



Volcan Compañía Minera S.A.A. and Subsidiaries Management Discussion and Analysis Fourth Quarter 2016

Principal Results:

Consolidated Volcan	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Operating Results									
Mineral treatment ¹ (thousands MT)	1,943	1,853	1,890	2,029	2,024	0.3	7,716	7,910	-2.4
Zinc Production (thousands FMT)	71.4	70.2	68.3	63.4	73.3	-13.6	273.4	284.9	-4.1
Lead Production (thousands FMT)	15.1	13.0	11.9	12.2	15.3	-19.9	52.2	59.6	-12.3
Copper Production (thousands FMT)	1.2	1.2	1.5	1.2	1.1	5.1	5.2	4.3	20.0
Silver Production (millions Oz)	5.8	5.8	5.6	4.8	6.3	-24.3	22.0	24.8	-11.4
Gold Production (thousands Oz)	1.5	1.4	1.6	1.4	1.5	-5.2	5.8	5.3	9.6
Unit Cost (USD/MT)	48.2	50.7	50.5	48.8	50.0	-2.3	49.5	53.7	-7.9
Total Investments (MM USD)	18.5	26.7	33.9	43.4	39.0	11.4	122.5	173.9	-29.6
Sales Prices									
Zinc (USD/MT)	1,671	1,883	2,263	2,506	1,614	55.3	2,077	1,917	8.3
Lead (USD/MT)	1,764	1,701	1,874	2,136	1,679	27.2	1,858	1,782	4.3
Copper (USD/MT)	4,773	4,756	4,754	5,298	4,788	10.6	4,901	5,426	-9.7
Silver (USD/Oz)	14.9	16.7	19.4	17.3	14.6	18.9	17.0	15.6	8.8
Gold (USD/Oz)	1,165	1,257	1,334	1,210	1,096	10.3	1,234	1,154	6.9
Financial Results (MM USD)									
Sales before adjustments	172.1	196.8	220.1	226.8	193.2	17.4	815.9	836.3	-2.4
Volcan Production	158.5	182.3	203.6	204.9	171.9	19.2	749.4	746.5	0.4
Commercialization Business	13.6	14.5	16.5	21.9	21.3	2.8	66.4	89.8	-26.0
Sales Adjustments	11.3	-0.1	-5.1	-0.4	-11.5	-96.7	5.7	-41.8	
Settlement of prior period adjustments	-7.0	-2.8	12.6	9.5	-13.2		12.3	-37.5	
Adjustments for open positions ²	6.5	18.8	-3.0	-2.9	-1.2	145.3	19.4	-4.6	
Hedging results	11.8	-16.1	-14.7	-7.0	2.9		-26.0	0.3	
Sales after adjustments	183.4	196.8	215.0	226.4	181.7	24.6	821.5	794.5	3.4
Net profit³	19.3	15.4	26.3	23.3	-469.0		84.4	-453.9	
Earnings per share (EPS)	0.005	0.004	0.007	0.006	-0.122		0.022	-0.118	
EBITDA⁴	75.8	63.1	83.2	80.9	45.4	78.0	302.9	225.3	34.4

¹ Includes treated tons at Oxides Plant

² 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 derivative and sales adjustments**, reflect this exposure according to a forward-price curve.

³ Net income in 2015 includes exceptional charges of USD -470.1 MM due to the devaluation of assets, intangibles and inventory.

⁴ EBITDA does not consider exceptional results.

Source: Volcan Cia. Minera



1. Executive Summary

- During 4Q16, the average sales price of metals produced by Volcan increased, compared to the same period of the previous year: the price of zinc rose from 1,614 USD/MT in 4Q15 to 2,506 USD/MT in 4Q16 **(+55.3%)**, lead from 1,679 USD/MT to 2,136 USD/MT **(+27.2%)** and silver from 14.6 USD/Oz in 4Q15 to 17.3 USD/Oz in 4Q16 **(+18.9%)**.
- Consolidated unit cost of production fell by 2.3%, from 50.0 USD/MT in 4Q15 to 48.8 USD/MT in 4Q16.
- In 4Q16, total mining investments grew by 11.4%, from USD 39.0 MM to USD 43.4 MM, mainly explained by increased operating unit investments, especially in explorations, development and mining infrastructure.
- Total sales before adjustments increased by 17.4%, from USD 193.2 MM in 4Q15 to USD 226.8 MM in 4Q16, due to better prices for all metals produced by the Company.
- Sales adjustments declined from USD -11.5 MM in 4Q15 to USD -0.4 MM in 4Q16, including final settlements of USD 9.5 MM, provisions related to open commercial positions of USD -2.9 MM and hedging results of USD -7.0 MM. As a consequence, sales after adjustments rose by 24.6%, from USD 181.7 MM in 4Q15 to USD 226.4 MM in 4Q16.
- Better metals prices and lower cost of production resulted in an increase in gross margin from 22% in 4Q15 to 30% in 4Q16. EBIDTA increased by 78.0%, from USD 45.4 MM in 4Q15 to USD 80.9 MM in 4Q16. In annual terms, EBITDA increased by 34.4%, from USD 225.3 MM in 2015 to USD 302.9 MM in 2016.
- Net profit grew from USD -469.0 MM in 4Q15 to USD 23.3 MM in 4Q16. In annual terms, net profit increased from USD -453.9 MM in 2015 to USD 84.4 MM in 2016. It must be taken into account that in 4Q15, the Company recorded an exceptional net loss after taxes of USD -470.1 MM, due to the impairment of fixed assets, intangibles and inventories as a result of the unfavorable environment for metals prices.
- Production in 2016 was in line with the annual projections updated last October. During 4Q16, copper production increased by 5.2%, zinc production declined by -13.6%, lead declined by -19.9% and silver by -24.3% as compared to 4Q15, mainly due to lower production at the Yauli Unit as a result of mining areas with lower grades across all metals during 4Q16 compared to the mineral extracted during 4Q15. Likewise, production volumes at the San Cristobal Mine at Yauli were affected by reduced development and preparation activities because of low metals prices observed until 1Q16, and a decrease in activity at Carahuacra Norte Open Pit.
- Production volumes at the Yauli Unit should return to normal in the coming months, with greater volumes coming from the Carahuacra and Ticlio mines. Therefore,



expected volumes for 2017 are similar to those in 2016. Likewise, zinc grades for 2017 are expected to be similar to 2016. However, in the case of silver a decline in reserve grades are expected as the Andaychagua and San Cristobal mines continue to deepen. This effect will have an impact on the production of silver at the Yauli Unit in 2017. It is important to emphasize that the Company has aggressive exploration plans in order to revert this situation.

Accordingly, consolidated production estimates for 2017 are as follows:

Table 1: Production projection 2017

Metal	2017 Estimated Range			
Zinc (Thousands FMT)	From	265	to	275
Lead (Thousands FMT)	From	45	to	50
Copper (Thousands FMT)	From	3	to	4
Silver (Millions Oz)	From	18.0	to	19.0
Gold (Thousands Oz)	From	4.0	to	4.8

2. Analysis of Results

2.1 Consolidated Results

2.1.1 Production

Table 2: Consolidated Production

Consolidated Production	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mineral extraction (thousands MT)	1,901	1,854	1,883	2,030	1,975	2.8	7,667	7,908	-3.0
Polymetallic ore	1,675	1,630	1,660	1,802	1,755	2.7	6,767	7,165	-5.6
Oxides ore ¹	226	223	224	228	220	3.3	900	743	21.2
Mineral treatment (thousands MT)	1,943	1,853	1,890	2,029	2,024	0.3	7,716	7,910	-2.4
Concentrator Plants	1,718	1,630	1,667	1,802	1,804	-0.1	6,816	7,167	-4.9
Silver Oxides Plant	226	223	224	228	220	3.3	900	743	21.2
Fine Content									
Zinc (thousands FMT)	71.4	70.2	68.3	63.4	73.3	-13.6	273.4	284.9	-4.1
Lead (thousands FMT)	15.1	13.0	11.9	12.2	15.3	-19.9	52.2	59.6	-12.3
Copper (thousands FMT)	1.2	1.2	1.5	1.2	1.1	5.1	5.2	4.3	20.0
Silver (millions Oz)	5.8	5.8	5.6	4.8	6.3	-24.3	22.0	24.8	-11.4
Gold (thousands Oz)	1.5	1.4	1.6	1.4	1.5	-5.2	5.8	5.3	9.6

¹Of the 743 thousand MT reported from January to December of 2015, 227 thousand MT correspond to the pre-operational stage from January to May and 516 thousand MT to the operational stage since June of 2015.

Source: Volcan Cia. Minera

In 4Q16, extracted ore volumes increased by 2.8% compared to the same quarter of the previous year. This is mainly explained by the contribution of marginal ore from stockpiles at Cerro de Pasco and increased volumes extracted at Chungar. These effects offset the lower volumes extracted at Yauli due to the reduced activity at the Carahuacra Norte Open Pit and lower volumes extracted at the San Cristobal Mine due to developments and preparations that are still recovering. In annual terms, the extraction volume was reduced by 3.0% compared to the previous year.

Ore volumes treated at the plants during 4Q16 grew by 0.3% compared to the same period of the previous year. In annual terms, volumes treated decreased by 2.4%, due

to the lower tonnage treated at Yauli and Cerro de Pasco; this effect was partly offset by the increase in tonnage treated at Chungar and the Oxides Plant.

The production of fine zinc fell by 13.6%, from 73.3 thousand FMT in 4Q15 to 63.4 thousand FMT in 4Q16; fine lead decreased by 19.9%, from 15.3 thousand FMT in 4Q15 to 12.2 thousand FMT in 4Q16; fine silver decreased by 24.3%, from 6.3 million ounces in 4Q15 to 4.8 million ounces in 4Q16; and gold production decreased by 5.2%, from 1.5 thousand ounces to 1.4 thousand ounces. Meanwhile, fine copper production increased by 5.1%, from 1.1 thousand FMT to 1.2 thousand FMT.

In annual terms, in 2016, zinc production decreased by 4.1%, lead by 12.3% and silver by 11.4%, compared to 2015. Meanwhile, copper production increased by 20.0% and gold by 9.6%.

The reduced zinc, lead and silver production in 2016 compared to the previous year is mainly explained by the suspension of production at the Cerro de Pasco Unit since November 2015, and lower production at the Yauli Unit during 4Q16. The reduced lead production in 2016 is also explained by lower grades at Chungar. Silver was also affected by lower grades at Chungar and Alpamarca.

The reduced production at the Yauli Unit in 4Q16 is mainly explained by lower volumes extracted at the Carahuacra Norte Open Pit and San Cristobal Mine due to reduced development and preparation activities because of low metals prices observed until 1Q16. Moreover, extraction at the Yauli Unit during 4Q16 came from lower-grade areas for all metals compared to the richer areas mined during the lowest part of price cycle.

For 2017, production volumes are estimated to be similar to 2016 at the Yauli, with average zinc grades expected to be similar to 2016. However, silver production is expected to decline at this unit following declining reserve grades of this metal at depth in the Andaychagua and San Cristobal mines.

2.1.2 Cost of Production

Table 3: Consolidated Cost of Production

Consolidated	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Oct-Dec	var %	Jan-Dec	Jan-Dec	var %
Production Cost ¹	2016	2016	2016	2016	2015		2016	2015	
Production Cost (MM USD)	92.5	93.9	95.3	99.0	99.8	-0.7	380.7	412.8	-7.8
Mine Cost	52.1	52.8	53.6	54.1	56.1	-3.6	212.6	234.9	-9.5
Plant and Other Cost	40.4	41.1	41.6	45.0	43.7	2.9	168.1	177.9	-5.5
Unit Cost (USD/MT)	48.2	50.7	50.5	48.8	50.0	-2.3	49.5	53.7	-7.9
Mine Cost	27.4	28.5	28.5	26.6	28.4	-6.1	27.7	30.6	-9.3
Plant and Other Cost	20.8	22.2	22.0	22.2	21.6	2.7	21.8	23.2	-5.9

¹The production cost does not consider: i. production cost from the pre-operational stage of the Oxides plant from January to May of 2015, ii. costs from third-party ore and concentrate purchase, iii. extraordinary costs related to severance payments.

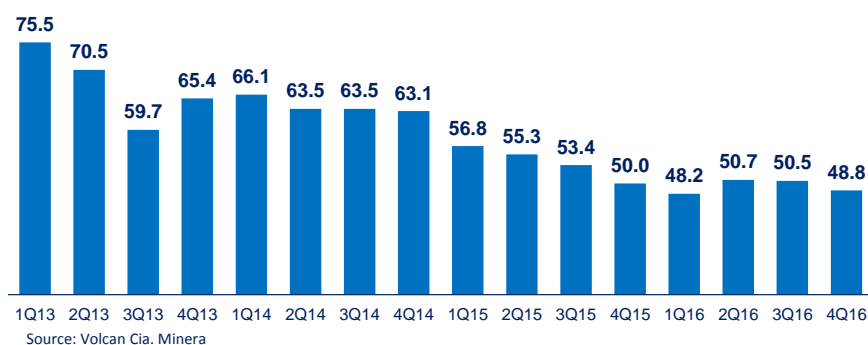
Source: Volcan Cia. Minera

The absolute cost of production declined by 0.7%, from USD 99.8 MM in 4Q15 to USD 99.0 MM in 4Q16. In annual terms, the absolute cost of production declined by 7.8%, from USD 412.8 MM in 2015 to USD 380.7 MM in 2016.



Consolidated unit cost fell by 2.3%, from 50.0 USD/MT in 4Q15 to 48.8 USD/MT in 4Q16. In annual terms, consolidated unit cost decreased by 7.9%, from 53.7 USD/MT in 2015 to 49.5 USD/MT in the same period in 2016.

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



2.1.3 Total Investments

Table 4: Consolidated Investment

Consolidated Investment (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mining	16.7	24.4	32.8	43.0	30.0	43.2	116.9	147.7	-20.8
Mining Units	16.1	23.6	31.9	41.5	28.7	44.3	113.1	118.6	-4.6
Local Exploration	0.1	2.1	3.9	4.0	1.3	207.8	10.0	8.5	17.6
Development	9.6	10.5	12.8	16.9	10.0	69.4	49.8	51.8	-3.9
Plants and Tailings Facilities	1.6	3.4	4.6	8.2	9.3	-11.4	17.8	28.3	-36.9
Mine and Infrastructure	4.1	6.9	9.6	9.2	5.4	69.5	29.8	22.3	33.5
Energy in Units	0.5	0.1	0.2	1.4	0.5	176.4	2.3	2.4	-5.9
Support and Others	0.2	0.5	0.8	1.8	2.3	-21.1	3.4	5.2	-35.6
Regional Explorations	0.4	0.5	0.8	1.5	1.0	42.8	3.2	4.1	-23.5
Growth and Others	0.17	0.3	0.1	0.1	0.3	-76.2	0.6	24.9	-97.6
Energy	1.7	2.3	1.1	0.4	8.9	-95.5	5.6	26.2	-78.8
Total	18.5	26.7	33.9	43.4	39.0	11.4	122.5	173.9	-29.6

Source: Volcan Cia. Minera

Total mining investments increased by 43.2%, from USD 30.0 MM in 4Q15 to USD 43.0 MM in 4Q16. This is mainly explained by operating-unit investments increasing by 44.3%, from USD 28.7 MM in 4Q15 to USD 41.5 MM in 4Q16, due to increased development and exploration at the principal mines, and the continuation of mine and infrastructure projects, such as Letts Shaft at Andaychagua and the Chungar water pumping system.

Regional exploration investments (greenfield or early-stage projects) grew by 42.8%, from USD 1.0 MM in 4Q15 to USD 1.5 MM in 4Q16, and investments in growth projects for the mining business fell from USD 0.3 MM in 4Q15 to USD 0.1 MM in 4Q16.

Energy investments in 4Q16 were USD 0.4 MM versus USD 8.9 MM in 4Q15, mainly due to the completion of the construction of the Rucuy Hydroelectric Plant (20 MW), which started commercial operations in August 2016.

In annual terms, total investments in 2016 amounted to USD 122.5 MM, 29.6% lower than the USD 173.9 MM for 2015, mainly explained by the completion of the construction of the Oxides Plant and Rucuy Hydroelectric Plant.

2.1.4 Income Statement

Table 5: Income Statement

Income Statement (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Sales before adjust.	172.1	196.8	220.1	226.8	193.2	17.4	815.9	836.3	-2.4
<i>Sett. of prior periods adjust.</i>	-7.0	-2.8	12.6	9.5	-13.2		12.3	-37.5	
<i>Adj. open positions</i>	6.5	18.8	-3.0	-2.9	-1.2	145.3	19.4	-4.6	
<i>Hedging</i>	11.8	-16.1	-14.7	-7.0	2.9		-26.0	0.3	
Sales after adjust.	183.4	196.8	215.0	226.4	181.7	24.6	821.5	794.5	3.4
Cost of Goods Sold	-135.8	-142.8	-144.8	-157.9	-142.3	10.9	-581.2	-663.2	-12.4
Gross Profit	47.6	54.0	70.2	68.5	39.4	74.1	240.3	131.3	83.0
<i>Gross Margin</i>	26%	27%	33%	30%	22%	9 pp	29%	17%	13 pp
Administrative Expenses	-9.3	-11.1	-10.0	-13.8	-13.9	-0.9	-44.2	-47.1	-6.2
Sales Expenses	-6.6	-8.9	-8.3	-10.3	-13.9	-25.9	-34.1	-43.0	-20.8
Other Income (Expenses) ^{1 2}	9.8	-4.0	-1.8	2.8	-634.6		6.8	-627.8	
Operating Profit	41.5	30.0	50.2	47.2	-623.1		168.9	-586.6	
<i>Operating Margin</i>	23%	15%	23%	21%	-343%	364 pp	21%	-74%	94 pp
Financial Income (Expenses)	-8.6	-7.5	-8.3	-11.2	-11.7	-4.5	-35.6	-35.6	0.0
Exchange difference (net)	0.7	0.3	-3.5	2.7	-8.1		0.1	-9.2	
Royalties	-1.4	-2.6	-1.9	-7.1	-3.1	132.3	-13.0	-11.9	9.0
Income Tax ²	-12.8	-4.8	-10.2	-8.2	176.9		-36.0	189.4	
Net Profit	19.3	15.4	26.3	23.3	-469.0		84.4	-453.9	
<i>Net Margin</i>	11%	8%	12%	10%	-258%	268 pp	10%	-57%	67 pp
EBITDA³	75.8	63.1	83.2	80.9	45.4	78.0	302.9	225.3	34.4
<i>EBITDA Margin</i>	41%	32%	39%	36%	25%	11 pp	37%	28%	9 pp

¹ Includes energy division sales and cost of sales

² In 2015, includes exceptional charges related to the devaluation of assets, intangibles and inventory; effect on other income (expenses) for USD -648.7 MM, and on income tax for USD 178.6 MM.

³ EBITDA does not consider exceptional results.

Source: Volcan Cia. Minera

Table 6: Financial Results per Business

Income Statement (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %	
Volcan Production	Sales	168.8	185.1	199.7	203.6	160.5	26.9	757.2	706.5	7.2
	Cost of Goods Sold	-123.6	-128.8	-128.1	-137.6	-123.7	11.3	-518.2	-580.2	-10.7
	Gross Profit	45.2	56.2	71.6	66.0	36.8	79.2	239.0	126.3	89.3
	<i>Gross Margin</i>	27%	30%	36%	32%	23%	9 pp	32%	18%	14 pp
	Net Profit	18.0	17.4	27.8	22.4	-469.8		85.6	-454.0	
	EBITDA ¹	73.7	65.8	85.0	79.2	44.1	79.8	303.7	224.0	35.6
	<i>EBITDA Margin</i>	44%	36%	43%	39%	27%	11 pp	40%	32%	8 pp
Commercialization Business	Sales	14.6	11.7	15.3	22.8	21.2	7.3	64.3	88.1	-26.9
	Cost of Goods Sold	-12.2	-13.9	-16.7	-20.2	-18.7	8.3	-63.0	-83.0	-24.1
	Gross Profit	2.4	-2.3	-1.4	2.6	2.6	0.4	1.3	5.1	-74.1
	<i>Gross Margin</i>	17%	-19%	-9%	11%	12%	-1 pp	2%	6%	-4 pp
	Net Profit	1.3	-2.0	-1.4	0.9	0.8	14.4	-1.2	0.1	
	EBITDA ¹	2.1	-2.7	-1.9	1.6	1.4	14.4	-0.8	1.3	
	<i>EBITDA Margin</i>	14%	-23%	-12%	7%	6%	1 pp	-1%	1%	-3 pp
	Sales	183.4	196.8	215.0	226.4	181.7	24.6	821.5	794.5	3.4
	Cost of Goods Sold	-135.8	-142.8	-144.8	-157.9	-142.3	10.9	-581.2	-663.2	-12.4
	Gross Profit	47.6	54.0	70.2	68.5	39.4	74.1	240.3	131.3	83.0
	<i>Gross Margin</i>	26%	27%	33%	30%	22%	9 pp	29%	17%	13 pp
	Net Profit	19.3	15.4	26.3	23.3	-469.0		84.4	-453.9	
	EBITDA ¹	75.8	63.1	83.2	80.9	45.4	78.0	302.9	225.3	34.4
	<i>EBITDA Margin</i>	41%	32%	39%	36%	25%	11 pp	37%	28%	9 pp

¹ EBITDA does not consider exceptional results.

Source: Volcan Cia. Minera



• Sales Analysis

Table 7: Average Sales Prices

Sales Prices	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Zinc (USD/MT)	1,671	1,883	2,263	2,506	1,614	55.3	2,077	1,917	8.3
Lead (USD/MT)	1,764	1,701	1,874	2,136	1,679	27.2	1,858	1,782	4.3
Copper (USD/MT)	4,773	4,756	4,754	5,298	4,788	10.6	4,901	5,426	-9.7
Silver (USD/Oz)	14.9	16.7	19.4	17.3	14.6	18.9	17.0	15.6	8.8
Gold (USD/Oz)	1,165	1,257	1,334	1,210	1,096	10.3	1,234	1,154	6.9

Source: Volcan Cia. Minera

Table 8: Fine Contents Sales Volumes

Fines Sales	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %	
Volcan Production	Zinc (thousands FMT)	69.6	69.0	69.5	65.6	87.0	-24.6	273.8	296.3	-7.6
	Lead (thousands FMT)	15.2	14.3	11.5	12.8	13.0	-1.2	53.8	57.2	-5.9
	Copper (thousands FMT)	0.9	0.9	1.1	0.9	1.3	-29.2	3.9	4.0	-2.0
	Silver (millions Oz) ¹	5.9	6.1	5.5	5.2	6.5	-19.6	22.7	25.2	-10.0
	Gold (thousands Oz) ¹	3.5	3.2	2.4	2.7	3.4	-21.0	11.8	12.7	-7.1
Commercialization Business	Zinc (thousands FMT)	7.3	7.6	7.4	8.1	15.1	-46.1	30.5	48.5	-37.1
	Lead (thousands FMT)	0.6	0.3	0.3	0.2	0.3	-38.7	1.4	1.9	-25.0
	Copper (thousands FMT)	0.3	0.4	0.3	0.4	0.5	-7.0	1.4	2.1	-32.3
	Silver (millions Oz)	0.3	0.3	0.2	0.3	0.4	-3.3	1.1	1.4	-20.9
	Gold (thousands Oz)	0.0	0.0	0	0.1	0.1	-30.7	0.2	0.6	-76.1
Total	Zinc (thousands FMT)	76.9	76.7	76.9	73.8	102.1	-27.8	304.3	344.8	-11.8
	Lead (thousands FMT)	15.8	14.7	11.8	13.0	13.3	-2.0	55.3	59.2	-6.6
	Copper (thousands FMT)	1.3	1.3	1.4	1.4	1.8	-23.3	5.3	6.1	-12.5
	Silver (millions Oz)	6.2	6.4	5.7	5.5	6.8	-18.8	23.8	26.6	-10.6
	Gold (thousands Oz)	3.5	3.3	2.4	2.8	3.5	-21.4	11.9	13.3	-10.4

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


Table 9: Sales in USD

Sales (millions USD)		Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Volcan Production	Zinc	65.8	79.6	97.9	108.0	81.7	32.2	351.4	348.3	0.9
	Lead	18.6	16.7	14.9	19.7	6.3	211.1	69.9	62.5	11.7
	Copper	1.9	1.9	2.2	2.4	3.0	-17.9	8.5	10.1	-15.8
	Silver	69.6	81.9	86.7	73.0	78.4	-6.8	311.2	315.4	-1.3
	Gold	2.6	2.2	1.8	1.8	2.6	-30.3	8.4	9.9	-15.1
	Antimony	0.0	0.0	0.1	0.0	0.0		0.1	0.3	-75.4
	Sales before adjust.	158.5	182.3	203.6	204.9	171.9	19.2	749.4	746.5	0.4
	Sett. of prior period adjust.	-6.5	-2.5	11.6	8.6	-11.6		11.2	-32.0	
	Adjust. for open positions	5.6	17.0	-2.3	-4.5	0.1		15.7	-4.3	
	Hedging results	11.2	-11.7	-13.2	-5.4	0.1		-19.1	-3.7	417.5
Sales after adjust.	168.8	185.1	199.7	203.6	160.5	26.9	757.2	706.5	7.2	
Commercialization Business	Zinc	9.5	10.3	12.2	16.2	15.8	2.6	48.2	64.7	-25.5
	Lead	0.7	0.4	0.5	0.2	0.3	-37.3	1.8	2.4	-24.2
	Copper	0.8	0.9	0.7	1.7	1.5	13.6	4.2	7.6	-44.4
	Silver	2.6	2.8	3.0	3.7	3.6	1.1	12.1	14.9	-18.8
	Gold	0.0	0.0	0.0	0.1	0.0	107.2	0.1	0.2	-56.1
	Sales before adjust.	13.6	14.5	16.5	21.9	21.3	2.8	66.4	89.8	-26.0
	Sett. of prior period adjust.	-0.5	-0.3	1.0	0.9	-1.5		1.1	-5.5	
	Adjust. for open positions	0.9	1.8	-0.7	1.6	-1.3		3.7	-0.2	
Hedging results	0.6	-4.4	-1.4	-1.6	2.8		-6.8	4.0		
Sales after adjust.	14.6	11.7	15.3	22.8	21.2	7.3	64.3	88.1	-26.9	
Total	Zinc	75.3	89.9	110.1	124.2	97.5	27.4	399.6	413.0	-3.3
	Lead	19.2	17.2	15.4	19.9	6.6	199.6	71.7	65.0	10.4
	Copper	2.7	2.9	3.0	4.1	4.5	-7.2	12.7	17.7	-28.1
	Silver	72.2	84.7	89.7	76.7	82.0	-6.5	323.3	330.3	-2.1
	Gold	2.6	2.2	1.8	1.9	2.6	-28.2	8.5	10.1	-16.1
	Antimony	0.0	0.0	0.1	0.0	0.0		0.1	0.3	-75.4
	Sales before adjust.	172.1	196.8	220.1	226.8	193.2	17.4	815.9	836.3	-2.4
	Sett. of prior period adjust.	-7.0	-2.8	12.6	9.5	-13.2		12.3	-37.5	
	Adjust. for open positions	6.5	18.8	-3.0	-2.9	-1.2	145.3	19.4	-4.6	
	Hedging results	11.8	-16.1	-14.7	-7.0	2.9		-26.0	0.3	
Sales after adjust.	183.4	196.8	215.0	226.4	181.7	24.6	821.5	794.5	3.4	

Source: Volcan Cia. Minera

For 4Q16, total sales before adjustments were USD 226.8 MM, 17.4% higher than the USD 193.2 MM reported in 4Q15. This result was attributable to the increase in the average sales price of zinc by 55.3%, lead by 27.2% and silver by 18.9%. The price effect was partly offset by lower volumes sold.

During 4Q16, Volcan recorded positive sales adjustments of USD 9.5 MM from final settlements, negative adjustments of USD -2.9 MM related to provisions for open commercial positions, and negative hedging results of USD -7.0 MM. Total sales adjustments in 4Q16 were USD -0.4 MM, compared to USD -11.5 during the same quarter of the previous year.

Therefore, sales after adjustments during 4Q16 totaled USD 226.4 MM, a 24.6% increase if compared to the USD 181.7 MM reported in 4Q15.

In annual terms, sales after adjustments increased by 3.4%, from USD 794.5 MM in 2015 to USD 821.5 MM in 2016. It is worth mentioning that, in 2016, sales adjustments related to final settlements amounted to USD 12.3 MM while those related to provisions for open commercial positions amounted to USD 19.4 MM. Likewise, hedging results in 2016 amounted to USD -26.0 MM.



- **Cost of Goods Sold**

Table 10: Cost of Goods Sold

Cost of Goods Sold (millions USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Volcan Production	122.9	126.7	126.3	135.0	123.7	9.2	510.9	577.2	-11.5
Own Production Cost	92.5	93.9	95.3	99.0	99.8	-0.7	380.7	412.8	-7.8
D&A from Production Cost	30.0	28.7	28.9	29.2	17.2	69.3	116.8	155.3	-24.7
Extraordinary Costs	0.4	0.2	1.2	0.9	1.0	-1.8	2.8	3.5	-21.0
Variation of Inventories	0.0	3.8	0.9	5.9	4.3	36.9	10.6	4.2	153.2
Exceptionals					1.5			1.5	
Commercialization Business	11.9	14.1	16.8	20.2	18.6	8.3	63.0	82.3	-23.5
Concentrates Purchase	12.2	14.1	16.1	20.7	19.0	8.9	63.1	81.5	-22.5
Variation of Inventories	-0.3	0.1	0.6	-0.5	-0.4	34.4	-0.1	0.8	
Workers Participation	1.0	2.0	1.7	2.6	0.0		7.3	3.7	99.6
Total	135.8	142.8	144.8	157.9	142.3	10.9	581.2	663.2	-12.4

Source: Volcan Cia. Minera

The total cost of goods sold during 4Q16 was USD 157.9 MM, 10.9% higher than the USD 142.3 MM figure for 4Q15. This is mainly explained by the USD 11.9 MM increase in depreciation and amortization following the adjustment made in 4Q15 as a consequence of the impairment of fixed assets, intangibles and inventories¹. In addition, total cost of goods sold was affected by a USD 2.6 MM increase in the provision related to workers' participation and a USD 1.7 MM increase in purchases of third-party concentrates.

In annual terms, the total cost of goods sold declined by 12.4%, from USD 663.2 MM in 2015 to USD 581.2 MM in 2016, mainly explained by the USD 38.4 MM decrease in depreciation following the impairment in 2015; a USD 32.1 MM reduction in the production cost; and USD 18.3 MM reduction in purchases of third-party concentrates.

- **Gross Margin and Gross Profit**

The Company's gross margin increased from 22% in 4Q15 to 30% in 4Q16 due to higher zinc, lead and silver prices. Total gross profit grew by 74.1%, from USD 39.4 MM in 4Q15 to USD 68.5 MM in 4Q16.

In annual terms, gross margin increased from 17% in 2015 to 29% in 2016. Gross profit increased by 83.0%, from USD 131.3 MM in 2015 to USD 240.3 MM in 2016.

- **Administrative and Sales Expenses**

Administrative expenses in 4Q16 totaled USD 13.8 MM, similar to the USD 13.9 MM recorded in 4Q15. In annual terms, administrative expenses declined by 6.2%, from USD 47.1 MM in 2015 to USD 44.2 MM.

Sales expenses during 4Q16 decreased by 25.9%, from USD 13.9 MM in 4Q15 to USD 10.3 MM. In annual terms, expenses decreased by 20.8%, from USD 43.0 MM to USD 34.1 MM. The significant reduction is mainly explained by the optimization of freight

¹ As a result of the USD 648.7 MM impairment of assets in 2015, a depreciation and amortization adjustment for 3Q15 was recorded in 4Q15.

charges, optimization of routes and concentrate transportation, and lower volumes of concentrates sold.

- **Other Income and Expenses**

In 4Q16, the net amount of other income and expenses was positive, USD 2.8 MM versus a negative amount of USD -634.6 MM in 4Q15. This is explained by the exceptional loss recorded by the Company in 4Q15 due to the impairment, brought about by the unfavorable environment for metals prices, with a net after-tax effect of USD -470.1 MM. In annual terms, other income and expenses increased from USD -627.8 MM in 2015 to USD 6.8 MM in 2016.

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

In 4Q16, net financial expenses totaled USD -11.2 MM, a figure similar to the USD -11.7 MM recorded in 4Q15. In annual terms, net financial expenses remained unchanged, totaling USD 35.6 MM.

Moreover, exchange-rate variation gains totaling USD 2.7 MM were registered in 4Q16 compared to the exchange-rate losses reported in 4Q15 (USD -8.1 MM). In annual terms, exchange-rate losses decreased from USD -9.2 MM in 2015 to a gain up to USD 0.1 MM in 2016.

- **Net Profit and EBITDA**

Net profit increased from USD -469.0 MM in 4Q15 to USD 23.3 MM in 4Q16. Likewise, EBITDA increased by 78.0%, from USD 45.4 MM in 4Q15 to USD 80.9 MM in 4Q16.

In annual terms, net profit increased from USD -453.9 MM in 2015 to USD 84.4 MM in 2016. EBITDA increased by 34.4%, from USD 225.3 MM in 2015 to USD 302.9 MM in 2016.

It should be noted that in 4Q15, a USD -470.1 MM net, after-tax impairment of fixed assets, intangibles, and inventories was recorded.

2.1.5 Liquidity and Creditworthiness

In 4Q16, cash generated by mining operations totaled USD 105.9 MM. Operating and exploration investments, as well as growth investments in the mining business, totaled USD -49.8 MM. Interest payments amounted to USD -1.0 MM, and other investments totaled USD -8.6 MM. Energy division investments totaled USD +2.3 MM, and net financing was USD -29.5 MM.

The resulting total cash flow during 4Q16 was USD +19.2 MM, and the total cash balance as of December 31, 2016, was USD 203.4 MM.

The increased EBITDA and cash balance, and a slight debt reduction resulted in a reduced Net Debt/EBITDA ratio of 2.0 in 4Q16, compared to 2.9 in 4Q15.

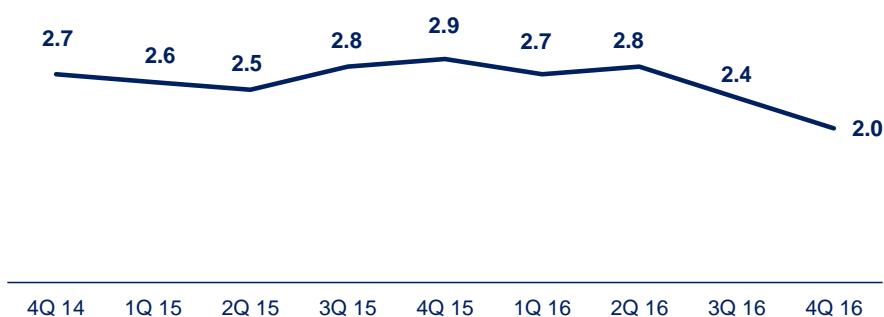
It is important to mention that during 1Q17 a short-term debt restructuring will be carried out. For this purpose, a 5-year USD 70 MM loan was obtained in January 2017 that will be used exclusively to reduce short-term debt.


Table 11: Net Debt / EBITDA Ratio²

Net Debt/EBITDA Ratio	Mining	Energy	Consolidated 4Q16	Consolidated 4Q15
Gross Debt (MM USD)	789.9	23.6	813.4	840.6
Cash Balance (MM USD)	194.9	8.5	203.4	192.3
Net Debt (MM USD)	595.0	15.1	610.1	648.3
EBITDA ¹ (MM USD)	296.3	6.6	302.9	225.3
Ratio	2.0	2.3	2.0	2.9

¹ EBITDA for the last 12 months.

Source: Volcan Cia. Minera

Chart 2: Net Debt / EBITDA Ratio Evolution


Source: Volcan Cia. Minera

2.2. Yauli Unit Operating Results

Table 12: Yauli Production

Yauli Production	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mineral extraction (thousands MT)	948	900	908	867	1,028	-15.6	3,623	4,036	-10.2
Mineral treatment (thousands MT)	984	898	908	867	1,034	-16.2	3,657	3,994	-8.4
Fines Content									
Zinc (thousands FMT)	46.0	43.3	41.2	34.3	47.0	-26.9	164.9	175.2	-5.9
Lead (thousands FMT)	7.4	6.0	5.9	5.1	7.4	-31.0	24.4	25.4	-3.7
Copper (thousands FMT)	0.8	0.7	1.1	0.6	0.7	-12.2	3.2	2.5	27.1
Silver (million Oz)	3.2	3.2	3.2	2.1	3.5	-40.7	11.6	12.9	-9.5
Gold (thousands Oz)	0.6	0.5	0.8	0.7	n/a		2.5	n/a	

Source: Volcan Cia. Minera

Ore volumes extracted at the Yauli Unit during 4Q16 declined by 15.6% compared to the same quarter of the previous year. This is mainly explained by reduced ore extraction at the San Cristobal Mine and Carahuacra Norte Open Pit. The reduced production at the San Cristobal Mine is mainly explained by reduced mine development and preparation caused by with low metals prices observed until 1Q16. In annual terms, the extraction volume was reduced by 10.2%.

² For a more complete analysis, debt, cash balance and EBITDA pertaining to the mining division are shown separately from the energy division. The energy division is comprised of subsidiary companies Hidroeléctrica Huanchor S.A.C., Compañía Hidroeléctrica Tingo S.A. and Empresa de Generación Eléctrica Río Baños S.A.C.

As a result, the ore treated at the Yauli Unit concentrator plants decreased by 16.2% in 4Q16 compared to the same period of the previous year. In annual terms, the volume of ore treated was reduced by 8.4%.

During 4Q16, the production of zinc, lead, copper and silver decreased by 26.9%, 31.0%, 12.2% and 40.7%, respectively, compared to 4Q15. In addition to lower volumes, production of fines was affected by lower grades from the areas of extraction.

In annual terms, zinc production decreased by 5.9%, lead by 3.7% and silver by 9.5%, while copper rose by 27.1%.

For 2017, extracted volumes and average zinc grades at Yauli are expected to be similar to 2016. However, silver production at this unit is expected to decline at the Andaychagua and San Cristobal mines, as a consequence of reserve grade reductions at depth. The Company has aggressive exploration plans areas that include diamond drilling in several mineralized areas that will help revert this situation.

Table 13: Yauli Cost of Production

Yauli Production Cost	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Production Cost (MM USD)	53.7	54.6	55.9	56.0	58.2	-3.8	220.0	235.4	-6.5
Extraction Cost	32.8	33.2	34.8	34.1	36.0	-5.2	134.9	145.8	-7.5
Treatment Cost	20.9	21.4	21.0	21.8	22.2	-1.5	85.1	89.6	-5.0
Unit Cost (USD/MT)	55.8	60.7	61.5	64.5	56.4	14.3	60.5	58.6	3.3
Extraction Cost	34.6	36.9	38.4	39.3	35.0	12.3	37.2	36.1	3.1
Treatment Cost	21.2	23.8	23.2	25.2	21.4	17.5	23.3	22.4	3.8

Source: Volcan Cia. Minera

The cost of production in absolute terms was reduced by 3.8%, from USD 58.2 MM in 4Q15 to USD 56.0 MM in 4Q16. However, the operation's unit cost increased by 14.3%, from 56.4 USD/MT in 4Q15 to 64.5 USD/MT in 4Q16, mainly due to lower extracted and treated volumes.

In annual terms, absolute cost declined by 6.5%, from USD 235.4 MM in 2015 to USD 220.0 MM during 2016, while unit cost rose by 3.3%, from 58.6 USD/MT in 2015 to 60.5 USD/MT, mainly due to lower tonnages.

Table 14: Yauli Operating Investments

Yauli Operating Investments (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Local Exploration	0.1	1.2	2.0	2.2	0.4	423.1	5.5	2.4	131.8
Mine Development	5.6	6.1	8.1	12.5	5.1	146.7	32.3	31.3	3.0
Plants and Tailings Dams	1.5	2.8	2.8	5.0	6.3	-20.7	12.1	15.3	-21.1
Mine and Infrastructure	1.5	3.5	3.7	3.2	1.8	75.1	11.9	9.9	20.4
Energy	0.5	0.1	0.2	0.9	0.4	162.2	1.7	1.3	33.9
Support and Others	0.1	0.4	0.3	0.5	1.0	-46.9	1.4	2.6	-48.2
Total	9.3	14.0	17.1	24.4	15.0	62.9	64.8	62.8	3.2

Source: Volcan Cia. Minera

Investments at Yauli increased by 62.9%, from USD 15.0 MM in 4Q15 to USD 24.4 MM in 4Q16, mainly due to higher development, exploration, mine and infrastructure investments. It is important to note that systematic exploration programs are being carried out at San Cristobal, Carahuacra and Andaychagua mines, and mine



development is being expedited at all mines. Moreover, the Roberto Letts Shaft at Andaychagua Mine is already in the test stage.

In annual terms, investments rose by 3.2%, from USD 62.8 MM in 2015 to USD 64.8 MM in 2016.

2.3 Chungar Unit Operating Results

Table 15: Chungar Production

Chungar Production	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mineral extraction (thousands MT)	501	500	484	501	453	10.7	1,986	2,019	-1.6
Mineral treatment (thousands MT)	510	504	496	506	455	11.1	2,016	1,896	6.3
Fines Content									
Zinc (thousands FMT)	22.9	24.5	24.4	24.6	21.7	13.1	96.4	88.7	8.7
Lead (thousands FMT)	5.8	5.3	4.3	4.5	5.2	-12.8	19.9	23.4	-15.0
Copper (thousands FMT)	0.4	0.4	0.3	0.4	0.2	70.6	1.4	1.0	35.1
Silver (million Oz)	1.1	1.1	1.0	1.0	1.0	0.1	4.1	4.6	-10.1

Source: Volcan Cia. Minera

In 4Q16, the ore volumes extracted at the Chungar Unit increased by 10.7%, mainly explained by the 11-day paralyzation resulting from the road blockage by the Huayllay community in 4Q15. In annual terms, the ore volumes extracted at the Chungar Unit decreased by 1.6%. This is explained by the reduced ore contribution of the Islay Mine due to the presence of more groundwater volumes than expected. It is worth mentioning that a new pumping systems was installed, to allow for better groundwater management.

In 4Q16, treated ore volumes increased by 11.1% compared to 4Q15, while in annual terms, the amount of treated ore increased by 6.3% in 2016 versus 2015.

During 4Q16, the production of fine zinc, copper and silver rose by 13.1%, 70.6% and 0.1%, respectively, compared to 4Q15. Fine lead production decreased by 12.8% due to lower grades found in current exploitation areas. In annual terms, zinc production rose by 8.7% and copper by 35.1%, while lead and silver decreased by 15.0% and 10.1%, respectively.

Table 16: Chungar Cost of Production

Chungar Production Cost	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Production Cost (MM USD)	24.3	25.6	25.3	26.4	21.5	22.9	101.6	94.8	7.1
Extraction Cost	15.2	15.9	15.3	16.4	13.6	20.7	62.9	58.4	7.8
Treatment Cost	9.1	9.6	10.0	10.0	7.9	26.8	38.7	36.5	6.1
Unit Cost (USD/MT)	48.2	51.0	51.7	52.5	47.3	10.9	50.9	48.1	5.7
Extraction Cost	30.3	31.9	31.7	32.8	30.1	9.0	31.7	28.9	9.6
Treatment Cost	17.9	19.1	20.1	19.7	17.3	14.1	19.2	19.2	-0.2

Source: Volcan Cia. Minera

Cost of production in absolute terms increased by 22.9%, from USD 21.5 MM in 4Q15 to USD 26.4 MM in 4Q16. This is mainly explained by higher sustaining and pumping costs related to larger groundwater volumes. Accordingly, unit cost grew by 10.9%, from 47.3 USD/MT in 4Q15 to 52.5 USD/MT in 4Q16.

In annual terms, the absolute cost of production rose by 7.1%, from USD 94.8 MM in 2015 to USD 101.6 MM in 2016. Moreover, unit costs increased by 5.7%, from 48.1 USD/MT in 2015 to 50.9 USD/MT in 2016.

Table 17: Chungar Operating Investments

Chungar Operating Investments (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Local Exploration	0.0	0.9	1.8	1.8	0.7	139.9	4.5	4.9	-8.5
Mine Development	3.9	4.5	4.7	4.4	4.9	-10.7	17.5	19.5	-9.9
Plants and Tailings Dams	0.0	0.3	0.8	2.9	1.4	98.2	3.9	5.0	-22.4
Mine and Infrastructure	0.7	2.8	4.5	3.1	1.8	71.1	11.1	8.4	31.2
Energy	0.0	0.1	0.0	0.5	0.2	207.7	0.6	1.2	-48.7
Support and Others	0.1	0.1	0.5	0.7	1.1	-32.4	1.3	2.3	-41.9
Total	4.8	8.5	12.3	13.3	10.1	31.3	38.9	41.3	-5.7

Source: Volcan Cia. Minera

Operating investments rose by 31.3%, from USD 10.1 MM in 4Q15 to USD 13.3 MM in 4Q16. This is mainly explained by investments in explorations and tailings dams. However, in annual terms, investments declined by 5.7%, from USD 41.3 MM in 2015 to USD 38.9 MM in 2016.

2.4 Oxides Plant Operating Results

Table 18: Oxides Plant Production

Oxides Plant Production*	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mineral treatment (thousands MT) ¹	226	223	224	228	220	3.3	900	743	21.2
Fines Content									
Silver (million Oz)	1.0	1.1	1.0	1.0	1.0	1.5	4.1	3.6	12.6
Gold (Oz)	933	874	755	710	1,467	-51.6	3,272	5,312	-38.4

¹Of the 743 thousand MT reported from January to December of 2015, 227 thousand MT correspond to the pre-operational stage from January to May and 516 thousand MT to the operational stage since June of 2015.

Source: Volcan Cia. Minera

In 4Q16, the treated volume of ore from stockpiles increased by 3.3% as compared to 4Q15. Fine silver production increased by 1.5%; however, gold fine production decreased by 51.6% due to lower grades.

In annual terms, ore volumes treated in 2016 increased by 21.2% as compared to 2015, because the Oxides Plant reached full capacity in June 2015. In 2016, fine silver production increased by 12.6% and gold fines decreased by 38.4% compared to the previous year.

Table 19: Oxides Plant Cost of Production

Oxides Plant Production Cost	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015*	var %
Production Cost (MM USD)	8.9	8.4	8.2	8.2	8.4	-2.1	33.7	20.1	
Extraction Cost	1.3	1.1	1.1	1.1	1.2	-12.1	4.6	3.0	
Treatment Cost	7.6	7.3	7.1	7.1	7.1	-0.3	29.1	17.2	
Unit Cost (USD/MT)	39.3	37.6	36.7	36.1	38.0	-5.2	37.4	39.1	-4.2
Extraction Cost	5.7	5.0	4.8	4.8	5.6	-14.9	5.1	5.7	-11.9
Treatment Cost	33.6	32.7	31.9	31.3	32.4	-3.5	32.4	33.3	-2.9

* Production cost of 2015 is considered from the operational stage starting from June.

Source: Volcan Cia. Minera



Cost of production in absolute terms was reduced by 2.1%, from USD 8.4 MM in 4Q15 to USD 8.2 MM in 4Q16, mainly due to improved efficiency in the use of reagents. In the same regard, unit cost declined by 5.2%, from 38.0 USD/MT in 4Q15 to 36.1 USD/MT in 4Q16.

In annual terms, the unit cost decreased by 4.2%, from 39.1 USD/MT in 2015 to 37.4 USD/MT in 2016.

Table 20: Oxides Plant Operating Investments

Oxides Plant Operating Inv. (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Plants and Tailings Dams	0.1	0.1	0.0	0.0	1.3	-100.0	0.3	6.0	-95.5
Mine and Infrastructure	1.8	0.5	1.3	2.8	1.2	129.9	6.4	2.8	130.8
Support and Others	0.0	0.0	0.1	0.1	0.2	-15.2	0.2	0.2	-2.3
Total	1.9	0.6	1.4	2.9	2.7	8.5	6.9	9.0	-23.7

Source: Volcan Cia. Minera

The operating investment figure for 4Q16 at the Oxides Plant amounted to USD 2.9 MM, versus USD 2.7 MM in 4Q15. In annual terms, operating investments decreased by 23.7%, from USD 9.0 MM in 2015 to USD 6.9 MM in 2016, mainly due to the completion of works at the Ocroyc Tailings Dam in 2015.

2.5 Alparmarca Unit Operating Results

Table 21: Alparmarca Production

Alparmarca Production	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mineral extraction (thousands MT)	227	231	232	236	235	0.5	926	859	7.7
Mineral treatment (thousands MT)	224	227	228	231	226	2.3	910	879	3.6
Fines Content									
Zinc (thousands FMT)	2.5	2.4	2.4	2.4	2.4	1.9	9.8	8.7	12.3
Lead (thousands FMT)	1.8	1.7	1.6	1.8	1.7	6.1	7.0	5.8	18.9
Copper (thousands FMT)	0.1	0.1	0.1	0.2	0.2	1.3	0.6	0.8	-23.9
Silver (million Oz)	0.5	0.5	0.5	0.6	0.6	0.1	2.0	2.7	-25.2

Source: Volcan Cia. Minera

Ore volumes extracted at the Alparmarca Unit during 4Q16 grew by 0.5% compared to the same quarter of the previous year. Meanwhile, ore volumes treated in 4Q16 amounted to 231 thousand MT, 2.3% higher than the 226 thousand MT figure recorded in 4Q15. In annual terms, ore extraction grew by 7.7% in 2016, as compared to the same period in 2015, while the volume of ore treated grew by 3.6%.

During 4Q16, zinc production rose by 1.9%, lead by 6.1%, copper by 1.3% and silver by 0.1%. In annual terms, zinc production grew by 12.3% and lead by 18.9% in 2016 compared to 2015, while copper decreased by 23.9% and silver by 25.2%. The reduced silver production is explained by lower grades, mainly due to the suspension of operations at the Río Pallanga underground mine since November 2015.

Table 22: Alparmarca Cost of Production

Alpamarca Production Cost	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Production Cost (MM USD)	5.6	5.4	5.3	5.2	6.5	-19.0	21.5	28.8	-25.2
Extraction Cost	2.8	2.5	2.4	2.4	3.6	-31.3	10.2	15.9	-35.8
Treatment Cost	2.8	2.8	2.9	2.8	2.9	-3.9	11.3	12.9	-12.2
Unit Cost (USD/MT)	25.0	23.4	23.1	22.4	28.0	-19.9	23.5	33.2	-29.2
Extraction Cost	12.5	11.0	10.2	10.4	15.2	-31.7	11.0	18.5	-40.4
Treatment Cost	12.5	12.4	12.8	12.0	12.8	-6.0	12.5	14.7	-15.2

Source: Volcan Cia. Minera

In absolute terms, the cost of production reached USD 5.2 MM in 4Q16, 19.0% lower than the USD 6.5 MM figure for the same quarter of the previous year. The unit cost of production fell by 19.9%, from 28.0 USD/MT in 4Q15 to 22.4 USD/MT in 4Q16. The cost reduction was due to operating improvements and the fact that all the ore was extracted from Alpamarca Open Pit, which has lower relative costs as compared to the Río Pallanga underground mine. In annual terms, the absolute cost of production decreased by 25.2%, from USD 28.8 MM in 2015 to USD 21.5 MM in 2016, while the unit cost decreased by 29.2%, from 33.2 USD/MT in 2015 to 23.5 USD/MT in 2016.

Table 23: Alpamarca Operating Investments

Alpamarca Operating Inv. (MM USD)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Local Exploration	0.0	0.0	0.1	0.0	0.1	-100.0	0.1	1.3	-94.9
Mine Development	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	1.1	-100.0
Plants and Tailings Dams	0.0	0.2	1.0	0.3	0.2	47.9	1.5	1.8	-17.9
Mine and Infrastructure	0.1	0.1	0.0	0.1	0.6	-81.4	0.4	1.2	-66.8
Support and Others	0.0	0.0	0.1	0.4	0.0	1105.3	0.5	0.2	95.2
Total	0.2	0.4	1.1	0.8	0.9	-16.5	2.4	5.6	-56.3

Source: Volcan Cia. Minera

Operating investments at Alpamarca unit were reduced from USD 0.9 MM in 4Q15 to USD 0.8 MM in 4Q16. In annual terms, investments declined by 56.3%, from USD 5.6 MM in 2015 to USD 2.4 MM in 2016, mainly because no investments were made at the Río Pallanga Mine.

2.6 Cerro de Pasco Unit Operating Results

Table 24: Cerro de Pasco Production

Cerro de Pasco Production	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Mineral extraction (thousands MT)	35	198	39	403.6	233	251	-7.3
Mineral treatment (thousands MT)	35	198	88	124.8	233	399	-41.6
Fines Content							
Zinc (thousands FMT)	0.3	2.0	2.2	-8.9	2.3	12.3	-81.2
Lead (thousands FMT)	0.1	0.8	1.0	-17.8	0.9	4.9	-81.6
Silver (million Oz)	0.0	0.1	0.2	-53.0	0.1	1.1	-87.4

Source: Volcan Cia. Minera

Following the tests carried out in 3Q16, the commercial treatment of ore from stockpiles commenced in 4Q16. In 4Q16, 198 thousand MT of ore was treated, producing 2,038 FMT of zinc, 799 FMT of lead and 110 thousand silver ounces. In annual terms, a total of 233 thousand MT of ore was treated, producing 2,323 FMT of zinc, 906 FMT of lead and 134 thousand silver ounces. Compared to 2015, the decrease in fines produced was



due to the lower grades of ore from stockpiles compared to the ore extracted from the Paragsha underground mine, where production was suspended during 4Q15.

The Sorting technology is expected to start operating during the second half of 2017 at the Cerro de Pasco Unit. It will facilitate the selection of the highest grade ores from the stockpiles, increasing grades by approximately 50%.

Table 25: Cerro de Pasco Cost of Production

Cerro de Pasco Production Cost*	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Production Cost (MM USD)	0.6	3.2	4.9		3.9	32.5	
Extraction Cost	0.0	0.0	1.3		0.0	10.7	
Treatment Cost	0.6	3.2	3.6		3.9	21.8	
Unit Cost (USD/MT)	17.5	16.4	73.5		16.6	97.4	
Extraction Cost	0.0	0.0	32.3		0.0	42.7	
Treatment Cost	17.5	16.4	41.1		16.6	54.6	

Source: Volcan Cia. Minera

In 4Q16, the absolute cost of production amounted to USD 3.2 MM and the unit cost was 16.4 USD/MT. In annual terms, absolute cost amounted to USD 3.9 MM and unit cost was 16.6 USD/MT. Because the ore treated in 2016 comes from stockpiles and the ore treated in 2015 came from the Paragsha underground mine, these results cannot be compared to 2015.

Table 26: Cerro de Pasco Operating Investments

Cerro de Pasco Operating Inv. (MM USD)	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Local Exploration	0.0	0.0	0.0		0.0	0.0	
Mine Development	0.0	0.0	0.0		0.0	0.0	
Plants and Tailings Dams	0.0	0.1	0.0	350.1	0.1	0.1	2.0
Mine and Infrastructure	0.0	0.0	0.0		0.0	0.0	
Energy	0.0	0.0	0.0		0.0	0.0	
Support and Others	0.0	0.0	0.0		0.0	-0.1	-100.0
Total	0.0	0.1	0.0	350.1	0.1	-0.1	

Source: Volcan Cia. Minera

Operating investments at the Cerro de Pasco Unit in 2015 and 2016 were practically null, with the exception of USD 80 thousand invested in San Expedito Plant in December 2016 for the treatment of the ore from stockpiles.



3. Energy

Table 27: Volcan's Electric Power Balance in GWh

Electric Balance (GWh)	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Energy generation	70.2	77.0	82.1	93.2	80.3	16.1	322.6	316.7	1.9
Chungar	38.7	34.4	32.8	32.0	41.5	-23.0	137.8	161.2	-14.5
Tingo	2.3	2.3	2.3	2.3	2.4	-4.2	9.2	9.8	-5.9
Huanchor	29.2	40.3	34.2	35.5	36.4	-2.3	139.3	145.8	-4.4
Rucuy	0.0	0.0	12.9	23.4			36.3		
Energy consumption	151.8	156.2	159.7	166.8	160.1	4.2	634.5	654.2	-3.0
Energy purchase	110.8	119.5	124.7	132.6	116.2	14.1	487.6	483.3	0.9

Source: Volcan Cia. Minera

During 4Q16, Volcan's total consumption of electric power reached 166.8 GWh, with a maximum demand of 84 MW.

The 10 hydroelectric plants that belong to the Chungar Unit generated 32 GWh. This accounted for 19.2% of the Company's total consumption, at an average cost of 32 USD/MWh, including operating, maintenance and transmission costs.

It is worth mentioning that power generation at the Chungar hydroelectric plants during 2016 was affected by low flows at its feeding rivers. This situation is expected to improve during 2017.

The Tingo Hydroelectric Plant generated 2.3 GWh, accounting for 1.4% of the Company's total consumption, which was supplied in its entirety to the Chungar Unit.

During 4Q16, the Huanchor Hydroelectric Plant generated 35.5 GWh of energy, and the Rucuy Hydroelectric Plant, which began commercial operations in August 2016, generated 23.4 GWh. The energy from both plants was sold to the national central grid system (the SEIN).

Volcan purchased 132.6 GWh from the SEIN in order to meet its total consumption demand, at an average unit cost of 75 USD/MWh.



4. Final Comments

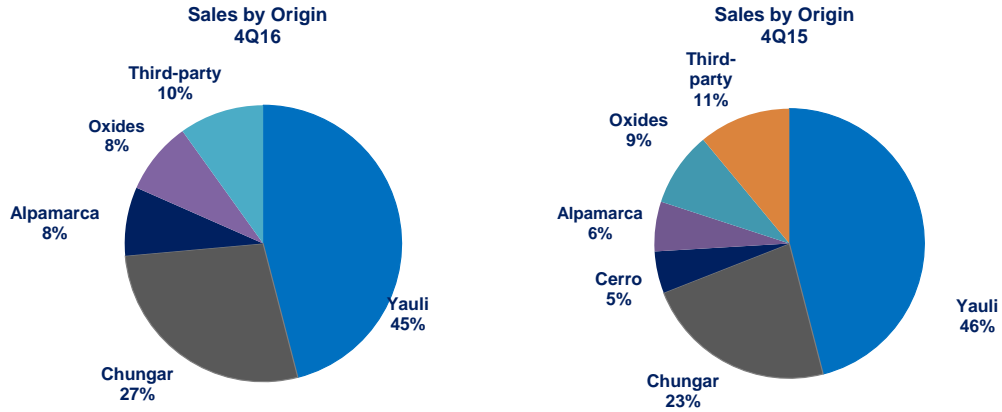
- The recovery of zinc, lead and silver prices during 4Q16 compared to 4Q15 and the control of production costs resulted in an increased gross margin of 30% in 4Q16 versus 22% in 4Q15. Similarly, EBITDA margin increased from 25% in 4Q15 to 36% in 4Q16.
- In 4Q16, production at the Yauli Unit was affected by lower grades extracted from the mines and volumes due to reduced mine development and preparation, mainly at the San Cristobal Mine. Production is recovering gradually after a period of low metals prices that limited investment in order to preserve the cash of the Company
- For 2017, extracted volumes and average zinc grades at the Yauli Unit are expected to be similar to 2016. However, silver reserve grades at the San Cristobal and Andaychagua mines will be lower at depth, which will affect Volcan's total production of this metal. Nonetheless, an aggressive exploration program was initiated with the aim of reverting this situation.
- The systematic exploration of the main Company mines was enhanced to allow for the expansion of resources and reserves, increasing operational flexibility.
- During 2017, an exploration program of more than 200 thousand meters of diamond drilling will be implemented at the operating units and at select greenfield targets. This effort is a key pillar of the plan to meet Volcan's growth objectives.
- The Company is permanently focused on achieving production with high safety standards, efficiency and cost control.
- The increase in EBITDA in the last 12 months, greater cash balance and total debt reduction resulted in a reduced Net Debt/EBITDA ratio of 2.0 in 4Q16, compared to 2.9 in 4Q15.
- During 1Q17, the Company will restructure its short-term debt. With this objective, a USD 70 MM, five-year loan will be used exclusively to this end.
- It is important to mention that on December 08, 2016, Fitch affirmed its investment grade credit rating of BBB- for the long-term debt of the Company, improving its outlook from “negative” to “stable”. In addition, on January 05, 2017, the rating agency Moody’s upgraded its credit rating from B2 to Ba3, with a stable perspective for the long-term debt of the Company.



Annexes

Annex 1: Sales Breakdown

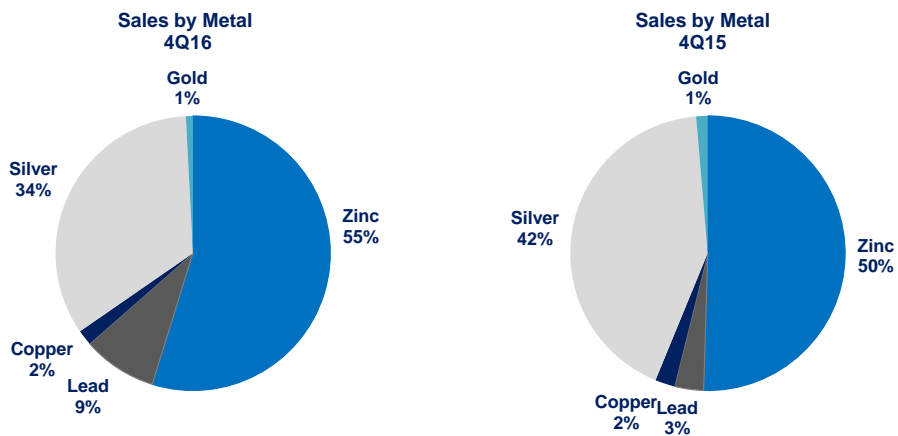
Chart 3: Sales by Origin (percentage of value in USD)



Source: Volcan Cia. Minera

The distribution of sales by origin reflects a lower contribution by the Yauli Unit as a consequence of its lower production, which the Chungar Unit absorbed. Similarly, the decrease of lower contribution by the Cerro de Pasco Unit was offset by the Alparmarca Unit.

Chart 4: Sales by Metal (percentage of value in USD)



Source: Volcan Cia. Minera

The distribution of sales by metal in 4Q16 reflects the growth in the contribution of zinc, as a result of the increase in the average sales price compared to 4Q15.

Annex 2: Average Spot Prices

Spot Prices	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Zinc (USD/MT)	1,676	1,915	2,253	2,518	1,611	56.3	2,091	1,933	8.2
Lead (USD/MT)	1,742	1,719	1,872	2,150	1,681	27.9	1,871	1,786	4.7
Copper (USD/MT)	4,669	4,730	4,774	5,281	4,887	8.1	4,863	5,502	-11.6
Silver (USD/Oz)	14.8	16.8	19.6	17.2	14.8	16.4	17.1	15.7	8.9
Gold (USD/Oz)	1,179	1,258	1,335	1,220	1,105	10.5	1,248	1,161	7.5

Source: London Metal Exchange

Annex 3: Macroeconomic Indicators

Macroeconomic Indicators	Jan-Mar 2016	Apr-Jun 2016	Jul-Sep 2016	Oct-Dec 2016	Oct-Dec 2015	var %	Jan-Dec 2016	Jan-Dec 2015	var %
Exchange Rate (S/ x USD)	3.45	3.32	3.34	3.39	3.32	2.1	3.38	3.19	6.0
Inflation	4.30	3.34	3.13	3.23	4.40	-26.4	3.23	4.40	-26.4

¹ Inflation of the last 12 months

Source: Central Reserve Bank of Peru

Annex 4: Domestic Peruvian Metal Production

National Production	Jan - Mar 2016	Apr - Jun 2016	Jul - Sep 2016	Oct-Nov 2016	Oct-Nov 2015	var %	Jan - Nov 2016	Jan - Nov 2015	var %
Silver (Thousands Oz)	34,450	35,316	35,604	23,516	23,476	0.2	128,887	118,806	8.5
Zinc (FMT)	320,114	310,219	338,148	248,391	239,623	3.7	1,216,872	1,304,439	-6.7
Lead (FMT)	78,428	77,543	79,977	51,761	54,517	-5.1	287,710	285,187	0.9
Copper (FMT)	514,494	607,619	602,910	417,683	317,501	31.6	2,142,705	1,514,367	41.5
Gold (Thousands Oz)	1,225	1,254	1,203	834	809	3.1	4,516	4,323	4.5

Source: Ministry of Energy and Mines