



Fish Farm, Pomacocha



Oxides Plant, Cerro de Pasco

# Volcan Compañía Minera



Islay Mine, Chungar



Animon Mine, Chungar



## Corporate Presentation

March 2017

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# Strategic Location with Diversified Operations

- Nearly 75 years of mining experience
- Committed to the highest standards of safety & environmental protection
- A world-class producer with significant organic growth potential
- Diversified, balanced and stable production of base & precious metals
  - Five operating units, 12 mines
  - Seven concentrator plants & one lixiviation plant (Ag oxides)
- Competitive zinc & silver cash costs
- Logistical flexibility
- Constructive relationships with authorities, labor & communities

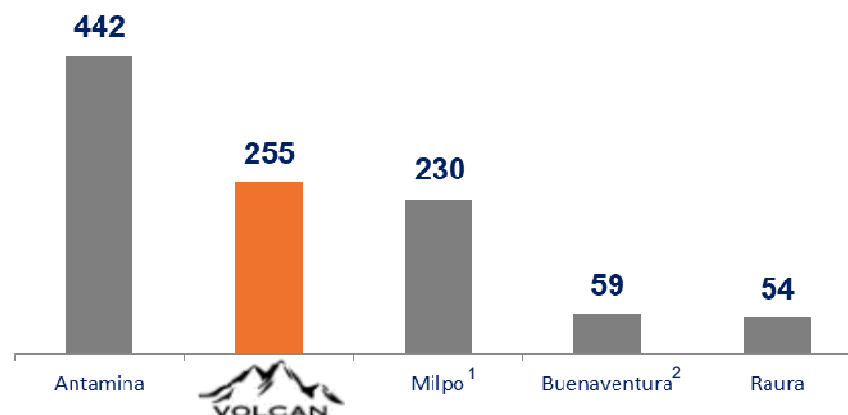


# A Leading Producer of Zinc, Silver & Lead

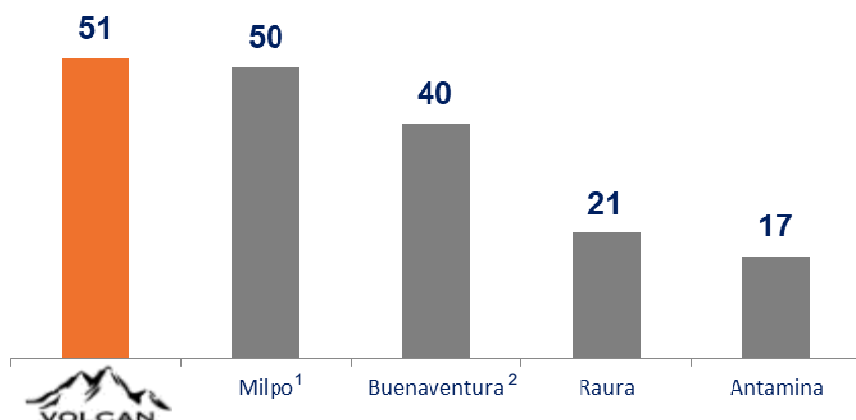
## Peru Ranking – Mining Production 2017

Metal	LatAm	Global
Zinc	1	2
Lead	1	4
Silver	2	2

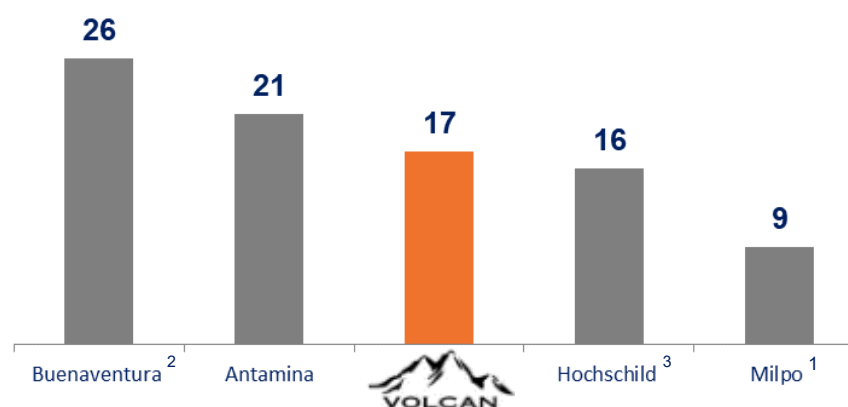
## Peru Zinc Production 2017 (000 FMT)



## Peru Lead Production 2017 (000 FMT)



## Peru Silver Production 2017 (MM Oz)



4 Source: Peru Ministry of Energy & Mines, United States Geology Survey.

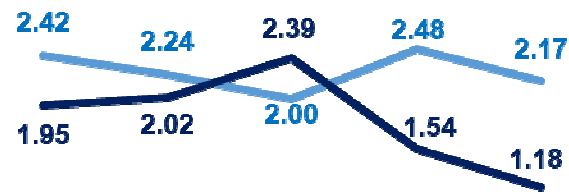
<sup>1</sup> Includes Atacocha. <sup>2</sup> Includes 61% of El Brocal. <sup>3</sup> Considers only Peruvian Ag production (Arcata, Inmaculada & Pallancata)



# A Safe Place to Work

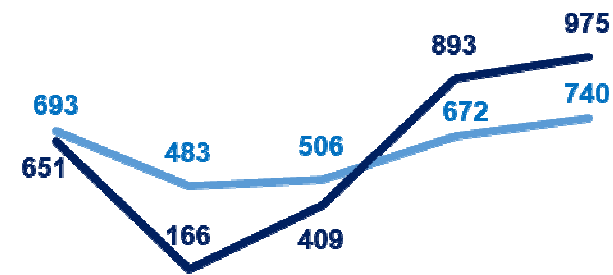
## Frequency Index

Lost-time injuries per million hours worked



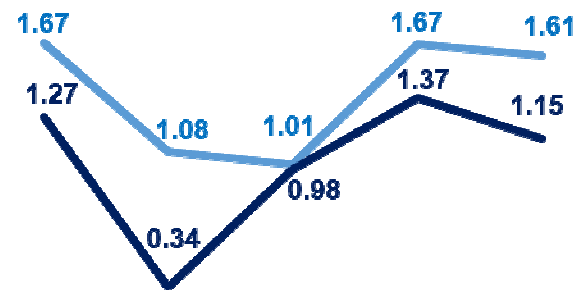
## Severity Index

Days lost per million hours worked



## Accident Index

Frequency x Severity



■ Volcan Consolidated  
■ Metallic Mining Sector<sup>1</sup>





# Mining Operations<sup>1</sup>



**Yauli**

<b>Mines:</b>	Four underground, one open pit
<b>Reserves:</b>	27.3 MM MT; 5.34% (Zn), 0.89% (Pb), 0.22% (Cu), 3.24 oz/MT (Ag)
<b>LOM:</b>	Seven years (reserves), 16 years (reserves + inferred resources)
<b>Capacity:</b>	11,000 tpd from three concentrator plants
<b>Production:</b>	146 K FMT (Zn), 18 K FMT (Pb), 3 K FMT (Cu), 7.7 MM oz (Ag)



**Chungar**

<b>Mines:</b>	Two underground
<b>Reserves:</b>	9.8 MM MT; 5.21% (Zn), 1.50% (Pb), 0.14% (Cu), 2.52 oz/MT (Ag)
<b>LOM:</b>	Five years (reserves), 12 years (reserves + inferred resources)
<b>Capacity:</b>	5,500 tpd from one concentrator plant
<b>Production:</b>	88 K FMT (Zn), 23 K FMT (Pb), 2 K FMT (Cu), 3.6 MM oz (Ag)



**Alpamarca**

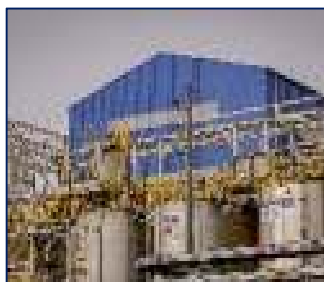
<b>Mines:</b>	One underground, one open pit
<b>Reserves:</b>	0.7 MM MT; 1.11% (Zn), 0.69% (Pb), 2.78 oz/MT (Ag)
<b>LOM:</b>	One year (reserves), three years (reserves + inferred resources)
<b>Capacity:</b>	2,500 tpd from one concentrator plant
<b>Production:</b>	12 K FMT (Zn), 7 K FMT (Pb), 1.8 MM oz (Ag)

# Mining Operations<sup>1</sup>



**Cerro de Pasco**

**Mines:** Two underground, open pit  
**Reserves:** 15.3 MM MT; 3.51% (Zn), 1.21% (Pb), 1.56 oz/MT (Ag)  
**Capacity:** 6,000 tpd from two concentrator plants  
**Production:** 9 K FMT (Zn), 4 K FMT (Pb), 0.4 MM Oz (Ag)



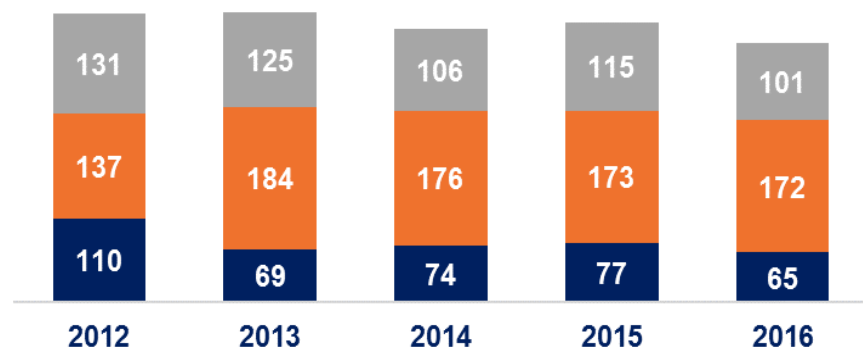
**Oxides Plant**

**Feed:** Stockpiles & in-situ mineral from Raul Rojas Open Pit  
**Reserves:** 12.1 MM MT; 6.25 oz/MT (Ag)  
**LOM:** 13 years of reserves, 19 years (reserves + inferred resources)  
**Capacity:** 2,500 tpd from one lixiviation plant  
**Production:** 3.7 MM Oz (Ag), 2.9 k Oz (Au)

# Solid Life of Mine (LOM)<sup>1</sup>, Robust Geological Potential

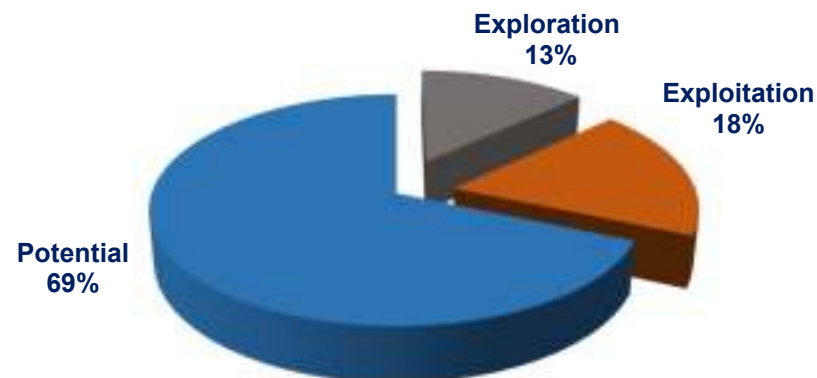
- 8-year LOM (Reserves), 19-year LOM (Reserves + Inferred Resources)
- 9 MM FMT of Zn (Reserves + Resources)
- 798 MM ounces of Ag (Reserves + Resources)

## Evolution of Reserves & Resources (MM MT)



■ Inferred Resources ■ Measured & Indicated Resources ■ Reserves

## ~ 344k Ha. of Mining Concessions



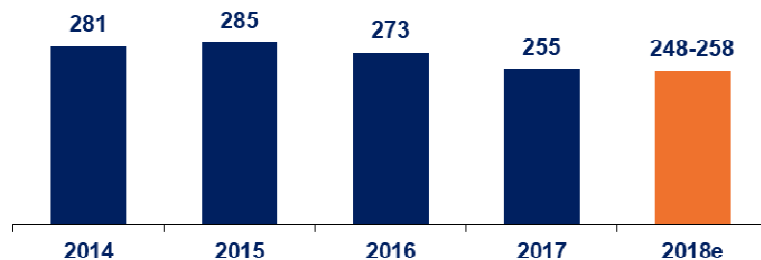
**Prices used to calculate R+R 2016:** Zn 2,300 USD/MT, Pb 2,100 USD/MT, Cu 5,800 USD/MT, Ag 18 USD/Oz



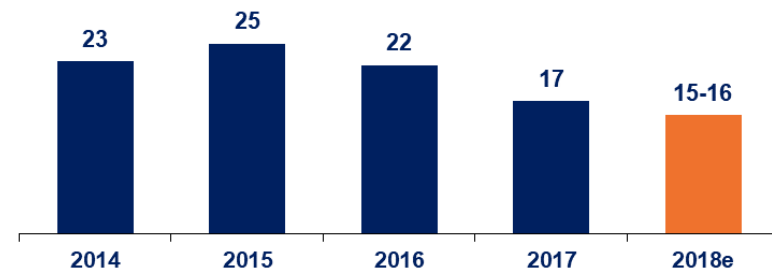
# Stable Production with Operating Flexibility

- Diversification among operating units & metals produced

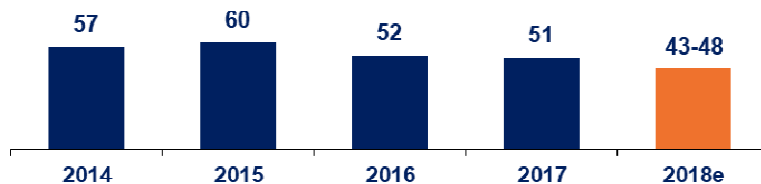
**Zinc Production  
(000 TMF)**



**Silver Production  
(MM Oz)**



**Lead Production  
(000 FMT)**

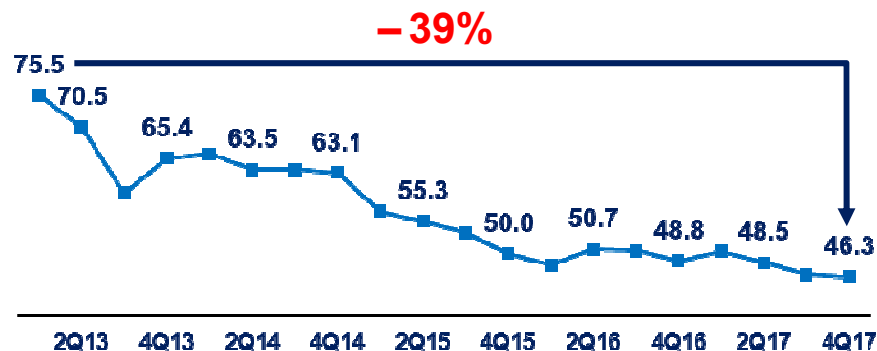


**Copper Production  
(000 FMT)**

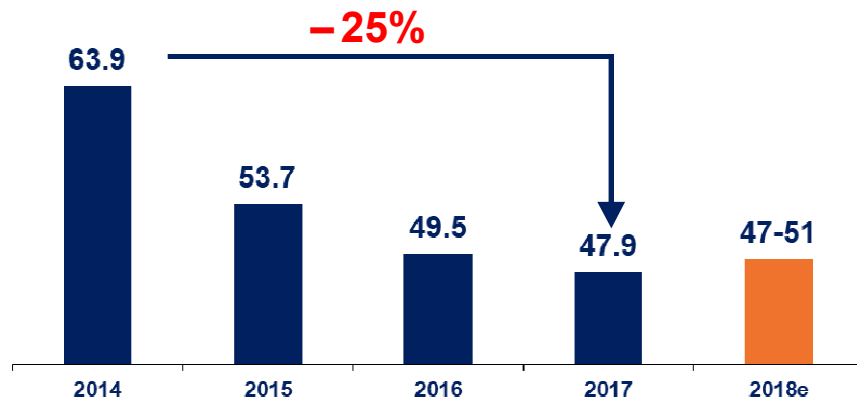


# Operating Cost Restructured & Reduced

## Quarterly Unit Cost (USD/MT)<sup>1</sup>



## Annual Unit Cost (USD/MT)<sup>1</sup>

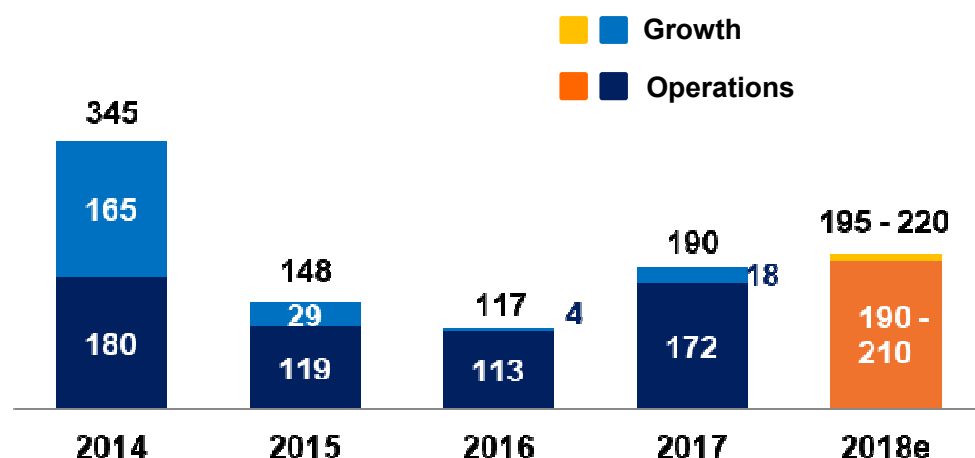


**Operating-cost reductions from continuous-improvement program integrated into all operating units**

- ✓ **39%** operating-cost reduction since 1Q13 (75.5 USD/MT)
- ✓ Cost continued to decline in 2017
- ✓ Unit cost (2018) 47-51 USD/MT (est.)
  - Reduction of the mining sections at main mines
  - Optimization of pumping systems, mine maintenance (shotcrete), roads & routes (interior mine), equipment maintenance costs
  - Reduction & further consolidation of contractors
  - Reduction of fixed costs & support at operating units

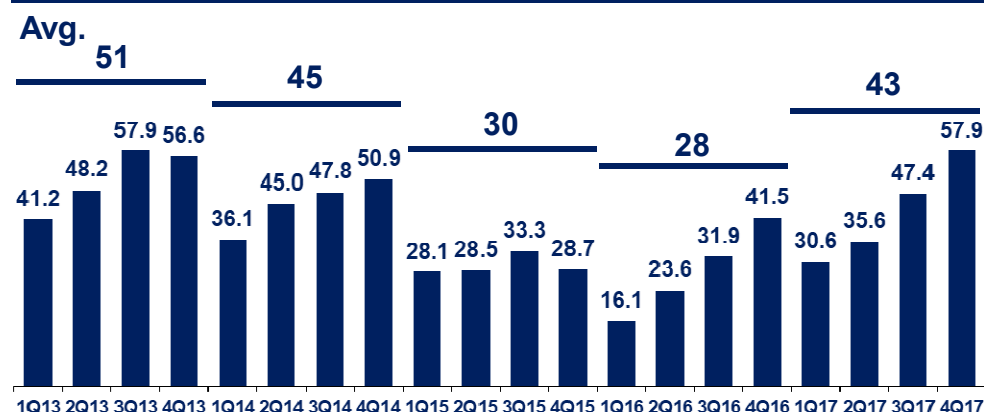
# Disciplined Capital Investment

## Annual Mining CAPEX (USD MM)



- ✓ **45% reduction** in operating CAPEX (2013 – 2016) to preserve cash
- ✓ **52% investment increase** in 2017 related to mine development and plants & tailings dams
- ✓ 2018 CAPEX related to exploration & mine infrastructure

## Quarterly Mining Operations CAPEX (USD MM)



## Volcan Exploration DDH (000 Meters)

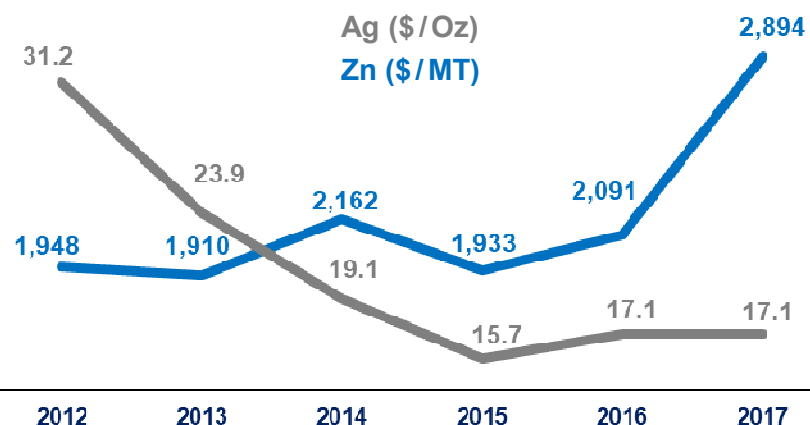
	2016	2017	2018e	% Var '16-'17	% Var '17-'18
Growth	25.5	75.3	72.0	195.8	-4.4
Operations <sup>1</sup>	104.2	134.1	215.0	28.7	60.3
<b>Total</b>	<b>129.7</b>	<b>209.4</b>	<b>287.0</b>	<b>61.5</b>	<b>37.0</b>

# Mining Operations Guidance 2018

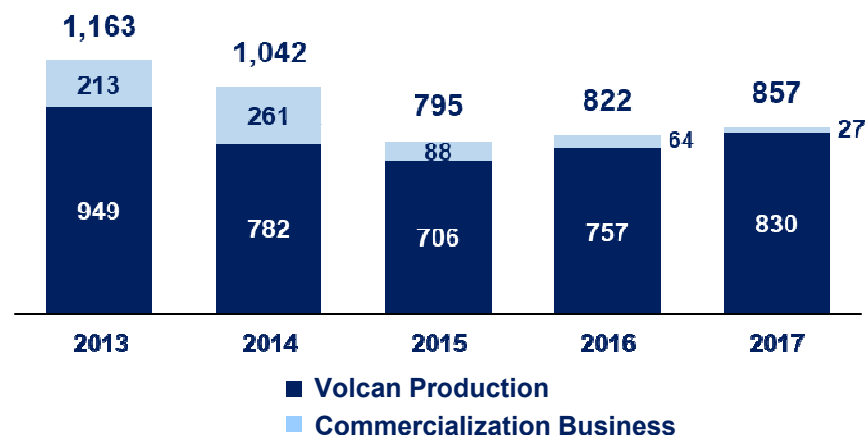
Consolidated Production		2016	2017	Var. %	Estimated 2018		
<b>TMT (000)</b>		<b>7,716</b>	<b>8,312</b>	<b>7.7</b>	<b>7,500</b>	<b>–</b>	<b>8,500</b>
<b>Zinc</b>	<b>(000 FMT)</b>	<b>273</b>	<b>255</b>	<b>-6.7</b>	<b>248</b>	<b>-</b>	<b>258</b>
<b>Lead</b>	<b>(000 FMT)</b>	<b>52</b>	<b>51</b>	<b>-1.8</b>	<b>43</b>	<b>-</b>	<b>48</b>
<b>Copper</b>	<b>(000 FMT)</b>	<b>5</b>	<b>5</b>	<b>4.7</b>	<b>3</b>	<b>-</b>	<b>5</b>
<b>Silver</b>	<b>(MM Oz)</b>	<b>22</b>	<b>17</b>	<b>-21.3</b>	<b>15</b>	<b>-</b>	<b>16</b>
<b>Gold</b>	<b>(000 Oz)</b>	<b>6</b>	<b>8</b>	<b>39.7</b>	<b>7</b>	<b>-</b>	<b>9</b>
Consolidated OPEX		2016	2017	Var. %	Estimated 2018		
<b>Unit Cost (USD/TM)</b>		<b>49.5</b>	<b>47.9</b>	<b>-3.3</b>	<b>47</b>	<b>–</b>	<b>51</b>
Mining CAPEX (MM USD)		2016	2017	Var. %	Estimated 2018		
<b>Mining Total</b>		<b>116.9</b>	<b>189.8</b>	<b>62.4</b>	<b>195</b>	<b>–</b>	<b>220</b>
<b>Operating</b>		<b>113.1</b>	<b>171.5</b>	<b>51.6</b>	<b>190</b>	<b>–</b>	<b>210</b>
<b>Growth<sup>1</sup></b>		<b>3.8</b>	<b>18.3</b>	<b>386.3</b>	<b>5</b>	<b>–</b>	<b>10</b>

# Financial Indicators

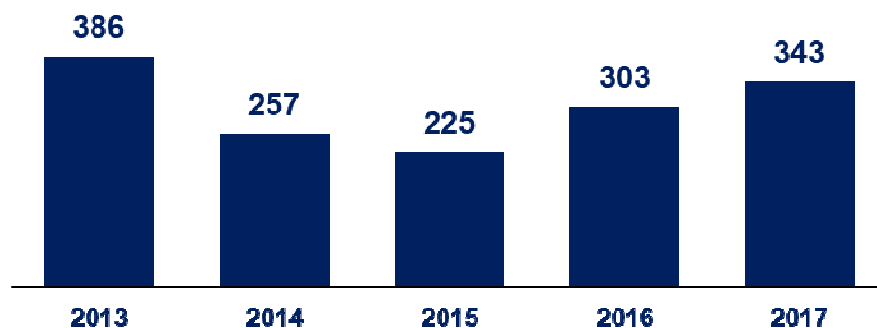
## Average Spot Prices (LME)



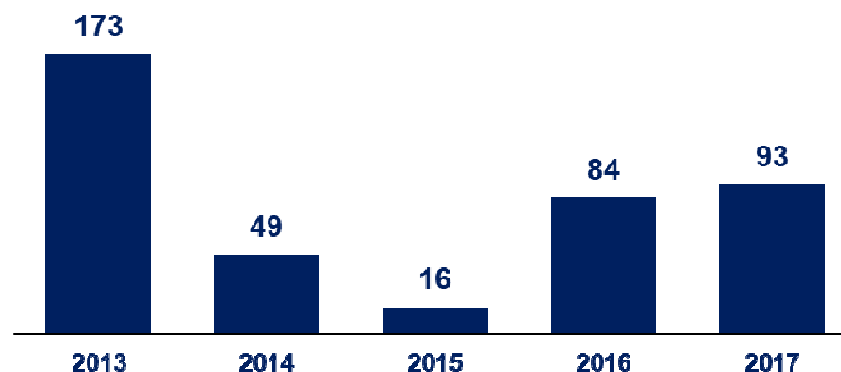
## Sales (USD MM)



## EBITDA <sup>1</sup> (USD MM)



## Net Profit <sup>2</sup> (USD MM)



<sup>1</sup> EBITDA 2016 includes an extraordinary gain of USD 14.0 MM related to the partial buyback of international bonds issued in 2012.

<sup>2</sup> Net Profit excludes exceptional non-cash charges, such as fixed-asset and intangible impairments. In 2015 & 2017, net profit including exceptional charges was USD - 454 MM & USD -478 MM, respectively.

# Exceptional Adjustment 2017

- Glencore acquired 55.03% of Volcan's Class A shares in a public tender that concluded Nov. 7, 2017.
- In order to meet the accounting standards & corporate policies to enable Glencore to consolidate Volcan's financial results, Volcan recorded an exceptional charge of USD 570.2 MM in 4Q17.
- These adjustments are accounting related only and **have no effect on the Company's cash flow.**

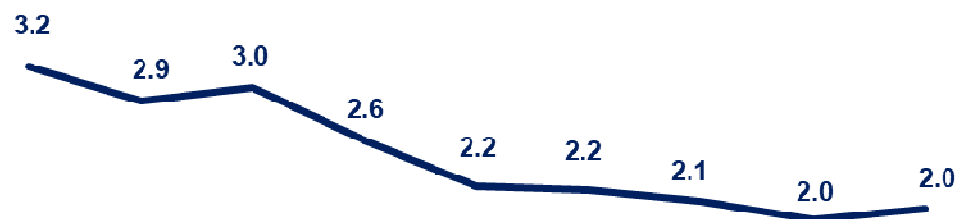
Exceptional Adjustments (USD MM)	Net Effect
Asset and intangible impairment in exploration projects	-163.7
Asset impairment at Cerro de Pasco	-155.4
Deferred tax adjustment at Cerro de Pasco	-118.5
Asset impairment at Oxides Plant	-80.6
Conversion and change in methodology in calculating deferred tax	-76.9
Other exceptional adjustments	24.9
<b>Total</b>	<b>-570.2</b>



# Liquidity & Creditworthiness

- Lower leverage and increasing EBITDA
- Focused on strengthening balance-sheet

## Net Debt / EBITDA (USD MM) <sup>1</sup>



	4Q15	1Q16	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17
Net Debt	711	693	691	696	672	672	669	654	701
EBITDA	225	237	228	267	303	300	318	335	343

\* For comparison, historical Net Debt has been recalculated with the cash balance adjustment

## Cash Flow 2017 (USD MM)

<b>Balance – Dec 2016</b>	<b>203</b>
CFO (Mining)	130
Energy Business	5
Taxes	1
Growth Investment	-23
Interest	-37
Net Financing	-35
Dividends	-29
Other Investments	-53
Cash Adjustment <sup>2</sup>	-62
<b>Balance – Dec 2017</b>	<b>102</b>

15 <sup>1</sup> EBITDA is trailing 12 months & Net Debt is as of most-recent quarter-end. EBITDA 2016 includes an extraordinary gain of USD 14.0 MM in 2016 related to the partial buyback of international bonds issued in 2012.

<sup>2</sup> In 4Q17, cash balance was adjusted by - USD 62.4 MM after the shares of Cementos Polpaico were reclassified as financial investments.



# 2018 Strategy

- **Develop potential of current operations aggressively**
  - Exploration investment more than 2x 2017
    - USD 27 MM in 2018 (aprox.)
  - Increase reserves
  - Develop long-term mine plans enabling:
    - Infrastructure investment (increase productivity, reduce costs)
    - More efficient permit process
    - Production increases
- **Prioritize project development near operations, leveraging existing infrastructure**
  - Romina & Carhuacayan (Alpamarca) & Zoraida, Toldorrumi, Oyama (Yauli)
- **Develop polymetallic greenfield projects with important geological potential**
  - Palma, Shuco, Yacucancho, Guargashmina
- **Ongoing control & optimization of all variables that impact cash flow**
  - Reduce operating fixed & administrative costs
  - Optimize debt structure
  - Revise corporate structure & optimize taxes

# Project Development Near Operations (1/2)

## Romina (Alpamarca)

- Located 15 km from UEA Alpamarca (6,554 Ha.)
- Polymetallic PIPE & vein mineralizations
- Potential of 15 MM MT (6% - 7% Zn, 2-3 oz Ag/t)
- Exploration permits approved (DIA)
- Preliminary expected production: 30 - 35 K FMT (Zn), 12 - 15 K FMT (Pb), 0.8 - 1.2 MM Oz (Ag)

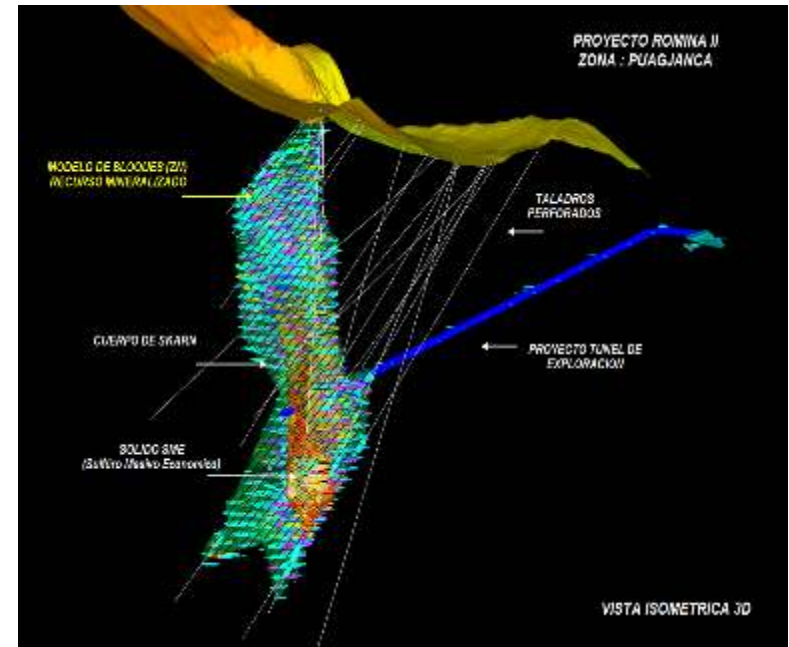
## Primary Structures

### Puagjanca

- 5,126 m in 14 DDH holes, with 6 MM MT estimated tonnage
- Successful results cut high-grade polymetallic ore
- 9,500 m in-fill drilling & geological model concluded
- Metallurgical test in development

### Yuncán

- Two perforations cut high-grade zinc ore
- Drilling program to begin in 2018

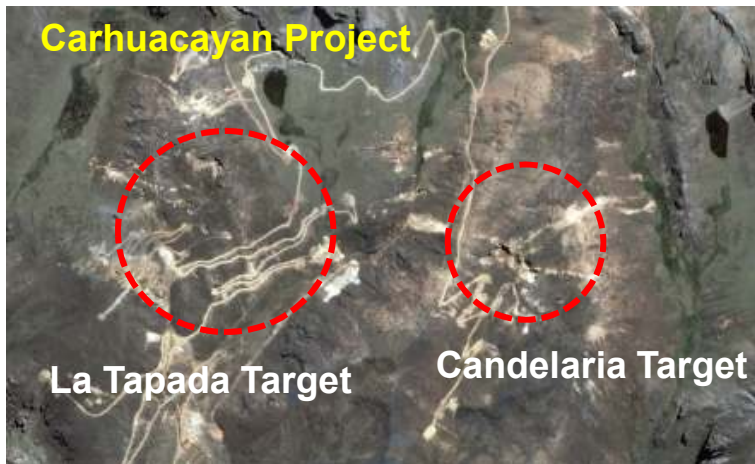


# Project Development Near Operations (2/2)



## Zoraida (Yauli)

- Located 7 km South of Andaychagua
- Potentially Yauli's third mineralized system
- Exploration permits approved
- 15,000 m program to be developed in 2018



## Carhuacayan (Alpamarca)

- Located 20 km East of Alpamarca
- The areas of La Tapada, which presents high-grade polymetallic mineralization, and Candelaria are being explored
- More than 20,000 m of DDH in 2017
- An additional 16,400 m DDH to be developed in 2018 to define La Tapada's morphology and evaluate new targets



# Greenfield Development



Exploration Program, Palma



Drilling Program, Palma

## Palma

- Located at the basin of the Casma Group
- Similar geotectonic environment as important deposits such as Cerro Lindo, Perubar & Colquisiri
- 4 prospective sectors along a 6 km corridor
- 25,000 m of diamond drilling completed:
  - Current resources of 5.2 MM TM (7.19% Zn, 1.48% Pb, 1.45 oz Ag/t)
- Environmental Impact Assessment (EIA) modified to build a 1 km exploratory tunnel, expected to begin in 4Q17
- In 2017, a 7,920 m in-fill drilling program in the area of the former surface mine began
- In 2018, a new DDH program of an additional 20,000 m will begin, which will expand the mineralized resources of the project

# Energy Operations

## 100+ MW hydroelectric energy portfolio

- 40 MW connected to the national grid
- 23 MW connected to the Chungar unit
- Additional 45 MW of development projects

Current infrastructure	Capacity
13 Hydroelectric plants	63 MW
15 Transmission lines	350 Km
26 Electric substations	303 MVA

Volcan Electric Balance	GWh	%
Consumption 2017	707	100
Self generation <sup>1</sup>	351	50

Cost	USD/MWh	Hydroelectric Projects	Capacity
Produced energy	17	Tingo Expansion	15 MW
Purchased energy	73	Chancay 2 plants	30 MW

## Rucuy Hydroelectric Plant





# Annex

# Volcan Compañía Minera History

In 1943, Volcan Mines Company began operating the Ticlio and Carahuacra mines, and the Victoria concentrator plant.

In 1997 Volcan acquired Empresa Minera Mahr Tunel, owner of the San Cristobal and Andaychagua mines, and the concentrator plants Mahr Tunel and Andaychagua.

In 1999 Volcan acquired Empresa Minera Paragsha, which included the Cerro de Pasco mining operation.

One year later, Volcan acquired Empresa Administradora Chungar with 450 ha. of mining concessions and a 350 tpd processing plant. Today Chungar produces 5,500 tpd.

In 2014, Volcan began operations at two new units, Alpamarca and the Oxides Plant at Cerro de Pasco. Between them, these plants produced 3.3 million ounces of silver in 2014 and 6.3 million ounces in 2015.

These acquisitions, as well as mine and plant developments executed by the Company over the last 20 years, turned Volcan into one of the principal producers of zinc, silver and lead in the world.

Glencore acquired 55.03% of Volcan's Class A shares in a public tender that concluded Nov. 7, 2017.



Ticlio, 1943

## Volcan Compañía Minera Production Growth

PRODUCTION	1997	2017
Zinc Concentrates (000 MT)	50	493
Lead Concentrates (000 MT)	6	48
Copper Concentrates (000 MT)	-	12
Silver (MM Oz)	0.5	17

# Social Responsibility & Sustainable Development

## Investing in the health, education, economic development, & infrastructure of the communities in the area of influence of Volcan operations

### Corporate Alliance



By 2021, Volcan and Enseña Perú will transform the educational reality of the Junín and Pasco regions by placing 20 highly skilled teachers in schools with the most needs



### Corporate project, 2018 horizon

Working in cooperation with Prisma NGO, Volcan's strategic partner in health & economic development

### Educational programs



- Scholarships for children of local community members
- Performance monitoring
- Specialized training in mining, administration and soft skills



### Public Works for Tax Credits: Infrastructure (OPI)

- Began in 2010
- 520,000 beneficiaries
- \$126 MM committed
- Potable water, roads, education, etc.

- Volcan has **38 communities** in its area of direct influence, with over **90 agreements and commitments**
- **USD 6 MM** invested in community development in 2017
- Hiring community businesses, generating **USD 52 MM** of annual revenue for local economies
- Volcan is a **pioneer** investor in the **Public Works for Tax Credits (OPI)** program

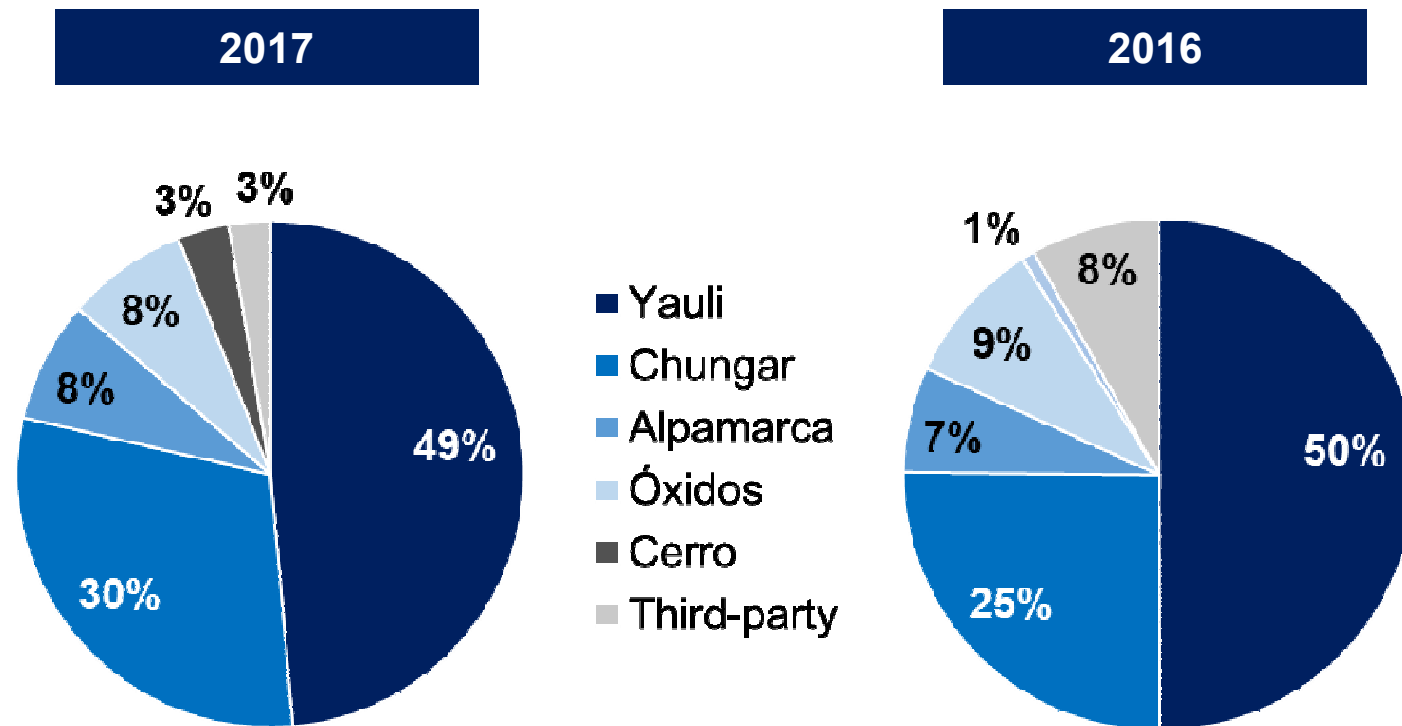
# Competitive Operating Cash Cost

Cash Cost <sup>1</sup>	Zinc (USD/MT)		
	2016	2017	var%
Co - Product	1,375	1,765	28.4
By - Product	911	1,314	44.2

Cash Cost <sup>1</sup>	Silver (USD/Oz)		
	2016	2017	var%
Co - Product	11.3	10.4	-8.2
By - Product	2.6	-6.2	-339.5

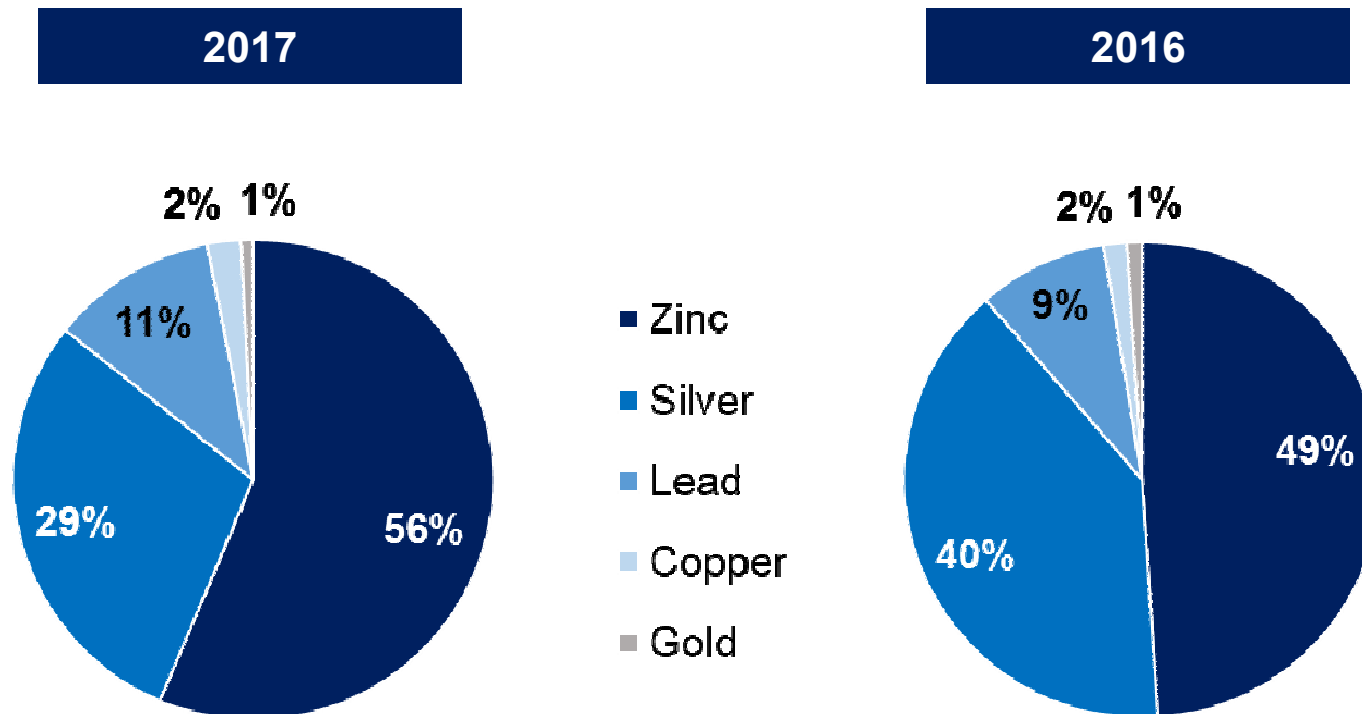
Metal	Unit	Average LME Spot Price		
		2016	2017	Var %
Zinc	USD/MT	2,091	2,894	38.4
Silver	USD/Oz	17.1	17.1	-0.3

# Sales Breakdown by Origin



The distribution of sales by origin reflects a decline in the contribution of third-party concentrate sales, from 8% in 2017 to 3% in 2017, and an increase in the contribution of Cerro de Pasco.

# Sales Breakdown by Metal



The distribution of sales by metal in 2017 reflects the growth in the contribution of zinc and lead as a result of the increase in their prices.



# Bond & Credit Ratings

## International Bond Emission

- ✓ USD 600 MM issued February 2012  
(USD 535 MM currently outstanding)
- ✓ Rate: 5.375% maturing February 2022
- ✓ Demand: USD 4.8 B

## Credit Ratings

**Fitch**Ratings      BBB-

MOODY'S      Ba3

# Stock Market Highlights<sup>1</sup>

## Stock Market Listings

Lima	Since	1956
Madrid (Latibex)	Since	2000
Santiago	Since	2007

## Class A Shares<sup>2</sup>: Full voting rights

Shares outstanding: 1,633,414,553  
Aprox. 460 shareholders

## Class B Shares<sup>2</sup>: Div. premium of 5% over Class A

Shares outstanding: 2,443,157,622  
Aprox. 8,900 shareholders

## Selected Institutional Shareholders of Volcan Compañía Minera S.A.A.

AFP Habitat	Eaton Vance	Prima AFP
AFP Integra	Global X Silver Miners ETF	Profuturo AFP
Arca Trading Limited	Inteligo	Sura
Ashmore Group	Ishares MSCI All Peru Capped (EPU)	UBS
BBVA	La Positiva	Vanguard Group
Blackrock Global Funds	Mercury Asset Management	
Credicorp Capital	Pacífico Seguros	



**Gracias!**

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