income Statement

Income Statement (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Sales before adjust.	169.0	205.2	174.4	202.5	-13.9	548.6	652.2	-15.9
<i>Sett. of prior periods adjust.</i>	-0.2	6.0	-11.1	-11.8	-6.4	-5.2	-14.4	-63.7
<i>Adj. open positions</i>	12.7	-25.8	6.0	-5.4		-7.1	-21.8	-67.2
<i>Hedging</i>	0.0	0.0	0.0	4.0	-100.0	0.0	-14.0	
Sales after adjust.	181.6	185.4	169.3	189.3	-10.6	536.3	602.1	-10.9
Cost of Goods Sold	-136.2	-157.6	-141.0	-135.4	4.1	-434.7	-394.6	10.2
Gross Profit	45.4	27.8	28.3	53.9	-47.5	101.5	207.5	-51.1
<i>Gross Margin</i>	25%	15%	17%	28%	-12 pp	19%	34%	-16 pp
Administrative Expenses	-9.8	-12.2	-5.9	-14.2	-58.6	-27.8	-33.6	-17.2
Exploration Expenses	-2.4	-4.0	-6.0	-3.9	55.7	-12.4	-7.1	74.8
Sales Expenses	-4.7	-6.5	-5.5	-6.3	-12.8	-16.7	-19.5	-14.4
Other Income (Expenses) ¹	-3.9	-14.7	-10.0	-4.5	123.1	-28.6	-25.8	11.0
Operating Profit	24.7	-9.5	0.8	25.0	-96.7	16.0	121.4	-86.9
<i>Operating Margin</i>	14%	-5%	0%	13%	-13 pp	3%	20%	-17 pp
Financial Income (Expense)	-11.1	7.2	-12.6	-9.4	34.3	-16.4	-28.5	-42.4
Exchange Difference (net)	0.7	0.4	-2.4	-1.4	77.5	-1.3	-2.0	-35.7
Royalties	-2.1	-2.7	-1.7	-2.8	-37.6	-6.5	-11.7	-44.3
Income Tax	-3.8	-0.3	-4.9	-10.3	-52.4	-9.0	-37.9	-76.2
Net Profit	8.4	-4.9	-20.8	1.3		-17.3	41.3	
<i>Net Margin</i>	5%	-3%	-12%	1%	-13 pp	-3%	7%	-10 pp
EBITDA²	73.7	47.3	51.5	64.6	-20.3	172.5	238.0	-27.5
<i>EBITDA Margin</i>	41%	26%	30%	34%	-4 pp	32%	40%	-7 pp

¹ Includes the sales and cost of sales of the energy division.

² Does not consider exceptional adjustments.

Source: Volcan Cia. Minera

• Sales Analysis

Table 5: Average Sales Prices

Sales Prices	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Zinc (USD/MT)	2,694	2,760	2,348	2,549	-7.9	2,600	3,007	-13.5
Lead (USD/MT)	2,042	1,873	1,997	2,123	-5.9	1,953	2,334	-16.3
Copper (USD/MT)	6,400	6,128	5,800	6,123	-5.3	6,078	6,580	-7.6
Silver (USD/Oz)	15.5	14.8	16.6	15.0	10.1	15.6	16.1	-3.1
Gold (USD/Oz)	1,307	1,305	1,466	1,215	20.7	1,354	1,279	5.8

Source: Volcan Cia. Minera

These prices are initial invoice prices, provisional in nature, and they are adjusted when the final liquidation is received from the clients. The embedded derivative and sales adjustment are financial provisions at the end of each period, and they estimate adjustments on open shipments resulting from future metals prices variations, using a specific forward prices curve.

Table 6: Fine Contents Sales Volumes

Fines Sales	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Zinc (thousands FMT)	56.8	59.4	58.8	65.3	-9.9	175.0	180.8	-3.2
Lead (thousands FMT)	9.2	16.1	11.2	12.4	-9.5	36.5	36.4	0.4
Copper (thousands FMT)	0.7	1.4	1.1	1.3	-14.2	3.3	3.1	6.4
Silver (millions Oz)	3.0	4.3	3.8	4.4	-12.1	11.2	13.0	-14.2
Gold (thousands Oz)	4.9	7.7	5.4	3.9	37.5	18.0	10.9	64.4

¹ Includes Oxides Plant silver and gold sales
Source: Volcan Cia. Minera

Table 7: Sales in USD

Sales (millions USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Zinc	107.2	114.5	92.6	117.9	-21.4	314.4	384.8	-18.3
Lead	15.9	25.2	18.8	22.8	-17.4	59.9	72.4	-17.2
Copper	3.3	4.0	3.4	4.6	-25.7	10.8	12.4	-12.9
Silver	37.2	53.0	52.8	53.7	-1.7	143.1	173.0	-17.3
Gold	5.4	8.5	6.7	3.5	90.1	20.5	9.7	111.2
Sales before adjust.	169.0	205.2	174.4	202.5	-13.9	548.6	652.2	-15.9
Sett. of prior period adjust.	-0.2	6.0	-11.1	-11.8	-6.4	-5.2	-14.4	-63.7
Adjust. for open positions	12.7	-25.8	6.0	-5.4		-7.1	-21.8	-67.2
Hedging results	0.0	0.0	0.0	4.0	-100.0	0.0	-14.0	
Sales after adjust.	181.6	185.4	169.3	189.3	-10.6	536.3	602.1	-10.9

Source: Volcan Cia. Minera

In 3Q19, total sales before adjustments amounted to USD 174.4 MM, 13.9% lower than the USD 202.5 MM recorded in 3Q18, explained by lower base metals prices, deterioration of commercial terms in the mining industry, lower production resulting from delays at Carahuacra and Ticlio, more than seven days of suspended operations at Chungar to ensure safety standards, and higher temporary concentrate inventories at Cerro de Pasco, Carahuacra and Chungar.

In 3Q19, sales adjustments were negative (USD 5.1 MM), as were the negative adjustments recorded in 3Q18 (USD 13.2 MM). That is, quarter versus quarter, there was a positive effect of USD 8.1 MM. In 3Q19, sales adjustments included final settlements of USD -11.1 MM, and provisions related to open shipments of USD 6.0 MM explained by an improved forward price curve at the end of September. Total sales after adjustments decreased by 10.6%, from USD 189.3 MM in 3Q18 to USD 169.3 MM in 3Q19.

Year-to-date (Jan-Sept), sales before adjustments decreased by 15.9%, from USD 652.2 MM in 2018 to USD 548.6 MM in 2019, while sales after adjustments decreased by 10.9%, from USD 602.1 MM in 2018 to USD 536.3 MM in 2019.

- **Cost of Goods Sold**

Table 8: Cost of Goods Sold

Cost of Goods Sold (millions USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Volcan Production	134.9	156.2	142.8	134.1	6.5	433.9	387.7	11.9
Volcan Production Cost ¹	90.5	99.7	99.5	97.8	1.8	289.7	281.0	3.1
D&A from Production Cost	46.7	46.5	46.9	35.2	33.2	140.1	99.8	40.4
Ore Purchase	0.0	1.0	0.0	0.6	-94.4	1.0	0.6	68.8
Extraordinary Costs	0.4	0.6	0.9	0.2	273.3	1.9	1.0	97.2
Variation of Inventories	-2.7	8.4	-4.5	0.2		1.2	5.3	-77.2
Workers Participation	1.3	1.4	-1.8	1.3		0.8	7.0	-88.0
Total	136.2	157.6	141.0	135.4	4.1	434.7	394.6	10.2

¹ Does not include the amortization of operating leases according to NIIF 16.

Source: Volcan Cia. Minera

Total cost of goods sold increased by 4.1%, from USD 135.4 MM in 3Q18 to USD 141.0 MM in 3Q19. This is mainly explained by: i) the increase of depreciation and amortization by USD 11.7 MM, resulting from greater capitalization of ongoing works and the amortization of operating leases after the application of IFRS 16, and ii) the increased cost of production, by USD 1.7 MM, due to greater treated volumes. This was partially offset by higher inventories which had a USD -4.8 MM effect on the cost, and a lower workers' participation provision in line with the Company's lower operating profit.

Year-to-date (Jan-Sept), the total cost of goods sold increased from USD 394.6 MM in 2018 to USD 434.7 MM in 2019, mainly explained by the increased depreciation (USD 40.3 MM) and greater cost of production due to increased treated volumes.

- **Gross Margin and Gross Profit**

The Company's gross margin decreased from 28% in 3Q18 to 17% in 3Q19, mainly due to reduced base metals prices, deterioration of commercial terms, and higher depreciation. Total gross profit fell by 47.5%, from USD 53.9 MM in 3Q18 to USD 28.3 MM in 3Q19, explained by the lower gross margin, lower production, and increased concentrate stocks.

Year-to-date (Jan-Sept), gross margin decreased from 34% in 2018 to 19% in 2019. Gross profit decreased from USD 207.5 MM in 2018 to USD 101.5 MM in 2019.

- **Administrative Expenses**

Administrative expenses decreased by 58.6%, from USD 14.2 MM in 3Q18 to USD 5.9 MM in 3Q19, mainly due to the lower personnel expenses provisions and workers' participation provisions, due to the Company's lower profits. Year-to-date (Jan-Sept), the administrative expenses decreased from USD 33.6 MM in 2018 to USD 27.8 MM in 2019.

- **Exploration Expenses**

Exploration expenses increased from USD 3.9 MM in 3Q18 to USD 6.0 MM in 3Q19, as a result of the increased execution of explorations at main projects, specifically Palma and Brownfield Yauli. Year-to-date (Jan-Sept), the exploration expenses increased from USD 7.1 MM in 2018 to USD 12.4 MM in 2019.

- **Sale expenses**

Sales expenses during 3Q19 decreased by 12.8%, from USD 6.3 MM in 3Q18 to USD 5.5 MM, due to lower transportation expenses, shipments and freights. Year-to-date (Jan-Sept), the sales expenses decreased from USD 19.5 MM in 2018 to USD 16.7 MM in 2019.

- **Other Income and Expenses**

In 3Q19, the net amount of other income and expenses was negative, USD 10.0 MM versus a negative amount of USD 4.5 MM in 3Q18. Year-to-date (Jan-Sept), the net amount of other income and expenses was negative, USD 28.6 MM in 2019 versus a negative amount of USD 25.8 MM in 2018. It is important to note that the main items reported under this category of the income statement are the energy business, expenses resulting from suspended operations at Cerro de Pasco, Vinchos, Río Pallanga, Paragsha and Mahr Túnel, non-deductible expenses, and contributions to OEFA and OSINERGMIN.

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

Net financial expenses totaled USD 12.6 MM in 3Q19, compared to net financial expenses worth USD 9.4 MM in 3Q18. This increase is strictly due to the accounting report of operating leases interests (IFRS 16) and the present value of variations in the mine closure plans. Year-to-date (Jan-Sept), net financial expenses totaled USD 16.4 MM in 2019, as compared to the USD 28.5 MM reported in 2018.

Exchange-rate losses totaling USD 2.4 MM were registered in 3Q19, as compared to the USD 1.4 MM exchange-rate loss reported in 3Q18. Year-to-date (Jan-Sept), an exchange-rate loss totaling USD 1.3 MM was registered in 2019, as compared to the USD 2.0 MM exchange-rate loss reported in 2018.

- **Income Tax and Royalties**

Royalties decreased from USD 2.8 MM in 3Q18 to USD 1.7 MM in 3Q19, while income tax decreased from USD 10.3 MM in 3Q18 to USD 4.9 MM in 3Q19, in line with the reduced profits and the exchange-rate conversion effect.

Year-to-date (Jan-Sept), royalties decreased from USD 11.7 MM in 2018 to USD 6.5 MM in 2019, while income tax decreased from USD 37.9 MM in 2018 to USD 9.0 MM in 2019.

- **Net Profit and EBITDA**

Net profit decreased from USD 1.3 MM in 3Q18 to USD -20.8 MM in 3Q19, mainly due to reduced sales, higher cost of goods sold due to greater depreciation, and higher exploration and financial expenses.

EBITDA decreased from USD 64.6 MM in 3Q18 to USD 51.5 MM in 3Q19, mainly explained by lower sales (lower base metals prices, lower production, greater temporary concentrate inventories, and deterioration of commercial terms) and greater exploration expenses.

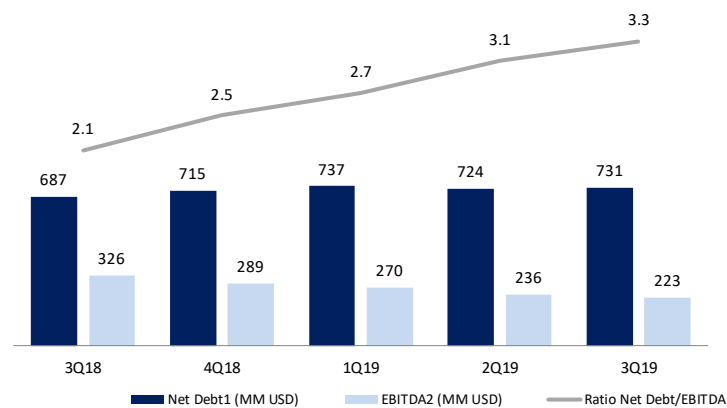
Year-to-date (Jan-Sept), net profit increased from USD 41.3 MM in 2018 to USD -17.3 MM in 2019. EBITDA decreased from USD 238.0 MM in 2018 to USD 172.5 MM in 2019.

2.5 Liquidity and Creditworthiness

In 3Q19, cash generated by mining operations after operating investments totaled USD - 3.4 MM. A payment worth USD -6.1 MM was made in connection to the sale of the Chancay Port. Interests paid amounted to USD -16.0 MM and the net flow of financial obligations for the period totaled USD 12.3 MM. Therefore, during 3Q19, the resulting total cash flow was USD - 13.2 MM, and the total cash balance as of September 30, 2019, was USD 38.5 MM.

As of September 30, 2019, the net debt/EBITDA ratio was 3.3, higher than in the previous quarter, mainly due to the lower EBITDA accumulated in the last 12 months.

Figure 4: Net Debt / EBITDA Ratio Evolution



1 Debt does not include the operating leases fee according to NIIF16 or the current interest
 2 EBITDA for the last 12 months.
 Source: Volcan Cia. Minera

3. Results by Operating Unit

3.1 Yauli Unit Operating Results

Table 10: Yauli Production

Yauli Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mineral extraction (thousands MT)	743	798	823	858	-4.0	2,364	2,423	-2.4
Mineral treatment (thousands MT)	737	803	817	852	-4.2	2,357	2,426	-2.9
Fines Content								
Zinc (thousands FMT)	31.0	35.1	36.6	40.2	-9.1	102.7	111.6	-8.0
Lead (thousands FMT)	5.2	5.0	4.8	5.0	-3.8	15.1	13.8	9.2
Copper (thousands FMT)	0.7	0.8	0.8	0.8	-9.3	2.3	2.2	1.1
Silver (million Oz)	1.6	1.8	1.7	2.0	-18.0	5.1	6.0	-14.9
Gold (thousands Oz)	1.4	1.6	1.5	2.0	-28.9	4.4	5.6	-20.2

Source: Volcan Cia. Minera

In 3Q19, ore extracted at the Yauli Unit decreased by 4.0% as compared to the same quarter of the previous year, mainly explained by a lower contribution by the Carahuacra and Ticlio mines as a consequence of the reformulation of mining plans and a delay in operations. This was partially offset by greater production at the San Cristóbal and Andaychagua mines. The ore treated at the Yauli Unit concentrator plants decreased by 4.2% in 3Q19, as compared to the same period of the previous year.

In 3Q19, zinc, lead, copper, silver and gold production decreased by 9.1%, 3.8%, 9.3%, 18.0% and 28.9%, respectively, as compared to 3Q18, mainly explained by lower volumes and head grades of the treated ore from Carahuacra and Ticlio.

Table 11: Yauli Cost of Production

Yauli Production Cost	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Production Cost (MM USD)¹	47.8	52.2	54.5	53.5	1.8	154.5	158.6	-2.6
Extraction Cost	27.7	30.6	31.8	32.6	-2.3	90.1	96.2	-6.4
Treatment Cost	20.1	21.6	22.7	21.0	8.3	64.4	62.4	3.3
Unit Cost (USD/MT)¹	64.6	65.3	66.4	62.5	6.2	65.5	65.4	0.1
Extraction Cost	37.2	38.4	38.7	38.0	1.8	38.1	39.7	-4.0
Treatment Cost	27.3	26.9	27.8	24.6	13.0	27.3	25.7	6.3

¹ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 3.6 MM in 1Q19 and USD 3.0 MM in 2Q19. These amounts are reflected in the operational investments now.

Source: Volcan Cia. Minera

In 3Q19, the cost of production in absolute terms increased by 1.8%, from USD 53.5 MM in 3Q18 to USD 54.5 MM in 3Q19.

The unit cost of production increased by 6.2%, from 62.5 USD/MT in 3Q18 to 66.4 USD/MT in 3Q19, due to lower processed volumes and greater costs related to the continuous improvement of operating standards and safety.

Year-to-date (Jan-Sept), the absolute cost of production declined by 2.6%, from USD 158.6 MM in 2018 to USD 154.5 MM in 2019. The unit cost of production increased by 0.1%, from 65.4 USD/MT in 2018 to 65.5 USD/MT in 2019.

Table 12: Yauli Operating Investments

Yauli Operating Investment (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Local Exploration	3.3	3.7	3.7	3.5	5.9	10.6	9.1	17.1
Mine Development	10.5	12.2	12.8	11.6	10.4	35.5	34.8	2.0
Plants and Tailings Dams	1.0	1.9	4.2	4.3	-0.9	7.1	7.4	-3.1
Mine and Infrastructure	5.0	4.0	5.0	1.7	193.9	14.1	5.3	165.6
Electrical Infrastructure	0.2	1.1	1.2	0.9	38.9	2.6	3.0	-12.0
Support and Others	1.0	1.2	1.7	0.5	277.0	3.9	1.8	123.9
Total¹	20.9	24.2	28.7	22.4	28.3	73.8	61.2	20.5

¹ The investments include the operating leases fee in 2019 according to NIIF 16: USD 3.6 MM in 1Q19, USD 3.0 MM in 2Q19 and USD 3.1 MM in 3Q19.

Source: Volcan Cia. Minera

Operating investments at Yauli increased by 28.3%, from USD 22.4 MM in 3Q18 to USD 28.7 MM in 3Q19, mainly due to greater investments in mine infrastructure, developments and support areas. Year-to-date (Jan-Sept), operating investments increased by 20.5%, from USD 61.2 MM in 2018 to USD 73.8 MM in 2019.

3.2 Chungar Unit Operating Results

Table 13: Chungar Production

Chungar Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mineral extraction (thousands MT)	413	413	376	462	-18.6	1,202	1,197	0.4
Mineral treatment (thousands MT)	435	449	385	462	-16.6	1,269	1,211	4.8
Fines Content								
Zinc (thousands FMT)	18.5	19.6	17.1	20.4	-16.1	55.2	53.9	2.5
Lead (thousands FMT)	4.4	4.3	4.4	4.6	-4.2	13.1	13.2	-0.8
Copper (thousands FMT)	0.3	0.3	0.3	0.3	-7.4	0.8	1.0	-14.2
Silver (million Oz)	0.8	0.7	0.8	1.1	-25.4	2.3	2.8	-17.6

Source: Volcan Cia. Minera

In 3Q19, ore volumes extracted at Chungar decreased by 18.6% as compared to 3Q18, due to seven days of suspended operations and their gradual restart, which made it longer, to ensure compliance with mine safety standards. In line with this, ore volumes treated in 3Q19 decreased by 16.6%, as compared to the same quarter in the previous year.

With regard to zinc, lead, copper and silver, in 3Q19, production decreased by 16.1%, 4.2%, 7.4% and 25.4%, respectively, as compared to 3Q18.

Table 14: Chungar Cost of Production

Chungar Production Cost	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Production Cost (MM USD)¹	23.8	24.8	21.6	26.6	-18.7	70.3	71.5	-1.6
Extraction Cost	13.6	13.7	12.1	16.3	-25.7	39.4	42.1	-6.4
Treatment Cost	10.2	11.2	9.5	10.3	-7.8	30.9	29.4	5.2
Unit Cost (USD/MT)¹	56.5	58.0	56.9	57.6	-1.2	57.1	59.4	-3.9
Extraction Cost	33.1	33.1	32.2	35.2	-8.7	32.8	35.2	-6.8
Treatment Cost	23.4	24.9	24.7	22.4	10.5	24.3	24.3	0.3

¹ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 1.4 MM in 1Q19 and USD 1.2 MM in 2Q19. These amounts are reflected in the operational investments now.

Source: Volcan Cia. Minera

In 3Q19, the cost of production in absolute terms decreased by 18.7%, from USD 26.6 MM in 3Q18 to USD 21.6 MM in 3Q19, mainly due to the lower treated volume. The unit cost of production decreased by 1.2%, from 57.6 USD/MT in 3Q18 to 56.9 USD/MT in 3Q19.

Year-to-date (Jan-Sept), the absolute cost of production declined by 1.6%, from USD 71.5 MM in 2018 to USD 70.3 MM in 2019. The unit cost of production decreased by 3.9%, from 59.4 USD/MT in 2018 to 57.1 USD/MT in 2019.

Table 15: Chungar Operating Investments

Chungar Operating Investment (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Local Exploration	1.6	2.1	1.4	2.2	-38.5	5.1	5.4	-4.7
Mine Development	5.3	6.5	6.3	6.8	-6.6	18.1	22.5	-19.9
Plants and Tailings Dams	0.7	1.4	0.5	1.1	-51.8	2.6	3.0	-11.3
Mine and Infrastructure	2.0	3.0	2.8	2.2	24.6	7.8	6.5	19.4
Electrical Infrastructure	0.3	0.3	0.2	0.4	-36.9	0.8	1.3	-37.9
Support and Others	0.9	0.9	0.8	0.5	37.9	2.6	0.9	202.2
Total¹	10.7	14.2	12.0	13.3	-9.6	37.0	39.5	-6.4

¹ The investments include the operating leases fee in 2019 according to NIIF 16: USD 1.4 MM in 1Q19, USD 1.2 MM in 2Q19 and USD 1.3 MM in 3Q19.

Source: Volcan Cia. Minera

Operating investments fell by 9.6%, from USD 13.3 MM in 3Q18 to USD 12.0 MM in 3Q19, mainly due to lower investments in developments, explorations, plants and tailings dams and electric infrastructure, partially offset by greater investments in mine infrastructure and support areas. Year-to-date (Jan-Sept), total investments declined by 6.4%, from USD 39.5 MM in 2018 to USD 37.0 MM in 2019.

3.3 Alparmarca Unit Operating Results

Table 16: Alparmarca Production

Alparmarca Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mineral extraction (thousands MT)	227	278	227	282	-19.4	732	744	-1.5
Mineral treatment (thousands MT)	224	238	240	240	0.0	701	701	0.0
Fines Content								
Zinc (thousands FMT)	1.2	1.5	1.5	2.2	-30.7	4.3	6.8	-37.5
Lead (thousands FMT)	0.9	1.1	1.3	1.7	-21.8	3.3	5.1	-34.3
Copper (thousands FMT)	0.1	0.1	0.1	0.1	-5.7	0.3	0.3	-13.1
Silver (million Oz)	0.3	0.3	0.3	0.4	-13.1	0.9	1.1	-20.0

Source: Volcan Cia. Minera

In 3Q19, ore volumes extracted at the Alparmarca Unit decreased by 19.4% compared to the same quarter of the previous year, due to the gradual decrease of the open pit's mineable resources. However, the volume of treated ore remained unchanged as a result of the use of ore stocks available in the unit.

In 3Q19, zinc, lead, silver and copper production decreased by 30.7%, 21.8%, 13.1% and 5.7%, respectively, as compared to 3Q18, mainly explained by lower head grades of the treated ore resulting from the use of new extraction zones in the open pit and the use of ore from stockpiles.

Table 17: Alparmarca Cost of Production

Alparmarca Production Cost	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Production Cost (MM USD)¹	4.8	5.7	5.9	4.1	41.8	16.4	11.8	39.2
Extraction Cost	2.0	2.7	2.8	1.4	102.9	7.6	3.6	108.4
Treatment Cost	2.8	3.0	3.0	2.8	10.8	8.8	8.1	8.1
Unit Cost (USD/MT)¹	21.2	22.3	25.2	16.4	53.3	22.9	16.5	38.9
Extraction Cost	8.8	9.9	12.5	5.0	151.8	10.4	4.9	111.7
Treatment Cost	12.4	12.4	12.7	11.5	10.7	12.5	11.6	8.2

¹ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 0.06 MM in 2Q19. These amounts are reflected in the operational investments now.

Source: Volcan Cia. Minera

In 3Q19, the absolute cost of production was USD 5.9 MM, 41.8% higher than the USD 4.1 MM figure for the same quarter of the previous year, due to a greater stripping cost at the Alparmarca open pit. The unit cost increased by 53.3%, from 16.4 USD/MT in 3Q18 to 25.2 USD/MT in 3Q19.

Year-to-date (Jan-Sept), the cost of production in absolute terms increased by 39.2%, from USD 11.8 MM in 2018 to USD 16.4 MM in 2019, while the unit cost of production increased by 38.9%, from 16.5 USD/MT in 2018 to 22.9 USD/MT in 2019.

Table 18: Alpacamarca Operating Investments

Alpacamarca Operating Inv. (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Local Exploration	0.0	0.4	0.6	0.5	12.2	1.0	1.0	0.0
Plants and Tailings Dams	0.3	0.2	1.0	1.7	-40.4	1.5	2.3	-31.5
Mine and Infrastructure	0.0	2.1	-1.6	0.0		0.5	0.2	162.3
Support and Others	0.0	0.1	0.3	0.0	766.0	0.4	0.2	97.5
Total¹	0.4	2.8	0.3	2.3	-87.5	3.5	3.7	-4.8

¹ The investments include the operating leases fee in 2019 according to NIIF 16: USD 0.06 MM in 2Q19 and USD 0.05 MM in 3Q19.

Source: Volcan Cia. Minera

Operating investments decreased from USD 2.3 MM in 3Q18 to USD 0.3 MM in 3Q19, due to lower investments in the tailings dam and a reclassification of the purchase of mine equipment. Year-to-date (Jan-Sept), operating investments declined from USD 3.7 MM in 2018 to USD 3.5 MM in 2019.

3.4 Cerro de Pasco Unit Operating Results

Table 19: Cerro de Pasco Production

Cerro de Pasco Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mineral extraction (thousands MT)	375	475	577	327	76.7	1,427	932	53.1
Mineral treatment (thousands MT)	375	475	577	327	76.7	1,427	932	53.1
Fines Content								
Zinc (thousands FMT)	3.1	4.0	4.8	2.5	90.9	12.0	8.2	45.3
Lead (thousands FMT)	0.9	1.4	1.8	0.8	114.1	4.1	2.9	42.2
Silver (million Oz)	0.1	0.2	0.2	0.1	148.9	0.5	0.3	80.0

Source: Volcan Cia. Minera

In 3Q19, ore volumes from stockpiles treated at Cerro de Pasco increased by 76.7% compared to the same quarter of the previous year, from 327 thousand MT in 3Q18 to 577 thousand MT in 3Q19.

Accordingly, in 3Q19, zinc, lead and silver production grew by 90.9%, 114.1% and 148.9%, respectively, as compared to 3Q18.

Table 20: Cerro de Pasco Cost of Production

Cerro de Pasco Production Cost	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Production Cost (MM USD)¹	6.0	7.2	6.8	4.6	49.0	20.0	13.4	50.2
Extraction Cost	0.0	0.9	1.1	0.0		2.0	0.0	
Treatment Cost	6.0	6.4	5.7	4.6	24.8	18.1	13.3	35.5
Unit Cost (USD/MT)¹	16.0	15.2	11.8	14.0	-15.7	14.1	14.3	-1.9
Extraction Cost	0.0	1.8	1.9	0.0		1.4	0.0	
Treatment Cost	16.0	13.4	9.9	14.0	-29.4	12.7	14.3	-11.4

¹ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 0.01 MM in 2Q19. These amounts are reflected in the operational investments now.

Source: Volcan Cia. Minera

Absolute cost increased by 49.0%, from USD 4.6 MM in 3Q18 to USD 6.8 MM in 3Q19 due to higher treated volumes. Unit cost fell by 15.7%, from 14.0 USD/MT in 3Q18 to 11.8 USD/MT.

Year-to-date (Jan-Sept), the absolute cost of production declined by 50.2%, from USD 13.4 MM in 2018 to USD 20.0 MM in 2019. The unit cost of production decreased by 1.9%, from 14.3 USD/MT in 2018 to 14.1 USD/MT in 2019.

Table 21: Cerro de Pasco Operating Investments

Cerro de Pasco Operating Inv. (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Local Exploration	0.1	0.1	0.1	0.3	-77.5	0.3	0.4	-24.8
Plants and Tailings Dams	1.2	0.6	0.2	2.2	-92.2	2.0	4.7	-58.5
Mine and Infrastructure	0.0	0.3	0.0	0.0		0.3	0.0	
Support and Others	0.4	0.3	0.2	0.3	-19.1	0.9	0.9	1.1
Total¹	1.7	1.3	0.5	2.9	-82.9	3.5	6.1	-42.6

¹ The investments include the operating leases fee in 2019 according to NIIF 16: USD 0.01 MM in 2Q19 and USD 0.04 MM in 3Q19.

Source: Volcan Cia. Minera

Operating investments decreased from USD 2.9 MM in 3Q18 to USD 0.5 MM in 3Q19, due to lower investments in the Ocroyoc tailings dam. Year-to-date (Jan-Sept), operating investments declined from USD 6.1 MM in 2018 to USD 3.5 MM in 2019.

3.5 Oxides Plant Operating Results

Table 22: Oxides Plant Production

Oxides Plant Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Mineral extraction (thousands MT)	198	237	235	229	2.5	671	675	-0.7
Mineral treatment (thousands MT)	198	237	235	229	2.5	671	675	-0.7
Fines Content								
Silver (million Oz)	0.6	0.8	1.0	0.8	18.6	2.3	2.6	-10.8
Gold (Oz)	3,335	4,810	3,335	1,087	206.9	11,480	2,990	284.0

Source: Volcan Cia. Minera

Ore volumes treated at the Oxides Plant increased by 2.5%, from 229 thousand MT in 3Q18 to 235 thousand MT in 3Q19.

In 3Q19, silver and gold production grew by 18.6% and 206.9%, respectively, due to higher head grades in the run-of-mine ore from the open pit.

Table 23: Oxides Plant Cost of Production

Oxides Plant Production Cost	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Production Cost (MM USD)¹	8.1	9.1	11.2	8.9	25.6	28.4	25.9	9.9
Extraction Cost	1.3	1.2	2.7	1.3	106.6	5.2	3.8	38.1
Treatment Cost	6.9	7.9	8.5	7.6	11.8	23.2	22.1	5.1
Unit Cost (USD/MT)¹	40.9	38.3	47.7	38.9	22.6	42.4	38.3	10.6
Extraction Cost	6.3	5.2	11.5	5.7	101.6	7.7	5.6	39.1
Treatment Cost	34.6	33.1	36.2	33.2	9.1	34.6	32.7	5.8

¹ The production cost has been adjusted from January to June 2019, removing the operating leases fee according to NIIF 16: USD 0.01 MM in 2Q19. These amounts are reflected in the operational investments now.

Source: Volcan Cia. Minera

In 3Q19, the cost of production in absolute terms totaled USD 11.2 MM, 25.6% higher than in 3Q18, due to higher costs of on-site ore extraction and greater use of reagents and supplies at the plant. Unit cost increased by 22.6%, from 38.9 USD/MT in 3Q18 to 47.7 USD/MT in 3Q19.

Year-to-date (Jan-Sept), the absolute cost of production increased by 9.9%, from USD 25.9 MM in 2018 to USD 28.4 MM in 2019. The operation's unit cost increased by 10.6%, from 38.3 USD/MT in 2018 to 42.4 USD/MT in 2019.

Table 24: Oxides Plant Operating Investments

Oxides Plant Operating Inv. (MM USD)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Plants and Tailings Dams	1.3	0.6	1.2	2.4	-51.1	3.0	5.0	-39.3
Mine and Infrastructure	0.0	0.7	0.8	0.7	3.9	1.5	4.8	-69.8
Support and Others	0.1	0.3	0.1	0.0	252.9	0.5	0.3	51.6
Total¹	1.4	1.5	2.0	3.2	-35.6	5.0	10.1	-51.0

¹ The investments include the operating leases fee in 2019 according to NIIF 16: USD 0.01 MM in 2Q19 and USD 0.03 MM in 3Q19.

Source: Volcan Cia. Minera

Operating investments decreased by 35.6%, from USD 3.2 MM in 3Q18 to USD 2.0 MM in 3Q19, mainly due to lower investments in the Ocroyoc tailings dam. Year-to-date (Jan-Sept), total operating investments declined by 51.0%, from USD 10.1 MM in 2018 to USD 5.0 MM in 2019.

4. Energy

Table 25: Volcan's Electric Power Balance

Electric Balance (GWh)	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Energy generation	86.0	91.2	101.2	101.2	73.2	38.2	278.3	230.3	20.8
Chungar	42.5	38.5	35.7	35.7	33.2	7.5	116.8	111.4	4.8
Tingo	2.3	2.3	2.2	2.2	2.2	-0.1	6.8	6.8	-0.5
Huanchor	41.1	40.2	37.0	37.0	37.8	-2.1	118.4	112.1	5.6
Rucuy	0.0	10.1	26.3	26.3	0.0		36.3	0.0	
Energy consumption	181.4	192.7	192.3	192.3	181.5	6.0	566.4	530.1	6.9
Energy purchase	136.6	151.9	154.4	154.4	146.1	5.7	442.9	411.8	7.5

Source: Volcan Cia. Minera

During 3Q19, Volcan's total consumption of electric power reached 192.3 GWh, with a maximum demand of 99.9 MW.

The 10 hydroelectric plants that belong to the Chungar Unit generated 35.7 GWh. This accounted for 19% of the Company's total consolidated consumption, at an average cost of 18.1 USD/MWh, including operating, maintenance and transmission costs. Moreover, the Tingo Hydroelectric Plant generated 2.2 GWh, which was sold directly to Chungar.

Volcan purchased 154.4 GWh from the national central grid system (the SEIN) in order to meet its total consumption demand, at an average cost of 59.1 USD/MWh.

In 3Q19, the Huanchor Hydroelectric Plant produced 37.0 GWh, a 2% decrease as compared to the same period of the previous year. The power of Huanchor Hydroelectric Plant was entirely sold to third parties.

The Rucuy Hydroelectric Plant, which resumed commercial operation on June 1, 2019, produced 26.3 GWh in 3Q19, and the power was used to meet the commitments set forth in its renewable energy agreement (RER).

5. Final Comments

- The safety of our employees is the Company's foremost value. Safety is not negotiable and it is above any operational objective. Accordingly, the operations of the Chungar Unit were suspended for more than seven days to ensure the Company's safety standards. The suspension and gradual restart of operations prevented the treatment of approximately 60 thousand MT of ore; this was reflected on the quarter's production.
- The Company's financial results were affected in 3Q19, as compared to 3Q18, mainly due to the lower base metals prices, deterioration of commercial terms, lower production resulting from the suspension at Chungar and the delays at Carahuacra and Ticlio, greater concentrate inventories, greater depreciation, greater exploration expenses and higher financial income (expense).
- The exploration plans are being executed as scheduled. As of September, 221 thousand meters have been drilled; the pace should let us exceed the 300 thousand meters defined in the drilling plan. Drilling reached 169 thousand meters at current operations, while 52 thousand meters have been drilled at main projects, such as Romina, Palma, Zoraida and Carhuacayán. The results are encouraging and may permit to increase the volume and certainty of our resources.
- The Romina project is progressing as expected. The resources of the Puajanca body have been confirmed and detailed studies are underway to obtain the project's full feasibility in the first half of the next year. The production of this mine is expected to start in 2022. It will feed the Alpamarca plant with ore of greater value than the one currently found at Alpamarca open pit.
- In addition to the Puaganca body, less than 1 kilometers to N and NW three new bodies (Adriana, Andrea and Esperanza), have been discovered and drilled this year with positive results. In the same way, explorations at Carhuacayán, at the east of Alpamarca, continue showing positive results. The potential of Romina and Carhuacayán leads us to believe in the growth and consolidation of Alpamarca as an important unit of Volcan in the near future.
- The Port Terminal Project changed its name in October 2019, from Terminales Portuarios Chancay S.A. to **COSCO SHIPPING Ports Chancay PERU (CSPCP)**, as a result of the association between COSCO SHIPPING Ports Limited and Volcan Compañía Minera S.A.A.

CSPCP continues with the development of the first stage of the Chancay multipurpose port terminal. The constructions have started with the portal of the underground viaduct tunnel and the area of the first multipurpose pier in the maritime zone. All the necessary permits and licenses have been granted by the different national and local entities.

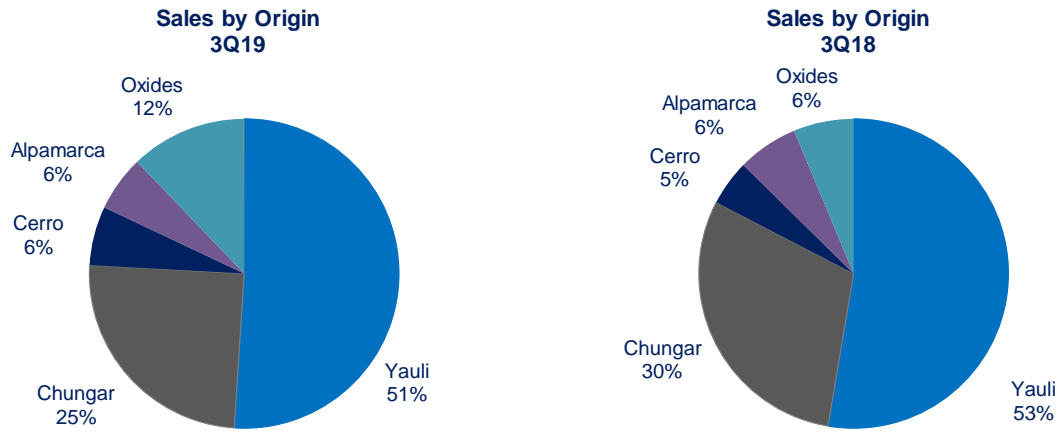
At the same time, licenses and permits have been requested for the operational area in order to expand the port capacity up to four docks, two multipurpose and two for containers.

The Port of Chancay construction is being executed according to the planned schedule with an estimated investment in its first stage of USD 1.3 billion.

Annexes

Annex 1: Sales Breakdown

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

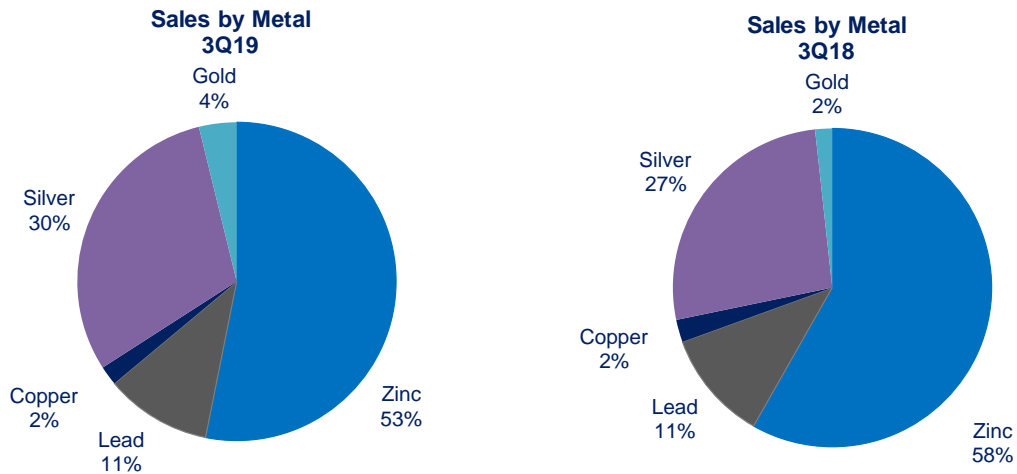


Source: Volcan Cia. Minera

Source: Volcan Cia. Minera

The distribution of sales by origin reflects an increase in the contribution of the Oxides Plant in total sales, as compared to a reduced contribution by Yauli and Chungar.

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



Source: Volcan Cia. Minera

Source: Volcan Cia. Minera

The distribution of sales by metal in 3Q19 reflects a decline in the contribution of zinc, as compared to 3Q18. The contribution of gold and silver increased, due to their higher prices.

Annex 2: Average Spot Prices

Spot Prices	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Zinc (USD/MT)	2,704	2,763	2,345	2,534	-7.4	2,604	3,023	-13.9
Lead (USD/MT)	2,037	1,886	2,029	2,102	-3.5	1,984	2,337	-15.1
Copper (USD/MT)	6,220	6,114	5,798	6,103	-5.0	6,044	6,645	-9.0
Silver (USD/Oz)	15.6	14.9	17.0	15.0	13.5	15.8	16.1	-1.7
Gold (USD/Oz)	1,305	1,310	1,474	1,213	21.5	1,363	1,283	6.2

Source: London Metal Exchange

Annex 3: Macroeconomic Indicators

Macroeconomic Indicators	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Exchange Rate (S/ x USD)	3.32	3.32	3.34	3.29	1.5	3.33	3.26	2.0
Inflation ¹	2.25	2.29	1.85	1.28	44.6	1.85	1.28	44.6

¹ Inflation of the last 12 months

Source: Central Reserve Bank of Peru

Annex 4: Domestic Peruvian Metal Production

National Production	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Jul-Sep 2018	var %	Jan-Sep 2019	Jan-Sep 2018	var %
Silver (Thousands Oz)	27,985	31,592	31,766	35,033	-9.3	91,343	101,567	-10.1
Zinc (FMT)	327,381	351,210	348,269	381,013	-8.6	1,026,860	1,124,478	-8.7
Lead (FMT)	69,710	79,655	78,559	77,314	1.6	227,924	213,278	6.9
Copper (FMT)	587,150	604,909	622,509	612,574	1.6	1,814,568	1,786,223	1.6
Gold (Thousands Oz)	1,028	1,047	1,052	1,170	-10.1	3,127	3,369	-7.2

Source: Ministry of Energy and Mines