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# 2017

## VOLCAN

### SUSTAINABILITY REPORT

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**2017**  
**VOLCAN**  
SUSTAINABILITY  
REPORT

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› **DISCLAIMER** 102-1

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**“THIS DOCUMENT CONTAINS ACCURATE AND SUFFICIENT INFORMATION ABOUT VOLCAN COMPAÑÍA MINERA S.A.A.’S BUSINESS ACTIVITIES IN 2017. REGARDLESS OF THE ISSUER’S LIABILITY, THE UNDERSIGNED ARE RESPONSIBLE FOR THE CONTENT HEREIN, IN ACCORDANCE WITH APPLICABLE LAWS.”**

**LIMA, FEBRUARY 26, 2018**

**José Picasso Salinas**  
Chairman

**Juan Ignacio Rosado Gómez de la Torre**  
Chief Executive Officer





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# 01

## LETTER TO THE SHAREHOLDERS





# LETTER TO THE SHAREHOLDERS

## DEAR SHAREHOLDERS:

**IN 2017, THE INTERNATIONAL POLITICAL CONTEXT WAS MARKED BY THE NUCLEAR THREAT FROM NORTH KOREA, THE ECONOMIC CRISIS IN VENEZUELA, PRESIDENTIAL ELECTIONS IN FRANCE AND GERMANY, THE IMPLEMENTATION OF NEW TRADE POLICIES BY THE UNITED STATES, AND CATALONIA'S FAILED ATTEMPT AT INDEPENDENCE FROM SPAIN.**

Despite this context, the global economy grew 3.7%, the highest rate in the last six years. This trend is sustained, on the one hand, by greater dynamism in developed economies such as the United States and the Eurozone thanks to increased private consumption and investment expansion; primarily in infrastructure. These also contributed to a drop in unemployment. Notably, in December U.S. President Donald Trump enacted a tax reform, the main thrust of which was to reduce corporate income taxes from 35% to 21% starting in 2018 and generate tax incentives for repatriation of capital gains.

In addition, for the first time in seven years China's year-over-year economic growth was positive, rising from 6.7% in 2016 to 6.9% in 2017. This was explained primarily by greater growth globally and higher public investment in infrastructure. This greater dynamism resulted in a recovery of commodity prices, boosting growth in Latin American economies. In particular, Argentina returned to a positive rate of expansion thanks to a recovery in the construction sector and higher household purchasing power, in the context of economic stabilization, fiscal consolidation and international reinsertion programs implemented by the government of Mauricio Macri. It is worth noting that Sebastián Piñera won the presidential election in Chile in 2017, contributing to the region's political and economic stability. Elections in Mexico, Brazil and Colombia will take place in 2018.

With regards to stock markets world wide, both emerging economies and developed economies indicated significant

growth. S&P 500 of the United States (+19.4%), Nikkei 225 of Japan (+19.1%), Shanghai Composite Index of China (+6.6%), IPSA of Chile (+34.0%) and BOVESPA of Brazil (+26.9%). For its part, the Lima Stock Exchange increased 28.3%.

In the domestic context, Peru was also subject to climatic, political and economic turbulence in 2017. In March, Peru was affected by the coastal El Niño phenomenon, which caused economic damage and irremediable human losses throughout the entire country. Volcan contributed equipment, food and personnel in the northern and central parts of the country to help those affected. We must also mention the support provided by the National Society of Mining, Energy and Petroleum to the victims. Our company also experienced problems during the coastal El Niño phenomenon, which caused a rupture of the penstock and damage to the transmission line for the Rucuy hydroelectric plant as well as difficulties in the transport of concentrates and supplies.

In the political realm, the conflict between the executive and legislative branches continued. There were cabinet leadership changes in education, transportation and communication and health, among others. Subsequently, the legislature passed a no-confidence vote in the cabinet of Prime Minister Fernando Zavala in September. In addition, the Odebrecht corruption scandal sharpened conflicts between the executive and legislative branches, slowing the country's progress and growth. Numerous infrastructure projects were suspended in Lima and in the country's interior. Former president Ollanta Humala and his wife Nadine Heredia were placed in preventive custody and other former presidents are also under investigation. Also, in December Congress sought to impeach President Pedro Pablo Kuczynski; this effort ultimately failed due to the fracturing of a group of Fuerza Popular legislators and the abstention of the Izquierda Nuevo Perú caucus. A few days later, on December 24, President Kuczynski, exercising his presidential prerogative, pardoned former president Alberto Fujimori. After Congress again sought to impeach President Pedro Pablo Kuczynski, he resigned the

presidency on March 21, 2018. Two days later, on March 23, 2018, Congress accepted the president's resignation and, in accordance with the Constitution, the presidency was assumed by Martín Vizcarra, first Vice President of the Republic and Peru's ambassador to Canada.

On the same day that President Vizcarra was sworn in by Congress, he gave a speech to the country in which he mentioned the instability and institutional peril Peru was experiencing and which no Peruvian wanted and that the time had come to say enough. Specifically, he mentioned certain serious developments that had occurred in recent times. He said that the judiciary must act independently, responsibly and quickly, but at the same time, it was time to end the politics of hate and confrontation which has only served to harm the country. Politicians and those in public office have an obligation to respond to the many needs, demands and aspirations of every Peruvian, he continued. This last point is the start of a new stage of institutional rebuilding in the country, in which democracy and respect for others are the flags, moving beyond personal interests and desires as well as political differences, to emphasize the wellbeing of all. Among his objectives he mentioned the fight against corruption, transparency, institutional stability, the fundamental division of powers to ensure that no branch of government is able to dominate the others, and the reconstruction of governance.

**IN ECONOMIC MATTERS, THE HORIZON INDICATES A STABLE COUNTRY WITH ORDERLY AND EQUITABLE GROWTH, AIMED AT DRIVING PERU DOWN THE PATH OF CREDIBILITY AND STABILITY.**

Creating quality jobs for all Peruvians through building infrastructure will be a pillar of the president's administration on the coast, in the mountains and in the jungle. Health, education and public security will be fundamental issues on his agenda, working toward the great transformation of this country, putting Peru first. He ended his message by calling for everyone to work together for the good of Peru, as there is no time to lose.

All of this political uncertainty in Peru affected the country's economic growth outlook. Gross domestic product increased by 2.5% with respect to the previous year, the lowest growth





rate in the last 3 years. This loss of dynamism is due to lower growth of private consumption associated with a reduction in household confidence indicators, lower levels of adequate employment and greater underemployment. With respect to public investment, the delay in execution of projects during the first half of the year due to the coastal El Niño phenomenon was partially offset by the recovery of public investment because of national infrastructure work for the Panamerican Games during the second half of the year. For its part, private investment halted the contraction it had experienced for three consecutive years, with expansion of 0.1% for the year. Notably, investment in the mining sector grew by 15.7%.

In sectoral terms, construction grew by 2.2% compared to the previous year, after two years of contraction, while the fishing sector grew 4.7% over the previous year, thanks to greater extraction of anchovies for industrial consumption. On the other hand, manufacturing fell by 0.3%, compared to a decline of 1.4% in the previous year.

The mining and hydrocarbons sector expanded 3.2% in 2017, below the two previous years (9.5% in 2015 and 16.3% in 2016) due to lower growth of copper production, after the production expansion at Las Bambas and Cerro Verde in 2016.

Peru's current balance of payments had a deficit of 1.3% of the GDP, lower than the 2.7% GDP deficit recorded in 2016. The trade balance was helped by higher metal prices, which caused appreciation of the sol, closing 2017 at 3.24 PEN/USD. The average exchange rate during 2017 was 3.26 PEN, compared to 3.37 PEN in 2016. For its part, inflation in Metropolitan Lima closed the year at 1.4%, within the Central Bank's target range.

**IN 2017, PRICES OF MOST BASE METALS INCREASED OVER THEIR 2016 LEVELS. THIS STRONG PERFORMANCE WAS DUE TO A MORE SOLID GLOBAL ECONOMY, AS SHOWN IN THE U.S., EUROPE, ASIA AND LATIN AMERICA.**



The rising trend in the cycle of metal prices was supported by increased demand and a reform in Chinese supplies, with greater environmental controls. Demand recovered substantially due to investments in infrastructure in China and the United States, the electric vehicle revolution and greater demand for copper. In regard to supply, it is important to note that China has been implementing policies to absorb idle plant capacity to reduce supplies that are highly contaminating, inefficient and unprofitable, resulting in a reduction in inventory.

The price of zinc rose 29.1% from 2,563 USD/MT at the end of 2016 to 3,309 USD/MT at the close of 2017. Likewise, the price of lead increased 25.7% from 1,985 USD/MT at year-end 2016 to 2,495 USD/MT at the close of 2017, while copper saw a 30.1% increase to 7,157 USD/MT, silver rose 3.8% to 16.87 USD/oz and gold climbed 12.3% to 1,294 USD/oz. This is the second year of a price recovery after almost five years of constant declines in metal prices. This positive trend in metal prices has enabled greater investment in the mining sector.

According to the Fraser Institute's annual survey for 2017, Peru rose nine positions in the ranking of attractiveness for mining investment, at 19 out of 91 jurisdictions. This ranking evaluates two factors: geological potential and political perception. In geological potential, Peru was ranked 14th, three positions above 2016. In terms of the perception of public policy and practices related to the sector, although Peru was ranked 43rd, an improvement of 11 positions, we continue to be outranked by Botswana, Namibia and Chile, among others. Notably, our neighboring country Chile was ranked 8th, moving up 31 positions, due to better political perception and stability in that country. We need to place greater emphasis on promoting government policies to take advantage of Peru's mining potential, facilitate investment, and guarantee the start-up of important projects that continue to be stalled, including Tía María, Cuajone, Quellaveco, Conga, Río Blanco, Galeno, Michiquillay, and La Granja. Currently, the mining sector represents 10% of the country's GDP and more than 60% of total exports.

As we said years ago, it is our responsibility to stimulate the country's development, since windows of opportunity do not open every day, and we must remember that we have

to compete to attract new investments that ultimately go to countries offering the best conditions. We have observed that neighboring countries without a tradition of mining such as Ecuador, Colombia and recently Argentina, under Mauricio Macri's government, are beginning to position themselves better to attract investors who will take advantage of their mining potential.

It is also important to mention that excessive pressure in terms of taxes and labor, environmental, and social issues has limited opportunities for development of the country's mining industry. This, in addition to the damage caused by the Law of Prior Consultation and inefficient use of mining royalties, which should be distributed in line with the needs of each region, has resulted in social conflicts that have yet to be resolved. The result is delayed private investment and higher costs faced by local mining companies. The executive branch is carrying out a series of reforms to reduce the excessive bureaucratic procedures that are currently required of the mining sector for exploration and project start-up.

In 2017, Volcan's production reached 255,000 FMT of zinc, 17.3 million ounces of silver and 51,000 FMT of lead. These represent decreases of 6.7%, 21.1% and 1.9% respectively, compared to 2016. This was mainly due to lower production grades at the Yauli and Chungar units. In addition, production was affected by the 65-day stoppage at Islay mine from August to October due to conflicts with one of the local communities, relating to authorization for work with the raise borer in the South vein, and the 18-day stoppage in February at the oxides plant due to conflicts with the Rancas Community.

It is important to mention that the Company continues to focus on cost control and reduction in all operating units.

**THE COMPANY HAS IDENTIFIED SPECIFIC OPPORTUNITIES FOR IMPROVEMENT RELATED TO THE MINE, SUPPORTS, MAINTENANCE, TRANSPORTATION AND ADMINISTRATIVE UNITS. THESE WILL BE IMPLEMENTED IN THE COMING MONTHS.**

As a result, unit cost in 2017 was 47.90 USD/MT, 3.3% less than the 49.50 USD/MT seen in 2016.



Investment in our operating units increased 52% from USD 113 million in 2016 to USD 172 million in 2017, mainly in plants, tailing dams, development and local exploration. Meanwhile, investment in regional exploration was up 367.4%, from USD 3 million in 2016 to USD 15 million in 2017 and investment in the energy business fell 43.2% compared to the previous year, from USD 6 million to USD 3 million. This decline reflects completion of the Rucuy hydroelectric plant in 2016. In total, Volcan invested USD 193 million in 2017, 58% more than the USD 122 million invested in 2016.

In 2017, net sales totaled USD 857 million, 4.3% higher than the USD 822 million in net sales in 2016. The Company's gross margin increased from 29% in 2016 to 34% in 2017, thanks to higher metal prices, lower production costs, and a decrease in sales volume of third-party concentrates, which generate lower margins. EBITDA rose to USD 343 million, compared to USD 303 million in 2016, while net profits were USD 93 million.

It is important to note that Volcan recorded a one-time net charge of USD 570 million as a result of aligning the Company's financial statements with the corporate accounting standards and policies of our shareholder Glencore. Because of its share in Volcan, Glencore is required to include the financial results of Volcan Compañía Minera S.A.A. in its consolidated financial statements. The adjustments were mainly focused on i) evaluation of devaluation of fixed and intangible assets (impairment); ii) deferred taxes; and iii) accounting provisions. These exceptional charges did not have any effect on the Company's cash flow. Also, in the case of the devaluation of fixed assets and intangibles, in the future the adjustment may be reversed in the event of a scenario other than the one considered in the evaluation as of December 31, 2017.

**VOLCAN HOLDS 371,000 HECTARES OF MINING CONCESSIONS FOR THE DEVELOPMENT OF EXPLORATION ACTIVITIES AND MINING PROJECTS.**

To estimate Volcan's total reserves, the Company uses geostatistical tools to generate resource block models. These have been applied to almost all mineralized

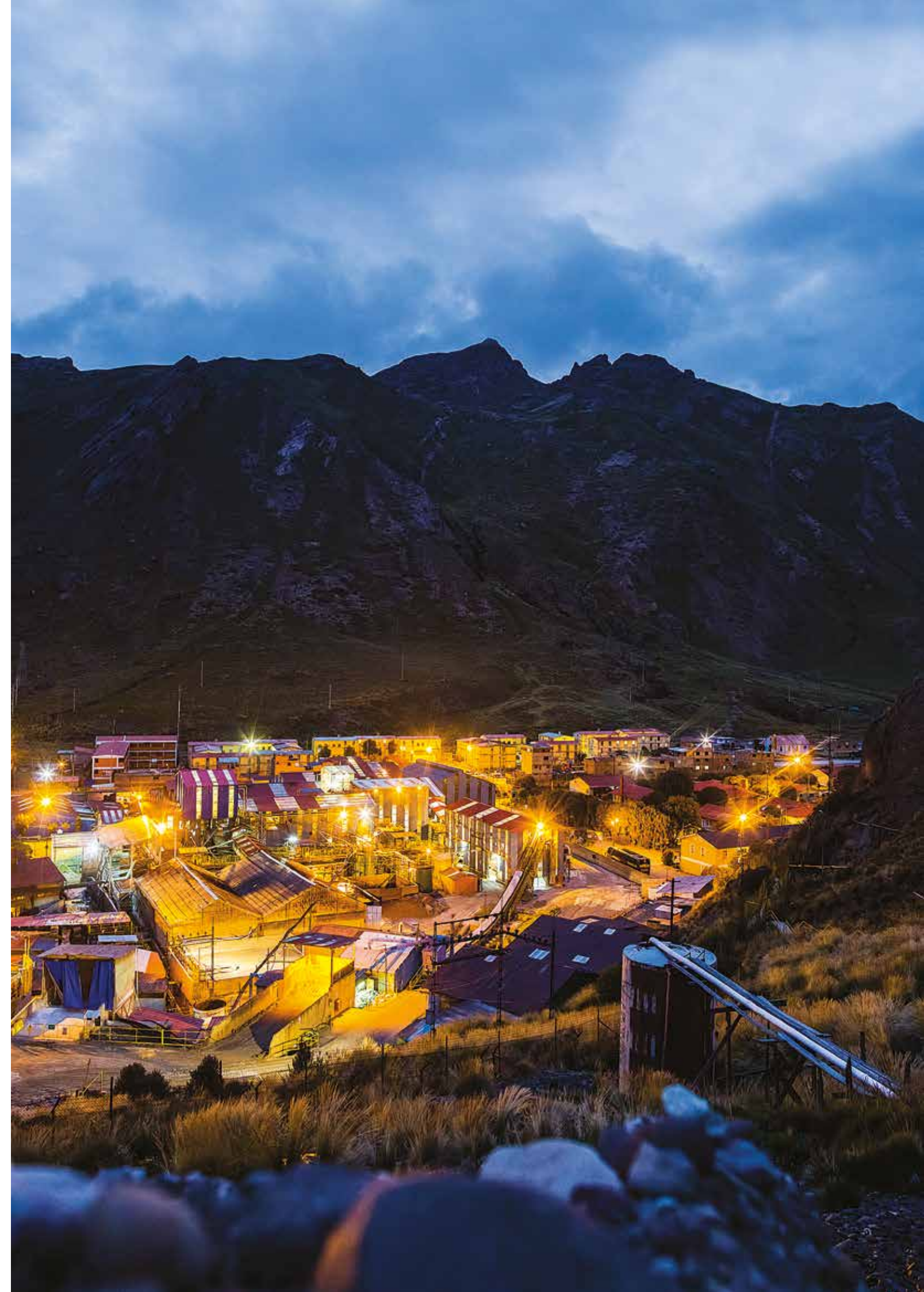
structures in our operating units, in order to improve interpretation and classification of these structures. This generates solid reserve models that provide greater support to mining plans.

In terms of mine development strategy, in 2017 Volcan concentrated its efforts on exploration at its current operations, aiming to develop the value chain in ore resources. For example, the diamond drilling program consisted of more than 150,000 meters at our Yauli and Chungar units.

Volcan also conducted exploration at six projects—three in the advanced phase and three in the initial phase—totaling more than 54,000 meters of diamond drilling. Notable among the projects in the advanced phase are Romina II and Carhuacayán, which will enable operational continuity of the Alpamarca unit. In the case of Romina II, significant polymetallic mineralization has been defined in the Puagjanca body, and there is evidence of other zones with high potential such as Yuncán, Nuevo Yuncán, Why Not and Romina Central. La Tapada body has been identified at Carhuacayán, as have other targets such as La Tapada Oeste and Toldojirca. At Palma, in 2017 we received approval for the second modification to the semi-detailed exploration EIS and we are updating the geological model for estimating new resources.

Projects in the initial stage include work at Alpamarca Norte, Santa Bárbara and Chumpe. In addition to these advances, and in line with Volcan's long term vision, the Company continued to evaluate opportunities to acquire projects and mining operations aligned with its corporate strategy.

Regarding our corporate policies on safety and the environment, we made significant progress in our cultural change in safety, health and the environment program, developed jointly by all areas of the Company. In 2017 Volcan focused on controlling the critical risks for our workers represented by falling rock, mobile vehicles and equipment, energy blocking, and manual tools. At year's end, and despite having reduced the number of disabling accidents and property damage, we deeply regret the occurrence of four accidents with fatal consequences: three employees of contractor companies and one Volcan





employee. Investigations were carried out to determine the causes of each incident and corrective measures were taken with an emphasis on supervision, training, and evaluation to strengthen oversight.

In terms of energy generation, in 2017 the Company produced 353 GWh, an increase of 9% compared to the previous year, and due to greater production at the Chungar hydroelectric plants resulting from greater availability of water.

On the other hand, Company energy consumption rose to 707 GWh, with average power demand of 103 MW, up 11% over the previous year. This increase is primarily caused by greater demand from mining operations. It should be noted that self-generation, without taking into account energy produced and supplied to third parties, represented 24% of total energy consumption; the remainder was supplied by Electroperú through a contract that expired on December 31, 2017. New electricity supply contracts signed with the company Engie went into effect in January 2018. These contracts will significantly reduce energy consumption rates for our operations.

Volcan continued its strategy of investing in renewable energy and a proprietary electricity transmission system to guarantee a constant, reliable source of power for its operating units and avoid unnecessary plant shutdowns. As of the close of 2017, Volcan's energy business consists of 13 hydroelectric plants, 350 km of transmission lines and 26 electrical substations. In 2017 studies were continued on expansion of the Tingo hydroelectric plant, which would achieve an installed capacity of 15 MW, and easement agreements were signed for the Chancay 2 and Chancay 3 projects.

It should be noted that as a consequence of the coastal El Niño phenomenon, the Rucuy hydroelectric plant was temporarily out of service, after the penstock and transmission line were damaged. To date, insurers have disbursed USD 3 million as an advance toward reparation of material damages, and the plant is expected to resume operations during the second half of the year.

On October 9, 2017, Glencore International AG launched a public tender to acquire a minimum of 436,659,163 and

a maximum of 787,140,176 class A shares at USD 1.215 per share. When the public offering concluded, Glencore had purchased a total of 603,077,387 shares for USD 734 million.

**GLENCORE INTERNATIONAL AG AND ITS AFFILIATED COMPANIES, AS OF THE LAUNCH DATE OF THE PUBLIC OFFERING, ALREADY HELD 295,754,888 SHARES (18% OF CLASS A SHARES), BRINGING THE TOTAL NUMBER OF CLASS A SHARES IT HOLDS TO 898,832,275. THIS REPRESENTS 55.028% OF CLASS A SHARES AND 23.29% OF TOTAL COMPANY EQUITY.**

Glencore, which trades on stock exchanges in London, Johannesburg and Hong Kong, has a market capitalization of approximately USD 75 billion. As of December 31, 2017, Glencore's worldwide assets total USD 135.593 billion, with sales of USD 205.476 billion, EBITDA of USD 14.762 billion and net income of USD 5.777 billion. This world-class company produces copper, cobalt, zinc, lead and nickel as well as energy products such as coal and petroleum. It also has agricultural businesses.

Now that Glencore holds a larger share of the company's equity, it has engaged with Company operations, bringing in professionals from different areas and specialties such as mine operations, plants, geology, safety and the environment. These professionals come from various countries including Australia, Canada and South Africa, to assist with developing all Volcan units. At the same time, they are prioritizing the potential of current operations, assigning resources to the operating units and identifying possible synergies that will benefit Volcan. The expectation is that this will result in lower costs, optimization of all variables that affect cash flow and increased Company production and reserves. As of the date of publication of this Annual Report, three Glencore executives have joined the Company: Mr. Aldo de la Cruz Peceros as vice president of operations, Mr. Carlos Francisco Fernández Navarro as executive vice president and Mr. Jorge De Olazabal Angulo as deputy manager of corporate environmental affairs.

With respect to Terminales Portuarios Chancay S.A., a wholly owned subsidiary of Volcan, the process of negotiation to

incorporate a strategic partner is ongoing. Preliminary work has begun on the port construction project, for which Volcan invested a total of USD 24.3 million in 2017. It's worth noting that, as a contribution to the development of the village of Chancay, Volcan was awarded the new PEN 22 million Chancay food market project as part of the Public Works Tax Credits program. The project will benefit 85,000 people who will be able to buy and sell essential staple products in a safe, clean and organized setting.

With respect to Volcan corporate social responsibility and care for its surroundings, the Company seeks to engage in dialog and strengthen its relations with community leaders, key authorities and social organizations to generate a positive impact on the development of the communities within its direct sphere of influence. Toward that end, in 2017 the Company invested USD 5 million in agreements with 60 communities in their area of influence. In addition, the various Volcan units provided work to 17 community enterprises, which invoiced about USD 50 million throughout the year. It is important to highlight the Company's pioneering participation in the Public Works Tax Credit program, having developed and/or won 15 projects with a total value of PEN 126 million, including investments in roads, schools, water, and sanitation.

In September, our operations manager at Cerro de Pasco, Mr. Hermán Flores Arévalo, resigned his position. We are appreciative of his contributions to the development of the Company.

In October, our head operations manager Mr. Roberto Maldonado Astorga, who for many years worked toward the Company's development and growth, also presented his resignation. On behalf of our Board of Directors, we would like to express our gratitude for his dedication, hard work and commitment to the Company's goals.

In addition, we mourn the passing in January 2018 of Dr. Otto Eléspuru Nesanovich, general manager of Empresa Administradora Cerro S.A.C. and Óxidos de Pasco S.A.C. He also held a management position in the Company's legal department. We are appreciative of the dedication, hard work, loyalty, and commitment that he showed for the Company.





It is also important to mention that in November 2017, as a result of Glencore's public tender, the following company directors resigned from the Board: Madeleine Osterling Letts, Felipe Osterling Letts and José Bayly Letts. On behalf of the Board, we would like to thank them for all of their contributions during their tenure as directors.

The Board of Directors, acting within the powers bestowed on it by law, appointed Ms. Victoria Soyer Toche and Mr. Carlos Perezagua Marín to the Board on November 18, 2017.

Subsequently, in December Mr. Pablo Moreyra Almenara resigned from the Board of Directors. On behalf of the Board, we would like to thank him for his collaboration during his time with the Company.

In addition, we would like to report that, as of the date of presentation of this Annual Report, Volcan class B shares have been reclassified from the FTSE Global Small Cap Index to the FTSA Global Mid Cap Index. The shares have also been added to a new index, the FTSE All-World Index.

**I WOULD LIKE TO TAKE THIS OPPORTUNITY, ON BEHALF OF OUR BOARD OF DIRECTORS, TO THANK ALL OF OUR EMPLOYEES, EXECUTIVES AND PARTNERS FOR THEIR HARD WORK, DEDICATION, AND COMMITMENT TO THE COMPANY'S OBJECTIVES.**

It's also important to mention that we now have a history of seven decades of investment in mining development in our country's central highlands, with a commitment to sustainable growth in harmony with surrounding communities and the environment. This hasn't been an easy undertaking. There have been numerous challenges, and thanks to the hard work of our founders and those who have enabled the Company to continue to grow—workers, engineers, executives and directors—we have successfully overcome them.

Finally, I would like to thank you, our shareholders, for your confidence, support and interest in Volcan's activities.

Sincerely,



**José Picasso Salinas**  
Chairman





## 02

# IMPORTANT INDICATORS AND SIGNIFICANT CHANGES IN 2017







## IMPORTANT INDICATORS AND SIGNIFICANT CHANGES IN 2017

Sustainability management in 2017 contributed to the following results:

### Financial

- Net sales: USD 856.7 MM 102-7
- EBITDA: USD 343.0 MM
- Net profit before exceptional items: USD 92.7 MM
- Net profit: USD -477.5 MM
- Total assets: USD 2,224.2 MM

### Environmental

- The legal environmental audit was carried out, as a mechanism to control and verify compliance at each mining unit
- The corporate standards book was published, as a tool to manage Critical Environmental Risks in the operation
- 52% of Critical Environmental Risks (RCA) implemented.

### Social

- 2,959 employees 2,800 men and 159 women 102-7, 102-8
- 49% of our employees are union members (workers and employees) 102-8
- 358 suppliers and 76 regular subcontractors
- Community investment: USD 5 MM
- The partnership between Volcan and Enseña Perú had a direct impact on more than 612 students, and an indirect impact on 1550 students, across all operating units
- Volcan ranked third among mining companies for projects awarded under the Public Works Tax Credit Program (Obras por Impuestos).

### SIGNIFICANT CHANGES 102-10

#### Operational aspects

There have been no changes in the location of Volcan operations or its suppliers. The structure of the supply chain and aspects related to selection or termination of contracts have remained the same as the previous year.

The 20-MW Rucuy hydroelectric plant (120 GWh/year) began its commercial operation in August, and generated 35 GWh during 2017. The production was lower than expected due to damage to part of the penstock caused by heavy rain, river overflow, and mudslides as a consequence of the coastal El Niño in March 2017. By the closing date of this report, the works to repair the hydroelectric plant are still underway, and its service is expected to resume by the second half of 2018. The claim, categorized as a Force Majeure event by Osinergmin, was promptly notified to the insurance company in order to request the recognition of damages and loss of profit.

The San Expedito plant at Cerro de Pasco, which suspended operations along with the Paragsha underground mine in November 2015, resumed activities in July 2016 to treat stockpiles from old operations. In the third quarter of 2017, the construction of the sorting circuit was concluded. The sorting technology separates the highest grade ore from the marginal ore stockpiles, which is then treated at the concentrator plant, obtaining better recoveries and higher production.

### Capital Structure Aspects

In November 2017, Glencore International AG made a Public Tender Offer (OPA) for Class A common shares. It acquired a total of 603,077,387 shares. It is important to note that, as of the date of the OPA, Glencore International AG and its related companies held 295,754,888 shares. By the closing date of this report, they held a total of 898,832,275 Class A shares, representing 55.028% of the shares of said class, and 23.29% of the Company capital, excluding Class A and Class B shares held in Volcan's portfolio. 102-7



# 03 OUR COMPANY





# A HISTORY OF COMMITMENT

**VOLCAN IS A PERUVIAN MINERAL EXPLORATION, PRODUCTION, AND PROCESSING COMPANY WHICH BEGAN OPERATIONS IN 1943. IN 2017, VOLCAN CELEBRATED 74 YEARS SINCE IT BEGAN MINING OPERATIONS.** 102-1

Through the constant hard work and dedication of its directors, management and employees, it has become one of the largest producers of silver, zinc, and lead in Peru and the world.

The Company sells concentrates of zinc, lead, copper and silver, as well as dore bars, in the domestic and international markets. In addition, Volcan generates electric power through

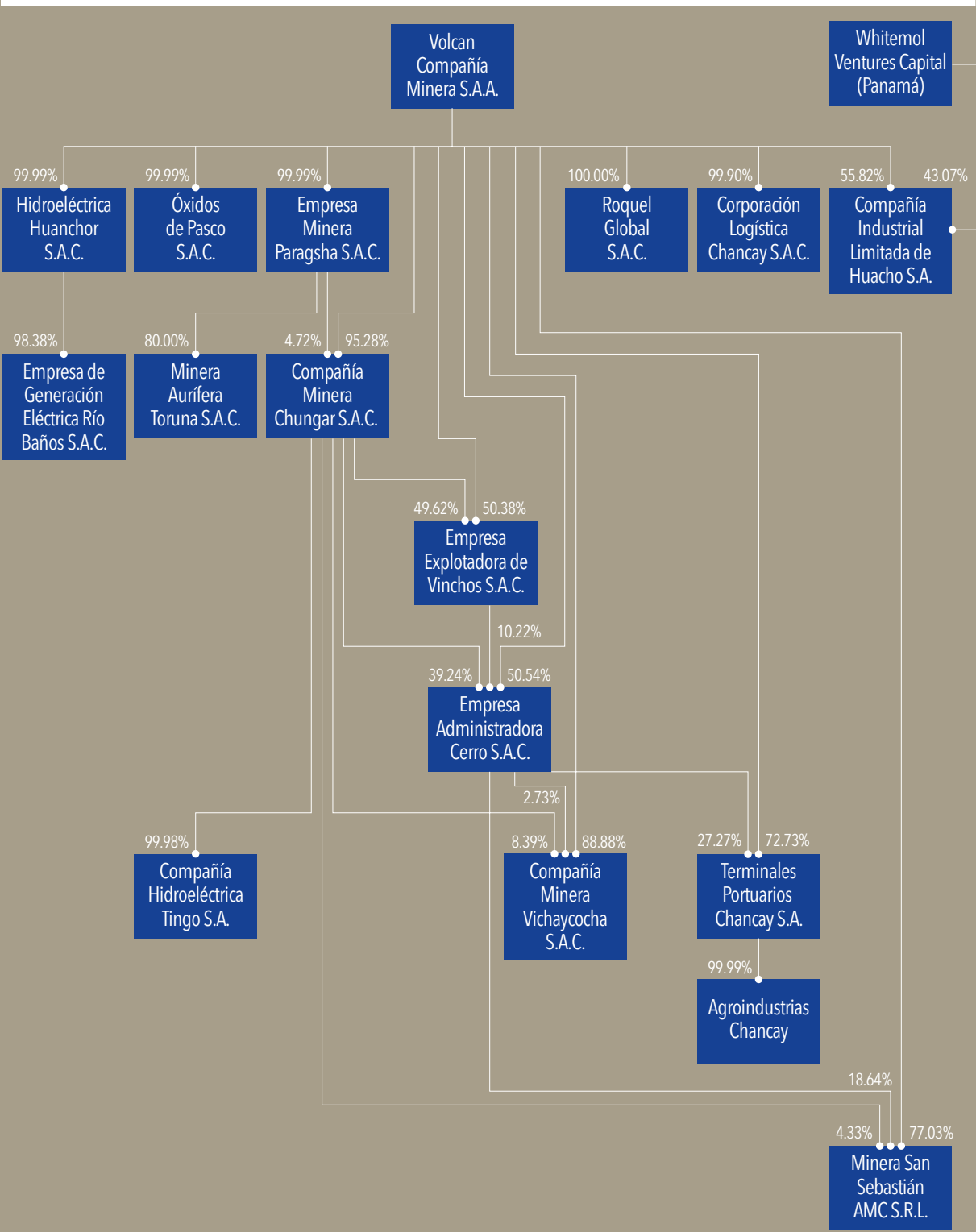
hydroelectric plants for its own supply and also sells power to several companies located near its operations. 102-2

Its activities are classified under ISIC category 1320 (mining of non-ferrous metal ores) and ISIC 3510 (electric power generation, transmission and distribution). 102-2

The Company, which resulted from a merger between Volcan Compañía Minera S.A. and Empresa Minera Mahr Túnel S.A., was incorporated on February 1, 1998, in a public deed executed before Notary Public Dr. Abraham Velarde Álvarez. Volcan is registered in the Public Mining Registry under Entry 1, Record 41074, and in Record 11363057 of the Registry of Legal Entities of Lima. 102-5



## 2017 CORPORATE STRUCTURE 102-18





## OUR OPERATIONS

Volcan carries out its activities in Peru, with operations in the regions of Lima, Pasco, and Junín. Its business address is Manuel Olguín N° 373, Santiago de Surco, Lima. The Company has five business units in Peru's Central Highlands: Yauli, Chungar, Cerro de Pasco, Alpamarca, and Óxidos de Pasco. Altogether, it has nine underground mines, three open pits, seven concentrate plants, and a lixiviation plant. [102-3 / 102-4 / 102-7](#)

In addition, the Company owns 13 hydroelectric plants near its mining operations.



### › MINING UNITS, MINES AND PLANTS

UNIT	MINES			PLANTS	
	NAME	TYPE	ESTADO	NAME	TYPE
Yauli	San Cristóbal	underground	active	Victoria	concentrator
	Andaychagua	underground	active	Mahr Tunel	concentrator
	Ticlio	underground	active	Andaychagua	concentrator
	Carahuacra	underground	active		
	Carahuacra Norte	open pit	active		
Chungar	Animón	underground	active	Animón	concentrator
	Islay	underground	active		
Cerro de Pasco	Mina Subterránea	underground	suspended	Paragsha	concentrator
	Raúl Rojas	open pit	suspended	San Expedito	concentrator
	Vinchos	underground	suspended		
Alpamarca	Río Pallanga	underground	suspended	Alpamarca	concentrator
	Alpamarca	open pit	active		
Óxidos de Pasco	Stockpiles	stockpiles	active	Óxidos	leaching

### 2017 VOLCAN SUSTAINABILITY REPORT OUR COMPANY

### › MINING UNITS AND THEIR PRODUCTS [102-2](#)

UNIT	OBTAINED PRODUCTS	FINE CONTENTS
Yauli	Zinc concentrate	Zinc, silver
	Lead concentrate	Lead, silver
	Copper concentrate	Copper, silver, gold
Chungar	Zinc concentrate	Zinc, silver
	Bulk concentrate	Lead, copper, silver
Cerro De Pasco	Zinc concentrate	Zinc, silver
	Lead concentrate	Lead, silver
Alpamarca	Zinc concentrate	Zinc, silver
	Bulk concentrate	Lead, copper, silver
Óxidos De Pasco	Dore bars	Silver, gold

### › LOCATION OF MINING UNITS [102-4](#)

UNIT	REGION	LOCATION
Yauli	Junín	170 km from the city of Lima
Chungar	Pasco	219 km from the city of Lima
Cerro De Pasco	Pasco	295 km from the city of Lima
Alpamarca	Junín	182 km from the city of Lima
Óxidos De Pasco	Pasco	295 km from the city of Lima

### › LOCATION OF HYDROELECTRIC PLANTS [102-4](#)

UNIT	REGION	LOCATION
CHS	Lima / Pasco	170 km from the city of Lima
Chungar <sup>1</sup>	Pasco	
CH Tingo	Lima	130 km from the city of Lima
CH Huanchor	Lima	110 km from the city of Lima
CH Rucuy	Lima	142 km from the city of Lima

<sup>1</sup> There are 10 hydroelectric plants: Baños I to V (5), Chicrín I to IV (4) and San José (1). Only CH San José is located in Pasco.





## WORKING WITH SOLID CORPORATE PRINCIPLES

**IN 2012, THE COMPANY'S VISION, MISSION AND VALUES WERE REVIEWED AND ADAPTED TO THE NEW CHALLENGES OF THE FUTURE.** 102-16

### MISSION:

Volcan is a mining company of Peruvian origin pursuing the maximization of shareholder value through operational excellence and the highest standards of workplace safety and environmental management, contributing to the development of its personnel and its community.

### VISION:

By 2021, Volcan aspires to be one of the principal mining companies diversified in the production of base and precious metals, a leader in growth and operational excellence, acting in a socially responsible manner with a dedicated and highly qualified workforce.

### CORPORATE VALUES

#### Safety:

Our actions are aimed at mitigating all risks in order to guarantee the health and safety of our employees in day-to-day operations.

#### Integrity:

Our conduct reflects an honest, just, ethical, and transparent attitude in all of our actions.

#### Commitment:

We are part of a larger corporate project in which we firmly believe and for which we give our best.

#### Excellence:

We strive to always meet the highest performance standards in our work to achieve outstanding results.

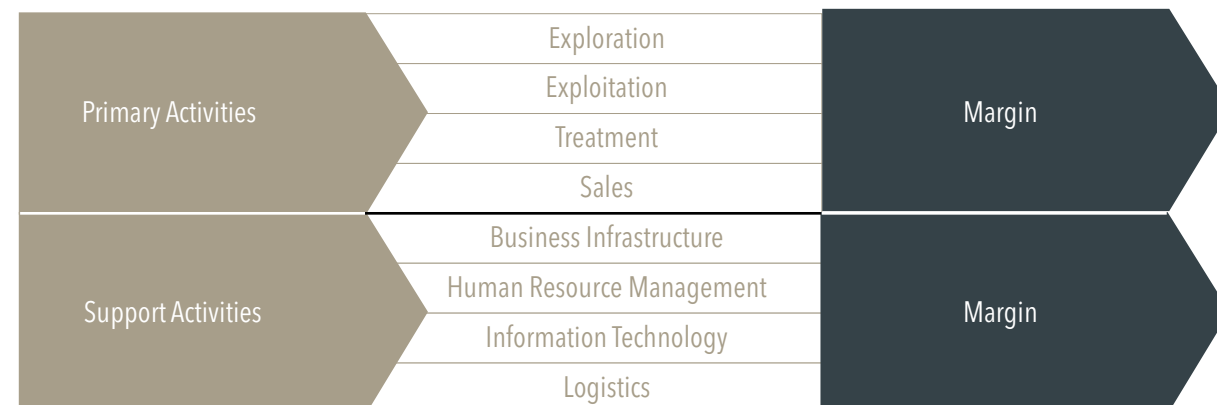
#### Respect:

Our actions are aimed at creating harmonious relationships with our employees, communities, environment, customers, and shareholders.

### OUR VALUE CHAIN

Volcan's business value chain describes how we carry out key strategic activities to generate value for the end customer.

#### › VALUE CHAIN



## WORKING WITH INTEGRITY

**THE COMPANY HAS ESTABLISHED A SET OF STANDARDS STIPULATED IN CORPORATE PRINCIPLES AND VALUES AND IN ITS CODE OF ETHICS AND CONDUCT, WHICH CONTRIBUTE TO PROFESSIONAL DEVELOPMENT AND TO GENERATING A WORKPLACE CLIMATE OF INTEGRITY AND HONESTY. THESE POLICIES ARE FOLLOWED BY THE EMPLOYEES, MANAGERS AND DIRECTORS OF VOLCAN AND ITS SUBCONTRACTOR COMPANIES.**

The Company promotes full compliance with this code. If an employee observes any unethical conduct, they must inform their manager or general auditor. They can also use the anonymous "Complaint Line", an anonymous communications channel that is open to every employee.

102-17

The Code of Ethics and Conduct, approved by the Board of Directors and Senior Management, is provided to all employees for their acceptance and is also published on the Company's web site. Subcontractors are also provided with a copy of the orientation manual and the mission, vision, and values of the Company are explained to them.

### CODE OF ETHICS AND CONDUCT

102-16 / 103-2

Volcan Compañía Minera S.A.A. and its Subsidiaries adopt an ethical and equitable behavior through a non-sectarian, apolitical, socially and environmentally responsible corporate culture. For this, the Company abides by the following values and principles:

- Justice and integrity in business affairs, including the ethical settlement of actual or potential conflicts in personal and professional relationships;
- Respect to Human Rights and the dignity of all employees;
- Acceptance of several cultures, religions, races, genders and sexual orientations;
- Honest, transparent and responsible actions;
- Observance of the corporate government's honesty standards and the relevant laws.





The Company and people subject to this Code must meet the following principles, duties and rules:

## 1. CONFLICT OF INTERESTS

Conflicts between personal concerns and the Company's interests must be avoided.

## 2. GIFTS AND COURTESY GESTURES

The employee is not authorized to deliver or accept, directly or indirectly, favors, gifts or courtesy gestures that may compromise or give the impression that they compromise their professionalism or impartiality, or that may affect their capacity to act with integrity in the Company's best interest.

## 3. LEISURE ACTIVITIES

The Company recognizes that social activities are important for business relationships; however, employees must not become involved in activities that may affect their integrity, professionalism or judgment regarding business decisions and relationships.

## 4. USE OF GOODS AND SERVICES

The employees cannot use the Company's goods and services for their personal benefit or other personal purposes (other than their duties or those scheduled by the Company), without written approval of their Manager.

## 5. RESPONSIBILITY

The employees are not authorized to give, offer, authorize or accept, directly or indirectly, any valuable (bribery) to achieve an undue personal or business advantage that may be deemed as an incorrect behavior.



## 2017 VOLCAN SUSTAINABILITY REPORT OUR COMPANY

## 6. WORKDAY AND VACATIONS

Negligence, dishonesty and abuse regarding the required working hours will be considered a noncompliance with the Code of Ethics, and may give rise to disciplinary measures.

## 7. PAYMENT ERRORS

Any payment in excess, or the irregular payment of amounts of money to the employee or to a third party not entitled to it, or due to a mistake, must be immediately notified to their Manager.

## 8. BUSINESS OPERATIONS

Purchase agreements and tenders must be awarded on the basis of quality, service, price and availability, within the parameters of the Company's policies and procedures and any law in effect.

All counsel and/or suppliers of goods or services must have good reputation and integrity if they intend to carry out business with the Company.

## 9. INTOXICATING SUBSTANCES

It is forbidden to consume, possess or distribute alcoholic beverages or illegal drugs within the Company, as well as to come to the workplace while under their influence.

## 10. INFORMATION OWNED BY THE COMPANY

The employees are obliged not to disclose, without the corresponding authorization, to any person within or outside the Company, who has no need to know the information, confidential data or information owned by the Company or belonging to their operations or properties, or to disclose it

to a supplier, consultant, customer, competitor or business associate, current or potential, without prior authorization by their Manager, who, in turn, may ask the General Manager on how to proceed.

## 11. REPORTING NON-ETHICAL CONDUCTS

The Company does not excuse behaviors that are incompatible with the Code of Ethics and Conduct. If the employee is aware of any unethical behavior, they must report it to their Manager or General Auditor. 102-17

If the employee is aware of any behavior incompatible with this Code by any member of Management, they must report it to the Audit Committee. Report can be made confidentially.

## 12. DECLARATION OF HUMAN RIGHTS

The Company strives to ensure that every individual within the group respects the rights and freedoms enunciated below and to secure their effective recognition and observance throughout the group. Taking into account the health and safety parameters permitted by its line of business, the Company seeks to protect the right to: 102-16

- Human dignity;
- Fair treatment (acknowledging the prior existence of disadvantaged groups);
- Liberty and security of individuals;
- Not be subjected to slavery, servitude and forced labor;
- Freedom of conscience, religion, thought, belief and opinion;
- Freedom of expression (subject to considerations of confidentiality and the prohibition of hate speech and incitement to cause harm);
- Freedom of association;
- Fair labor practices;
- Not to be employed if you are a child, except for exceptions stipulated by law;
- Not to be arbitrarily deprived of property or possessions;
- Freely participate in the cultural activities of your choice;
- Lawful, reasonable and fair action;
- Not to be subject to arbitrary arrest or detention.



## PARTICIPATION IN ASSOCIATIONS AND ORGANIZATIONS

102-13

- National Society of Mining, Petroleum and Energy: Active member.
- American Chamber of Commerce of Peru (AmCham): Member of the Sustainable Development Committee.
- Enseña Perú (Teach Peru): Member of Campeones por la Educación (Education Champions), a partnership among companies committed to education and whose goal is to close learning gaps in math and reading comprehension.

**VOLCAN COMPAÑÍA MINERA S.A.A. AND ITS SUBSIDIARIES ADOPT AN ETHICAL AND EQUITABLE BEHAVIOR THROUGH A NON-SECTARIAN, APOLITICAL, SOCIALLY AND ENVIRONMENTALLY RESPONSIBLE CORPORATE CULTURE.**





## AWARDS AND HONORS

### › AWARDS AND HONORS RECEIVED IN 2017

DATE	AWARD / HONOR	INSTITUTION	REASON / CAUSE
March	First Place: XXI National Mining Safety Contest. Alparmarca won the first place in open pit category	Mining Safety Institute of Peru (ISEM)	Best safety practices
March	XXI National Mining Safety Contest. First place in UG mine category	Mining Safety Institute of Peru (ISEM)	Best safety practices
August	First place in 2017 Latin American Executive Team Small Cap. Metals & Mining	Institutional Investor	Best Investor Relations Professional (Overall): David Gleit
August	First place in 2017 Latin American Executive Team Small Cap. Metals & Mining	Institutional Investor	Best Investor Relations Professional (Sell Side): David Gleit
August	First place in 2017 Latin American Executive Team Small Cap. Metals & Mining	Institutional Investor	Best Investor Relations Team (Overall) to Volcan Compañía Minera
August	First place in 2017 Latin American Executive Team Small Cap. Metals & Mining	Institutional Investor	Best Investor Relations Program (Overall) to Volcan Compañía Minera
August	First place in 2017 Latin American Executive Team Small Cap. Metals & Mining	Institutional Investor	Best Investor Relations Program (Sell Side) to Volcan Compañía Minera
September	Winner: Environmental Management category and National Mining Award nominee	PERUMIN 33	Rock acid drainage as incubation for control of cyanide in Cerro de Pasco

## 2017 RESULTS

### 01. OPERATING RESULTS

#### Mine Production

**IN 2017, TREATED VOLUME GREW 7.7% DUE TO INCREASED PRODUCTION AT CERRO DE PASCO, AN EFFECT THAT WAS COMPLEMENTED BY GROWTH IN TONNAGE TREATED AT YAULI AND ALPAMARCA.**

In terms of fines, zinc production fell 6.7%, lead production was down 1.9%, and silver production decreased 21.1% relative to 2016, while copper production rose 4.2% and gold production increased by 39%.

Lower zinc, silver and lead production in 2017, compared to the previous year, is explained mainly by low grade ore and two months of suspended operations at Islay Mine resulting from issues with the Huaychao community.

### › CONSOLIDATED MINING PRODUCTION

102-7

CONSOLIDATED PRODUCTION	2016	2017	VAR %
<b>Ore Treatment (thousand MT)</b>	<b>7,716</b>	<b>8,312</b>	<b>7.7</b>
Concentrator Plants	6,816	7,440	9.2
Oxides Plant	900	872	-3.1
<b>Fines Content</b>			
Zinc (thousand FMT)	273.4	255.1	-6.7
Lead (thousand FMT)	52.2	51.3	-1.9
Copper (thousand FMT)	5.2	5.4	4.2
Silver (million Oz)	22.0	17.3	-21.1
Gold (thousand Oz)	5.8	8.1	39.0

Source: Volcan Cia. Minera

In the case of silver, decreased production was also due to lower treated volumes at Chungar, and the 18-day suspension of production at the Oxides Plant resulting from conflicts with the community of Rancas in February 2017. Lead was influenced by low grades at San Cristóbal and Carahuacra mines.

Year-to-date, copper and gold production grew. In the case of copper, this is explained by better head grades in some operations, as planned.

#### Energy Production

In 2017 Volcan's 13 hydroelectric plants generated 352.5 GWh, which represents 50% of the Company's total energy consumption.

Chungar's 10 hydroelectric plants generated 162 GWh of power altogether—23% of the Company's total consumption. Moreover, the Tingo hydroelectric plant generated 9 GWh, which was sold directly to the Company. Volcan purchased 541.4 GWh from the Sistema Eléctrico Interconectado Nacional (National Interconnected Electric System) in order to meet its total consumption demand.





The Huanchor hydroelectric plant produced 146.9 GWh. This power was sold to third parties. By the closing date of this report, the operations at the Rucuy hydroelectric plant are still suspended due to damage to part of the penstock and a section of the transmission line as a consequence of the coastal El Niño in March 2017. The project to repair the penstock is currently underway, and includes the construction of a tunnel and, subsequently, a shaft.

#### › VOLCAN ELECTRICITY BALANCE IN GWH <sup>102-7</sup>

ELECTRICITY BALANCE IN GWH	2016	2017	VAR%
<b>Energy Production</b>	<b>323</b>	<b>353</b>	<b>9%</b>
CH's Chungar	138	162	17%
CH Tingo	9	9	-3%
CH Huanchor	139	147	6%
CH Rucuy	36	35	-5%
<b>Energy Consumption</b>	<b>635</b>	<b>707</b>	<b>11%</b>
<b>Energy Purchase</b>	<b>488</b>	<b>541</b>	<b>11%</b>

## 02. FINANCIAL RESULTS

#### › INCOME STATEMENT <sup>201-1</sup>

INCOME STATEMENT MM USD	2016	2017	VAR %
Sales after adjustments	821.5	856.7	4.3
Sales Costs	-581.2	-566.1	-2.6
<b>Gross Profit</b>	<b>240.3</b>	<b>290.6</b>	<b>20.9</b>
Gross Margin	29%	34%	5 pp
<b>Net Profit Before Exceptionals</b>	<b>84.4</b>	<b>92.7</b>	<b>9.8</b>
Net Margin	10%	11%	1 pp
Exceptional Adjustments		-570.2	
<b>Net Profit After Exceptionals</b>	<b>84.4</b>	<b>-477.5</b>	
<b>EBITDA<sup>3</sup></b>	<b>302.9</b>	<b>343.0</b>	<b>13.2</b>
<b>Margin EBITDA</b>	<b>37%</b>	<b>40%</b>	<b>3 pp</b>

<sup>1</sup> Includes sales and sales costs of energy business. In 2016, other income includes an extraordinary income of USD 14.0MM due to a partial international bond buyback.  
<sup>2</sup> Exceptionals in 2017 were USD -363.5 MM in other income (expenses) and USD -206.7 MM due to taxes, totalling USD -570.2 MM  
<sup>3</sup> Does not consider exceptional adjustments.  
Source: Volcan Compañía Minera



#### 2017 VOLCAN SUSTAINABILITY REPORT OUR COMPANY

#### Mining Sales

Volcan mining sales totaled USD 856.7 million in 2017, a 4.3% increase over sales in the previous year. <sup>102-7</sup>

#### › DETAIL OF MINING SALES, BY METAL <sup>201-1</sup>

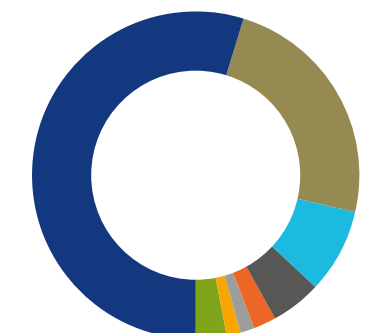
SALES (MMSD)	2016	2017	VAR. %
Zinc	399.6	484.5	21.2
Lead	71.7	96.5	34.6
Copper	12.7	19.5	53.4
Silver	323.3	252.7	-21.8
Gold	8.5	6.9	-18.5
<b>SALES BEFORE ADJUSTMENTS</b>	<b>815.9</b>	<b>860.2</b>	<b>5.4</b>
Final Invoices	12.3	9.4	-23.8
Open Positions	19.4	-7.2	
Hedging	-26.0	-5.6	-78.5
<b>SALES AFTER ADJUSTMENTS</b>	<b>821.5</b>	<b>856.7</b>	<b>4.3</b>

Volcan's main customers are domestic, accounting for 56% of sales value in 2017, followed by South Korea with 23%; China, with 8%; the United States, with 5%; Belgium, with 2%; Mexico, with 1%; Italy, with 1%, among others. <sup>102-6</sup>



#### › PERCENTAGE OF SALES BY DESTINATION, 2017

56.05% Peru  
23.13% Korea  
8.01% China  
5.28% USA  
1.93% Belgium  
1.49% Mexico  
1.28% Italy  
2.84% Others





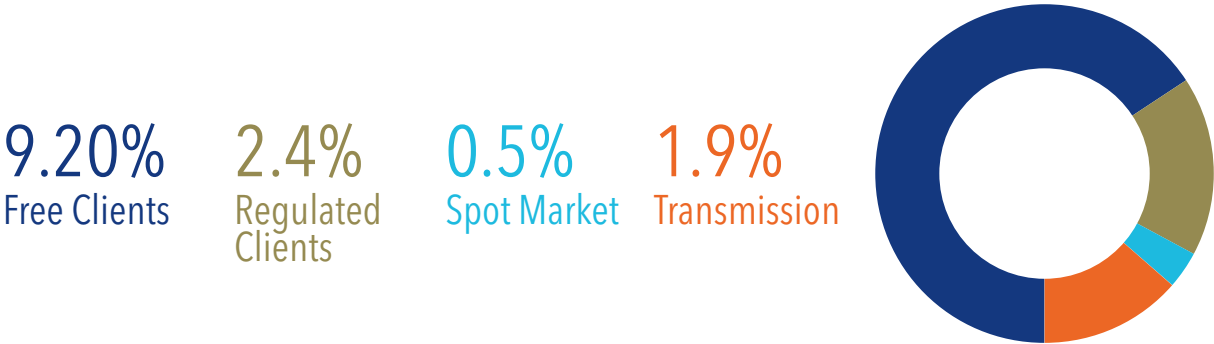
Energy sales

In the energy sector, net sales totaled USD 13.9 million. 102-7 100% of energy sales were domestic. 102-6

ENERGY SALES

ENERGY SALES (MM U SD)	HUANCHOR	EGERBA	TINGO	TOTAL
Free Clients	8.6	0.5	0.1	9.2
Regulated Clients	1.7	0.7	0.0	2.4
Spot Market	0.1	0.4	0.0	0.5
Transmission	0.4	0.0	1.5	1.9
Total	10.8	1.6	1.6	14.0

PERCENTAGE OF SALES BY CUSTOMER TYPE, 2017





# 04

## SUSTAINABILITY MANAGEMENT





# SUSTAINABLE DEVELOPMENT GOALS (SDG)

## › SDG TO WHICH WE CONTRIBUTED IN 2017:



### 1. SUSTAINABLE DEVELOPMENT GOALS (SDG) 102-12

Volcan believes it is extremely important to promote harmonious relations with the communities in the area of influence of its operations. In order to prioritize Volcan interventions in communities within its direct area of influence, the Company has aligned its voluntary corporate social responsibility initiatives with the United Nations Sustainable Development Goals (SDG). In addition, to achieve its goals Volcan has forged partnerships with private entities, government agencies, and non-governmental organizations. Its social responsibility plans and actions are focused mainly on the following objectives:

#### Objective 3: Ensure healthy lives and promote wellbeing for all at all ages

Volcan has committed to generating material and sustainable improvements in community health standards. Therefore, in alliance with Prisma, a non-governmental organization and strategic health partner, the Company has designed a corporate project with a 2018 timeline. The aim of the project is to identify the principal diseases in each community, monitor their evolution over time, and develop medical campaigns to address them.

#### Objective 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

In 2017 Volcan continued its multi-annual partnership with Enseña Perú to incorporate teachers from their organization into various schools within the Company's area of influence. This produced immediate results in terms of academic performance and soft skills improvement for more than 1,500 students. The intervention was focused on the Cerro de Pasco, Chungar and Yauli units. In addition, the Company continued with the SENATI and CETEMIN comprehensive scholarship program, which directly benefits youth from communities near our operations.

#### Objective 6: Ensure availability and sustainable management of water and sanitation for all

All Public Works Tax Credits projects help their specific sector and also contribute to reduce poverty (SDG 1), develop infrastructure (SDG 9) and create partnerships for development (SDG 17).

Since 2010, Volcan has committed PEN 126 million to finance 15 infrastructure and utilities project of great social impact. These education (SDG 4), water and sanitation (SDG 6), solid waste management and transport (SDG 11)

## 2017 VOLCAN SUSTAINABILITY REPORT SUSTAINABILITY MANAGEMENT

projects, among others, benefit almost 500,000 people and incorporate sustainability and innovation components and comprehensive solutions.

#### Objective 7: Ensure access to affordable, reliable, sustainable, and modern energy for all

Volcan owns hydroelectric plants and has chosen to invest in clean, renewable hydroelectric generation projects to supply its own operations and third parties. It has also invested in its own electricity transmission systems in an effort to better manage its cost structure, ensure greater availability of power for its mining operations, and contribute to reducing greenhouse gas emissions.

The total installed capacity of Volcan hydroelectric plants is 63 MW. Ten hydroelectric plants in Baños, and the Tingo Hydroelectric Plant, supply 23 MW directly to the Chungar mining unit; while Huanchor and Rucuy supply 19.7 MW and 20 MW, respectively.

In March 2017, the Peruvian coast endured heavy rain, river overflow and mudslides that affected, among others, several sections of the penstock of the Rucuy hydroelectric plant, interrupting the plant's service. By the closing date of this report, the works to repair the hydroelectric plant are still underway, and its service is expected to resume by the second half of 2018.

#### Objective 9: Build resilient infrastructure, promote inclusive and



#### sustainable industrialization, and foster innovation

In the third quarter of 2017, the construction of the sorting circuit was concluded. The sorting technology separates the highest grade ore from the marginal ore stockpiles, which is then treated at the concentrator plant, obtaining better recoveries and higher production. Without it, processing the mineral would not be profitable.

## 2. SUSTAINABILITY STRATEGY

The business approach has shifted in recent years, aiming at improving the relation between profitability and responsibility. Modern and efficient companies make commitments to the comprehensive development of its economic, social and environmental area of influence. Volcan adheres to this concept, with the understanding that proper management of its environmental impacts has a positive effect on value generation and enables the Company to develop its operations in a sustainable manner. Environmental care and protection is a concern present in all Company activities. 102-11

It is important to emphasize that Volcan's internal policies are in compliance with Peruvian law.

Volcan's Environmental Management System (EMS) aids the Company in identifying and preventing environmental damage. The system optimizes water and energy



consumption, controls waste production, as well as assists in evaluating the Company's commitments, and updates, improves, or redesigns environmental measures.

In addition, the Internal Auditing unit identifies opportunities for improvement and incorporates preventive and corrective actions throughout the different areas of the Company. The Company's EMS contributes to the continuous improvement of procedures, adds value, and optimizes management of economic, social, and environmental risks.

Finally, the different areas of the Company are overseen and subject to enforcement by government regulatory entities that evaluate compliance with legal procedures and statutes. In this regard, the Company dedicates careful attention to the legal commitments made in the various environmental instruments it manages.

### 3. INFORMING WITH TRANSPARENCY

Volcan conducted an evaluation to identify stakeholder groups that in one way or another are directly or indirectly influenced by its operations, taking into consideration both potential positive and negative impacts. **102-42**

- Shareholders
- Employees
- Suppliers
- Communities
- Government and civil society
- Customers **102-40**

### 4. STAKEHOLDER MANAGEMENT AND DIALOG

**102-43** Establishing solid, lasting relations with stakeholder groups is a strategic goal of Volcan's environmental management. The Company conducted surveys and interviews with employees, suppliers, and subcontractors, as well as focus groups with community representatives in its areas of direct influence. In addition, community relations

specialists contributed quality information for understanding community expectations.

It is important to note that stakeholder participation in the various stages of mining activity occurs through processes of dialog, negotiations, participation in informational workshops, communication mechanisms, and complaint channels. **G4-26** These dialog mechanisms enable the Company to understand and more closely manage its relations with stakeholder groups.

#### STAKEHOLDER GROUP EXPECTATIONS, BY GRI CATEGORY

GRI CATEGORY	EXPECTATIONS
Economic	Value generated (revenues) and distributed (operating and administrative costs, payroll, investment in the community, etc.)
	Indirect economic consequences (investment in infrastructure, development of economic activities in the area of influence)
Environmental	Water use and management
	Biodiversity protection
	Effluent and waste management
Social (Labor)	Investments for improved environmental performance
	Employment and work practices (staff retention, turnover, social benefits, support to employees approaching retirement)
	Employee training and education
	Occupational health and safety management
	Diversity and equal opportunities
Social (Society)	Impacts on communities and their management
	Information for customers and their satisfaction level
	Planning for operation closure

#### PRINCIPAL MECHANISMS TO DIALOG WITH STAKEHOLDER

STAKEHOLDER	MECHANISMS
Shareholders	General meeting of shareholders
	Informational meetings
	Website for the Securities Market of the Superintendency of Securities Market (SMV)
	Email and post
	Telephone
Employees	Company web site
	Ongoing and interdepartmental meetings with teams.
	Bimonthly meetings with unions.
	Response to complaints.
	Virtual media, intranet and daily email and boards.
Community	Occupational Health and Safety Committees in all Operating Units.
	Activities with employees.
	Daily interaction with community actors.
	Weekly meetings with authorities.
	Daily coordination with community groups.
Government and Civil Society	Assemblies with active community participation.
	Strategic meetings with thought leaders.
	Community outreach through print and radio media.
	Requests and letters.
	Email.
Customers	Telephone communications.
	Information Office.
	Ongoing interaction via email and telephone.
Suppliers and contractors	Incident areas and complaints.
	Visits to plants.
	Ongoing interaction.
	Email.
	Telephone.





# 05

## SHAREHOLDER RELATIONS MANAGEMENT





**SHARE STRUCTURE**

**SUBSCRIBED, PAID AND REGISTERED CAPITAL AS OF DECEMBER 31, 2017 WAS PEN 3,546,617,792, COMPRISED OF 1,633,414,553 CLASS A COMMON SHARES AND 2,443,157,622 CLASS B COMMON SHARES; THE VALUE OF EACH NOMINAL SHARE IS PEN 0.87.**

The subsidiary Empresa Minera Paragsha S.A.C. holds 182,664,981 Class A common shares and 12,234,901 Class B common shares. The subsidiary Compañía Minera Chungar S.A.C. holds 23,442,345 Class A common shares.

› **MAIN SHAREHOLDERS - CLASS A COMMON SHARES**

MAIN SHAREHOLDERS	%	TYPE OF PERSON	NATIONALITY	ECONOMIC GROUP
Glencore International AG	41.91	Legal	Switzerland	Glencore
Empresa Minera Paragsha S.A.C.	11.18	Legal	Peruvian	Volcan
De Romaña Letts, José Ignacio	10.33	Natural	Peruvian	Not applicable
Letts Colmenares de Romaña, Irene Florencia	9.90	Natural	Peruvian	Not applicable
Blue Streak International N.V.	8.38	Legal	Netherlands Antilles	Not applicable
Sandown Resources S.A.	7.81	Legal	Panama	Glencore

(\*) Glencore group, including all its subsidiaries, holds a 55.03% share.

› **MAIN SHAREHOLDERS - CLASS B COMMON SHARES**

MAIN SHAREHOLDERS	%	TYPE OF PERSON	NATIONALITY	ECONOMIC GROUP
AFP Integra - Fondo 2	10.63	Legal	Peruvian	Not applicable
AFP Integra - Fondo 3	7.29	Legal	Peruvian	Not applicable
AFP Prima - Fondo 3	7.23	Legal	Peruvian	Not applicable
AFP Prima - Fondo 2	6.58	Legal	Peruvian	Not applicable
AFP Profuturo - Fondo 2	5.99	Legal	Peruvian	Not applicable





# STOCK MARKET PARTICIPATION

Volcan shares are traded on the Lima Stock Exchange, the Santiago Stock Exchange, and the Latibex in Madrid.

## › STOCK MARKET

SHARE	LIMA STOCK EXCHANGE	SANTIAGO DE CHILE STOCK EXCHANGE	MADRID STOCK EXCHANGE LATIBEX
Volcan Class "A" common share	VOLCAAC1	VCMAC1	
Volcan Class "B" common share	VOLCABC1	VCMB1	XVOLB.MC

## STRATEGIC COMMITTEES

These committees are responsible for decision-making and management of the following economic, social, and environmental aspects. Board committees are made up of Company directors, while operational committees are comprised of Company executives. 102-18

## › BOARD COMMITTEES

COMMITTEE	DUTIES
Executive Committee	Research and resolve matters entrusted to it by the Board of Directors, except for accounting matters, distribution of provisional dividends, B3:C7 of financial reports to the general shareholders meeting, and the specific powers that the General Shareholders Meeting concedes to the Board of Directors, in accordance with Article 38 of the bylaws.
Audit Committee	"Support management to ensure compliance with the company's Good Corporate Governance standards. Monitor compliance with the company's Strategic Management of Corporate Risk. Guarantee the existence of a proper internal control system. Monitor the implementation of effective controls based on the cost/benefit evaluation. Although there is no formal Risk Committee, most of its duties are carried out by the Audit Committee."
Human Resources Committee	"Ensure that an organizational structure is maintained in accordance with business needs, promoting meritocracy and professional development of the company's executives. Define guidelines for compensation plans (current and long-term) for management levels, to ensure alignment with company objectives and consistency with market conditions, to attract and retain the best talent available. Participate in determining annual bonuses for senior management based on performance."
Corporate Social Responsibility Committee	"Define annual objectives and priority improvement initiatives in the areas of community, environment, and occupational health and safety. Monitor progress of implementation of priority initiatives, including progress of the Dupont project. Analyze and propose for assessment specific topics that require a Board decision."

## › OPERATIONAL COMMITTEES 102-20

	COMMITTEE	DUTIES
Lima	Management Committee-Health and Safety in the Workplace	Seguimiento y control al cumplimiento de estándares, procedimientos e indicadores de gestión de severidad y accidentabilidad.
	Environmental Affairs Committee	Control y seguimiento del trámite de licencias y certificaciones ambientales. Seguimiento y control de las inspecciones ambientales para identificar y prevenir impactos ambientales y posibles desviaciones en el cumplimiento de la normativa.
Units	Management Committee-Health and Safety in the Workplace	Follow-up and control of the Safety Management System. Monitor Occupational Health, Safety, Environment, and Quality system (known as SSOMAC) committees. Participate in scheduled safety inspections.
	Human Resource Management Indicators Committee	Control and follow-up of human resource management indicators: overtime, absenteeism, vacations, selection, medical exams, etc.
	Environmental Services Management Committee	Responsible for implementing the Environmental Management System.
	Health Indicators Committee	Follow-up and control of occupational health indicators.
	Meeting on operational results, production indicators and costs	Follow-up and control of monthly budget compliance. Control of mine planning, production indicators, physical goals and costs.

## INVESTOR RELATIONS

Volcan strives to maintain constant communication with all stakeholders, above and beyond legal requirements. The Company believes it is essential that current and potential investors are provided with timely, complete, accessible, and transparent information about the key activities that could affect their decisions. In this area, the main achievements in 2017 were:

102-43

- Organization of the required annual general shareholders meeting
- The CEO's or CFO's quarterly presentation of financial statements to specialized analysts who cover Volcan stock
- Participation in three non-deal road shows for institutional and individual investors

- Visits to leading stockbrokers in Peru to present the Company's results and outlook to their personnel and customers
- Guided visits to our mining units for analysts and investors seeking an in-depth understanding of our mining and metallurgy operations
- Participation in conferences with national and international investors, and presentation of the Company's operating and financial results
- Hiring a consultant in corporate communications to improve greater transparency with different stakeholder groups
- Hiring a specialized company to redesign Volcan's corporate website.





# 06

## HEALTH AND SAFETY



# VOLCAN UNDERSTANDS THAT PROPER MANAGEMENT OF HEALTH AND SAFETY IS VITAL FOR THE SUSTAINABILITY OF ITS OPERATIONS

103-1

Therefore, it ensures careful hazard identification and evaluation of risks to health and safety in all of its activities, in order to minimize accidents and incidents for its direct employees as well as indirect employees. There are significant inherent risks in the mining sector, particularly in underground mining.

## MANAGEMENT OF OCCUPATIONAL HEALTH AND SAFETY

Our strategy for ensuring appropriate management of occupational health and safety is defined as follows:

103-2

- Management commitment and involvement through the Occupational Health and Safety, Environment, and Quality Policy.
- Safety Management System based on four fundamental pillars: risk evaluation, conditions, training, and behavior. In addition, the Company has implemented management tools for hazard identification, risk evaluation, and determination of controls; inspections; critical risks; training tailored to each position; safe conduct audit; internal work regulations and internal occupational health and safety regulations; development of and training in standards and procedures, etc.
- Participation and consultation through the OHS committee in all operating units.

- Subcontractors involvement in knowing and enforcing the Safety Management System.

### 1. EVALUATION OF OCCUPATIONAL HEALTH AND SAFETY

103-3

- Safety Management System: Internal and corporate audits.
- Conditions: Inspections focused on critical safety risks.
- Legal: External enforcement (SUNAFIL and OSINERGMIN).
- Health: Monitoring of agents and occupational studies.

### 2. OHS TRAINING, COMMUNICATION AND MOTIVATION

- Annual occupational health and safety training, approved by the joint committee at each operating unit.
- Annual training plan based on legal requirements for the sector.
- Supervisor Development Program focused on developing soft and technical skills.
- Amauta Minero program aimed at operators involved in critical mining operation activities, to develop their technical skills and understanding of the importance of following procedures.
- Training provided to direct employees and contractors.
- Communication campaigns aimed at employees exposed to risks, to prevent accidents.
- Monthly employee recognition and quarterly supervisor recognition on safest work practices, for direct and third parties employees.





# ACCIDENT REPORTING

As in previous years, in 2017, Volcan focused on controlling the critical risks of falling rock, mobile vehicles and equipment, energy blocking, and manual tools. By the end of the year, although the number of accidents (disabling, property, high potential) decreased, there were four fatal accidents, which significantly increased the severity index.

The units where the accident occurred, currently under stricter supervision, are: San Cristobal, Carahuacra and Islay.

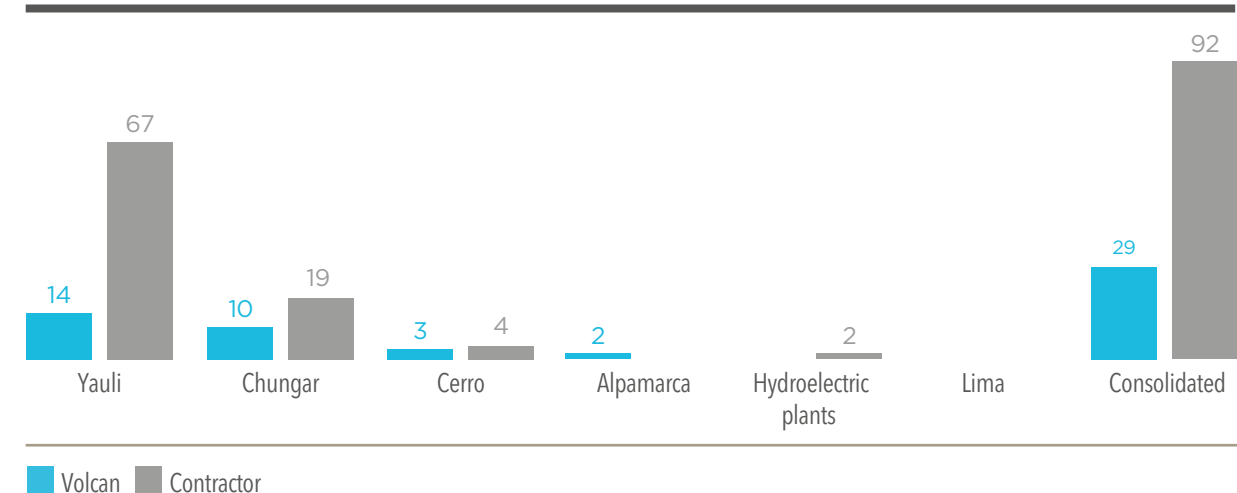
**IN 2017, THE ACCIDENT AND FREQUENCY INDEX FELL BY 16% AND 23%, RESPECTIVELY, RELATIVE TO 2016. HOWEVER, THE SEVERITY INDEX ROSE 9% PER MILLION MAN-HOURS WORKED.**

## ACCIDENT RATE, FREQUENCY, SEVERITY AND ACCIDENTS 403-2

REGION	YULI	CHUNGAR	CERRO DE PASCO	ALPAMARCA	HYDROELECTRIC PLANTS	LIMA	CONSOLIDATED
Fatal accidents	3	1	-	-	-	-	4
Disabling accidents	19	4	5	1	-	-	29
Minor accidents	59	24	2	1	2	-	88
Property accidents	38	10	1	-	10	-	59
Accident Index	1.76	0.61	0.41	0.04	-	-	1.15
Frequency Index	1.39	0.68	2.16	0.92	-	-	1.18
Severity Index	1,270	900	190	46	-	-	977
Man-hours worked	15,854,161	7,404,986	2,310,227	1,085,445	531,169	739,255	27,925,243
Time lost (days) due to accidents	20,137	6,664	438	50	-	-	27,289

## 2017 VOLCAN SUSTAINABILITY REPORT HEALTH AND SAFETY

### VOLCAN ACCIDENTS VS. SUBCONTRACTOR ACCIDENTS



Volcan complies with the regulatory provisions of Supreme Decree No. 024-2016-EM, as amended by Supreme Decree No. 023-2017-EM, and Law No. 29783, the Occupational Health and Safety Law, in regard to registration and communication of accidents. Health and safety incidents and management performance are also tracked by the health and safety committees at each operating unit, which meet weekly, and corporate monitoring committees, which meet monthly in Lima.



## 1. MORTAL ACCIDENTS

In 2017, there were four accidents with fatal consequences involving three subcontractor employees and one Volcan employee. These incidents were investigated to determine the causes, and corrective measures were taken with an emphasis on supervision, training, and evaluation to strengthen oversight and reduce the accident rate in 2018.

### FATAL ACCIDENT REPORTS

UNIT	DATE	COMPANY
Chungar	February 24, 2017	Volcan
	May 25, 2017	Contractor
Yauli	October 24, 2017	Contractor
	October 24, 2017	Contractor



# ASSET SECURITY

VOLCAN SUPPORTS APPROPRIATE INTERACTION OF SURVEILLANCE AND SECURITY PERSONNEL WITH NEIGHBORING COMMUNITIES AND STAKEHOLDERS THROUGH ITS CORPORATE VALUES, RESPECT FOR INDIVIDUALS, AND FAIR TREATMENT. THE COMPANY REJECTS ALL TYPES OF VIOLENCE, ABUSE, AND DISCRIMINATION INSIDE OR OUTSIDE ITS FACILITIES. 103-1

To promote compliance with principles in support of individual rights, Volcan trains, supervises, monitors, and evaluates the actions of surveillance and security personnel to prevent inappropriate conduct. 103-2

Company Security coordinators monitor the behavior of surveillance personnel through controls implemented at each of the mining units. 103-3

No complaints, reports or grievances were received in 2017 from communities or other stakeholders regarding treatment by Volcan surveillance and security staff.

## 1. HUMAN RIGHTS TRAINING FOR SECURITY AGENTS

During 2017, security personnel participated in the following trainings at the Cerro de Pasco, Chungar, Alpamarca, and Yauli (San Cristóbal, Mahr Túnel, Carahuacra, Andaychagua and Ticlio) units, hydroelectric plants, and the Lima corporate office: 410-1

### Fundamental principles on human rights and security:

The purpose of this training is to maintain operational security within a framework that ensures respect for fundamental individual rights and freedoms.

### Human rights:

Training focused on human values, the right of individuals to receive fair and equitable treatment, as well as non-discrimination on the basis of origin, age, gender, sexual orientation, education, religion, customs, or socioeconomic status.



### Emotional intelligence:

Surveillance personnel learn how to handle emotional situations when facing imminent aggression by third parties, and how to control occupational stress that may affect their activities and oversight duties.

### Citizen's arrest:

This course focused on the actions to be followed by surveillance personnel to detain a person found committing an illegal act. The arrest is made according to the legal framework and respecting the person's rights and physical integrity.

### › HUMAN RIGHTS TRAINING FOR SECURITY PERSONNEL 2017 410-1

UNIT	TRAINED	NOT-TRAINED	TOTAL
Yauli	88	76	164
Chungar	44	18	62
Cerro de Pasco	120	12	132
Alpamarca	12	6	18
Hydro-electric plants	36	0	36
Main Office	11	0	11
<b>TOTAL</b>	<b>311</b>	<b>112</b>	<b>423</b>

### › PERCENTAGE OF SECURITY PERSONNEL, TRAINED AND NON-TRAINED 410-1

66%  
Trained

34%  
Not-trained







**07**

# **HUMAN RESOURCE MANAGEMENT**



# VOLCAN PROMOTES ADEQUATE LABOR ENVIRONMENT AND CONDITIONS FOR ITS EMPLOYEES, AND THEREFORE ENSURES THEY ARE COMMITTED TO THE COMPANY'S VALUES, CODE OF ETHICS AND CONDUCT, AND VISION AND MISSION. 103-2

In addition, it provides the resources, environment, and tools employees need to carry out their activities and prioritize the principle of employment stability. Moreover, the Company ensures respect for collective agreements with all of its unions. At year-end 2017, the Company had a total of 2,959 direct employees in Lima and its operating units. An additional 8,367 employees work with Volcan subcontractor companies, representing 74% of the workforce. 102-7

## › TOTAL EMPLOYEES BY GENDER AND EMPLOYMENT CATEGORY 102-8 / 405-1

COMPANY	FEMALE	MALE	TOTAL
<b>Volcan Cía. Minera S.A.A.</b>	<b>109</b>	<b>1,577</b>	<b>1,686</b>
Officers	0	27	27
Staff	81	430	511
Employees	24	691	715
Workers	4	429	433
<b>CÍA. MINERA CHUNGAR S.A.C.</b>	<b>27</b>	<b>877</b>	<b>904</b>
Officers	0	2	2
Staff	24	225	249
Employees	1	284	285
Workers	2	366	368
<b>EMP. ADMIN. CERRO S.A.C.</b>	<b>18</b>	<b>211</b>	<b>229</b>
Officers	0	0	0
Staff	4	39	43
Employees	2	17	19
Workers	12	155	167
<b>Óxidos de Pasco S.A.C.</b>	<b>4</b>	<b>114</b>	<b>118</b>
Officers	0	1	1
Staff	1	33	34
Employees	2	42	44
Workers	1	38	39
<b>Hidroeléctrica Huanchor S.A.C.</b>	<b>1</b>	<b>21</b>	<b>22</b>
Staff	1	10	11
Employees	0	11	11
<b>Total general</b>	<b>159</b>	<b>2,800</b>	<b>2,959</b>
Officers	0	30	30
Staff	111	737	848
Employees	29	1,045	1,074
Workers	19	988	1,007



› TOTAL EMPLOYEES BY TYPE OF CONTRACT 102-8 / 405-1

DIVISION	COMPANY	UNIT	STABLE STAFF		FIXED-TERM STAFF		TOTAL		
			FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	TOTAL
Mining	Volcan Cía Minera S.A.A	Yauli y Lima	65	1,186	44	391	109	1,577	1,686
	Cía. Minera Chungar S.A.C.	Chungar y Alpa-marca	10	588	17	289	27	877	904
	Emp. Admin. Cerro S.A.C.	Cerro de Pasco	1	123	17	88	18	211	229
	Óxidos de Pasco S.A.C.	Óxidos de Pasco	1	18	3	96	4	114	118
Energy	Hidroeléctrica Huanchor S.A.C.	C.H. Huanchor	1	18	0	3	1	21	22
Total			78	1,933	81	867	159	2,800	2,959



› STAFFING SIZE BY REGION AND GENDER 102-8 / 405-1

REGION	VOLCAN CÍA. MINERA S.A.A			CÍA. MINERA CHUNGAR S.A.C.			EMP. ADMIN. CERRO S.A.C.		
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
Ancash	0	18	18	0	5	5	0	3	3
Apurímac	1	1	2	0	0	0	0	0	0
Arequipa	1	19	20	0	19	19	0	1	1
Ayacucho	0	3	3	0	1	1	0	0	0
Cajamarca	0	3	3	0	6	6	0	0	0
Callao	6	21	27	3	12	15	0	1	1
Cusco	0	6	6	1	0	1	0	0	0
Huancavelica	0	18	18	0	2	2	0	0	0
Huancayo	1	26	27	0	2	2	0	0	0
Huánuco	1	17	18	0	18	18	0	1	1
Ica	0	5	5	0	6	6	0	0	0
Junín	23	929	952	3	233	236	14	63	77
La Libertad	1	17	18	0	19	19	0	1	1
Lambayeque	0	2	2	0	1	1	0	0	0
Lima	74	403	477	15	152	167	2	28	30
Moquegua	0	0	0	0	0	0	1	4	5
Pasco	1	82	83	5	393	398	1	109	110
Piura	0	2	2	0	7	7	0	0	0
Puno	0	2	2	0	0	0	0	0	0
San Martín	0	1	1	0	0	0	0	0	0
Tacna	0	2	2	0	0	0	0	0	0
Ucayali	0	0	0	0	1	1	0	0	0
Total	109	1,577	1,686	27	877	904	18	211	229



› STAFFING SIZE BY REGION AND GENDER 102-8 / 405-1

REGION	ÓXIDOS DE PASCO S.A.C.			HIDROELÉCTRICA HUANCHOR S.A.C.			CONSOLIDATED		
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL
Ancash	0	6	6	0	0	0	0	32	32
Apurímac	0	0	0	0	0	0	1	1	2
Arequipa	0	0	0	0	1	1	1	40	41
Ayacucho	0	0	0	0	0	0	0	4	4
Cajamarca	0	2	2	0	0	0	0	11	11
Callao	0	1	1	0	0	0	9	35	44
Cusco	0	0	0	0	0	0	1	6	7
Huancavelica	0	0	0	0	0	0	0	20	20
Huancayo	0	0	0	0	0	0	1	28	29
Huánuco	0	3	3	0	0	0	1	39	40
Ica	0	0	0	0	0	0	0	11	11
Junín	0	22	22	0	7	7	40	1,254	1,294
La Libertad	0	7	7	0	0	0	1	44	45
Lambayeque	0	0	0	0	1	1	0	4	4
Lima	1	19	20	1	12	13	93	614	707
Moquegua	0	1	1	0	0	0	1	5	6
Pasco	3	53	56	0	0	0	10	637	647
Piura	0	0	0	0	0	0	0	9	9
Puno	0	0	0	0	0	0	0	2	2
San Martín	0	0	0	0	0	0	0	1	1
Tacna	0	0	0	0	0	0	0	2	2
Ucayali	0	0	0	0	0	0	0	1	1
<b>Total</b>	<b>4</b>	<b>114</b>	<b>118</b>	<b>1</b>	<b>21</b>	<b>22</b>	<b>159</b>	<b>2,800</b>	<b>2,959</b>



› EMPLOYEES WITH SPECIALIZED COMPANIES 102-8

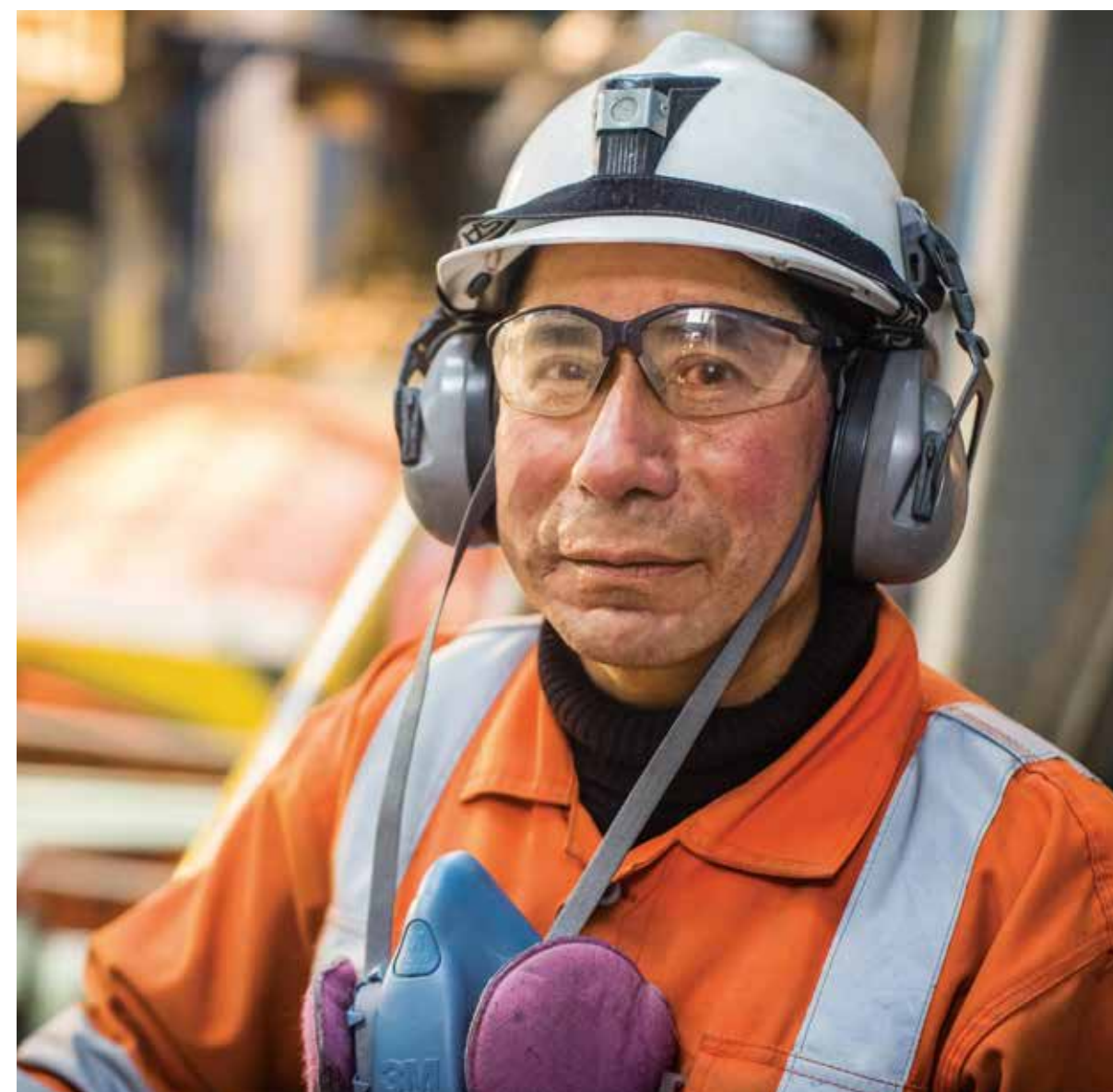
COMPANY	2017 <sup>1</sup>
Yauli	4,490
Chungar	2,609
Cerro de Pasco	519
Alpamarca	457
Óxidos de Pasco	292
<b>Total General</b>	<b>8,367</b>

<sup>1</sup> As of December 31.

## TALENT RECRUITMENT AND RETENTION STRATEGY

Identifying talent and motivating performance improvement is a fundamental concept for Volcan. To achieve this goal, the Company has developed strategies to retain and manage talent through:

- Annual training plan
- Career plan
- Personnel management
- Salary planning
- Performance evaluation





# TRAINING AND DEVELOPMENT

One of Volcan's main pillars is to achieve excellence in its processes. Therefore, the Company has developed an annual training plan that enables it to achieve strategic objectives and meets operational and employee needs. This plan enables the Company to achieve exceptional results and ensure the availability of qualified labor. 103-2

The plan encompasses programs that help to close gaps in knowledge and employee skills. In addition, it aims at preventing accidents and having personnel trained in new

developments and skills to manage operations efficiently. Moreover, it promotes continuous improvement of employee and operation competitiveness and productivity. 103-1

Volcan invests time and resources in internal and external training. In 2017, the Company invested 135,271 man-hours in training to reach an average of 45.7 hours of training per worker. 404-1

› **AVERAGE MAN-HOURS OF EMPLOYEE TRAINING BY PROFESSIONAL CATEGORY AND GENDER** 404-1

	PER PROFESSIONAL CATEGORY				PER GENDER		TOTAL
	OFFICERS	STAFF	EMPLOYEES	WORKERS	FEMALE	MALE	
Number of workers	30	848	1,074	1,007	159	2,800	2,959
Training man-hours	1,911	50,679	49,419	33,261	12,297	122,974	135,271
Average training hours per worker	63.7	59.8	46.0	33.0	77.3	43.9	45.7



2017 VOLCAN SUSTAINABILITY REPORT  
**HUMAN RESOURCE MANAGEMENT**

**IN 2017, NOTABLE INTERNAL TRAINING PROGRAMS INCLUDED SUPERVISOR DEVELOPMENT AND OPERATOR TRAINING BY VOLCAN TRAINING CENTER.** 404-2

The Supervisor Development Program is focused on training mining unit supervisors. The goal of the program is to strengthen knowledge and conduct necessary to achieve excellence in relation to corporate competencies and work procedures, prioritizing workplace safety management. The program includes classroom and field tutoring by instructors in the work areas. More than 800 supervisors participated in this training in 2017.

The Operator Training Program trains heavy equipment operators at the Volcan Training Center located at the Yauli unit. The participants undergo 48 hours of training. The program includes theoretical and in-person training, e-learning, practice in simulator and equipment, and field tutoring.

In addition, in 2017, training sessions were held for executives and leading staff. More than 120 members, including managers, deputy managers, superintendents and unit heads received training across all mining units. The goal was to strengthen leading teams, boosting their soft skills and optimizing the interaction between the different teams at the mining units to create work synergies.

The Company's performance in this area is evaluated using a set of indicators that includes the total number and average of training man-hours and the number of participants in the programs. Other indicators related



to workplace safety (reduction of workplace accidents), fulfillment of goals per mining unit and management, the results of the organizational climate survey, and evaluation of competencies, are also part of performance management. 103-3

Volcan's commitment to its employees is also manifested in other aspects. The Company provides financial support for post-graduate studies (master's degrees or certificates) for personnel who have demonstrated excellent performance and high potential. 404-2

In periods of transition to labor inactivity, the Company offers placement and assistance such as training and guidance. In addition, it offers outplacement workshops to employees who occupied key positions in the Company and are retiring.

› **TRAINING PARTICIPANTS AND MAN-HOURS IN SPECIAL PROGRAMS** 404-1

INDICATORS	SUPERVISOR DEVELOPMENT PROGRAM	OPERATOR TRAINING PROGRAM	TOTAL
Participants	870	107	977
Training man-hours	34,416	5,661	40,077



# EMPLOYEE WELL-BEING AND WORKING CONDITIONS

THE COMPANY STRIVES TO PROMOTE A GOOD WORKING ENVIRONMENT AND APPROPRIATE CONDITIONS FOR ALL OF ITS EMPLOYEES.

Towards that end, all areas of the Company are committed to complying with procedures established in the different operations, mainly collective bargaining agreements, code of ethics and conduct manual, anti-fraud policy, privileged information management manual and internal work rules.

Organizational climate committees were held in Lima and the operating units; these multidisciplinary groups analyzed the factors affecting organizational climate and generated the respective action plans. As a result, workshops were held on topics such as leadership,

improved employee transportation, improved dining services, nutrition services, physical and mental health advising, as well as recognition of safety and productivity improvements, sports tournaments, birthday celebrations, and holidays, among others.

To measure the impact of these improvements, Volcan has used the Organizational Climate Survey to measure levels of personnel satisfaction and commitment since 2014. Results of the 2017 survey show a 65% satisfaction level.

In addition, labor relations committees receive reports on progress in compliance with commitments and management indicators. In 2017 there were no changes in labor relations management.



MECHANISMS FOR DIALOG WITH EMPLOYEES

MECHANISM	DESCRIPTION
Meetings on internal agreements	Collective complaints and observations are received on work and operational issues. Agreements recorded in minutes are monitored during periodical meetings and in indicators.
Bi-monthly scheduled meetings between unions and labor relations areas	Labor, safety and operational complaints from UEAs are handled. Items on the agenda are monitored through indicators and reviewed through a Monthly Workplace Relations Committee and sent to the Operations Department.
Reception of individual complaints	Complaints are received as established in the internal work regulations and in the collective agreement. The immediate supervisor is responsible for handling these, or in his/her stead the head of Workplace Relations for the respective UEA.
Open Doors	Quarterly meeting to close the gaps between the CEO and staff, in both Lima and in UEAs. Its purpose is to communicate the current situation and company prospects in terms of safety, operations, finance, projects, workplace climate and other relevant issues for the Company. This is a space that promotes open dialog in both directions to resolve any queries or concerns.
Quarterly meeting	Meeting with the Metallurgical Mining Workers Federation of Volcan to present the Company's economic and financial position. The aim is to keep staff informed and committed to corporate goals.

Dialog procedures and Volcan labor policies are evidence of the Company's interest in establishing closer connections with employees and union organizations. In addition, collective bargaining agreements and internal policies establish procedures for addressing, overseeing, and tracking commitments, which are carried out through regular meetings with the various unions and regular joint inspections of work areas.

General labor relations management indicators measure operations stoppages by personnel due to complaints that have not been addressed or collective bargaining processes. In 2017 there were no strikes longer than one week or employee blockades.

LOCAL EMPLOYEES (DIRECT AND SUBCONTRACTED)

UNIT	DETAIL
Yauli	120 who belong to the community local of 1,323 residents
Hydroelectric plants	31 employees who belong to the local community of 2,850 residents (11 communities)



# ECONOMIC WELL-BEING

The majority of personnel is comprised of workers and employees at the Yauli, Cerro de Pasco, and Chungar units. Salaries are established in accordance with the provisions of the collective bargaining agreement; they are never based on minimum-wage laws. 103-2 / 202-1

› **RELATIONSHIP BETWEEN LOWEST SALARY AND MINIMUM LEGAL SALARY**

RELATIONSHIP BETWEEN LOWEST SALARY AND MINIMUM LEGAL SALARY	
Minimum legal salary (SML)	S/.850
Lowest operator salary	S/.1,560
Ratio (Lowest salary/SML)	1.80

## VOLCAN CONSIDERS ESSENTIAL IDENTIFYING TALENT AND MOTIVATING THE IMPROVEMENT OF THE PERFORMANCE OF ITS COLLABORATORS





# SOCIAL BENEFITS FOR EMPLOYEES

Volcan provides the following social benefits to all full-time employees. 401-2

› SOCIAL BENEFITS

SOCIAL BENEFITS	DETAIL
Medical Insurance – ESSALUD	Medical insurance for all workers and dependents
Life Insurance	To all workers from the first day they start working
Accident Insurance (Mas Vida - ESSALUD)	Personal accident insurance that grants compensation in case of death or total or partial permanent disability
Complementary workers compensation insurance (SCTR)	Insurance that provides health and economic benefits for workers with occupational disease and / or work accidents at high risk
Incapacity or invalidity coverage (medical attentions)	In case of disability (common accident, illness) you have the coverage of Rímac EPS or Essalud. On the other hand, work accidents are covered by Rímac (since 2016).
Incapacity or invalidity coverage (economic benefits)	In the case of temporary disability, it is assumed by Essalud, in the case of permanent disability and as a result of an accident at work is assumed by the ONP or Mapfre.
Subsides for maternity / paternity	Rest for maternity is 98 days and for paternity is 4 days.
Pension fund	Benefit acquired by the worker for his contributions to the pension system. Each member has in their name an individual savings account managed by an AFP or the ONP.
Benefit to managers, deputy managers and superintendents.	Benefit to managers, deputy managers and superintendents.
Health Insurance (EPS) for the employee and family	EPS medical insurance for staff workers, includes insurance for parents and children over 18 years. The group of workers and employees ha

# PERFORMANCE MANAGEMENT

THE PERFORMANCE MANAGEMENT PROCESS IS PART OF THE EMPLOYEE MANAGEMENT CYCLE AND IS MANIFESTED THROUGH RECOGNITION OF INDIVIDUAL CONTRIBUTIONS IN THE PERIOD EVALUATED. IN 2017, A TALENT MANAGEMENT PLAN WAS IMPLEMENTED. IT INCLUDES PERFORMANCE MANAGEMENT AND COMPENSATIONS.

103-2

In addition, the talent retention plan continued through salary planning and prioritizing training activities for outstanding personnel.





# SIGNIFICANT CHANGES IN THE LABOR FORCE

THE INCREASE IN PERSONNEL TURNOVER IN THE MARKET TRIGGERED A PROCESS OF PERSONNEL REDUCTION. VOLCAN WAS ALSO AFFECTED BY THIS GLOBAL SITUATION. IN 2016, 466 EMPLOYEES WERE TERMINATED, MAINLY DUE TO CONTRACT EXPIRATION, RESIGNATION, AND MUTUAL CONSENT. 102-8

## › EMPLOYEES TERMINATED IN 2017

COMPANY	2017
Volcan Cía Minera S.A.A	249
Cia Minera Chungar S.A.C.	148
Emp. Admin. Cerro S.A.C.	49
Oxidos de Pasco S.A.C.	19
Hidroeléctrica Huanchor S.A.C.	1
<b>Total</b>	<b>466</b>

## › EMPLOYEES TERMINATED BY CAUSE

CAUSE	2017
Resignation	197
Mutual Consent	133
Contract Expiration	109
Completion of Test Period	14
Termination	9
Gross Misconduct	3
Death	1
<b>Total</b>	<b>466</b>

Annual employee turnover at Volcan was 15.7%; the majority of terminated employees were from Junín, Pasco, and Lima. 401-1

## › ANNUAL EMPLOYEE TURNOVER BY AGE RANGE AND GENDER

DIVISION	COMPANY	UNIT	AGE RANGE (YEARS)			PER GENDER		TOTAL
			18 - 29	30 - 50	MÁS DE 50	FEMALE	MALE	
Mining	Volcan Cía Minera S.A.A	Yauli y Lima	1.4%	5.4%	1.6%	0.8 %	7.6%	8.4 %
	Cia Minera Chungar S.A.C.	Chungar y Alpamarca	0.7%	3.7%	0.5%	0.4 %	4.6 %	5.0 %
	Emp. Admin. Cerro S.A.C.	Cerro de Pasco	0.5%	0.9%	0.2%	0.6 %	1.1 %	1.6 %
	Óxidos de Pasco S.A.C.	Óxidos de Pasco	0.1%	0.4%	0.7%	0.0 %	0.6 %	0.6 %
Energy	Hidroeléctrica Huanchor S.A.C.	C.H. Huanchor	0.0%	9.1%	0.0%	0.7 %	0.0 %	0.0 %
<b>Total</b>			<b>2.8%</b>	<b>10.5%</b>	<b>2.4%</b>	<b>1.7%</b>	<b>14.0%</b>	<b>15.7%</b>

## › ANNUAL EMPLOYEE TURNOVER BY REGION

REGION	VOLCAN CÍA. MINERA S.A.A	CÍA. MINERA CHUNGAR S.A.C.	EMP. ADMIN. CERRO S.A.C.	ÓXIDOS DE PASCO S.A.C.	HIDROELÉCTRICA HUANCHOR S.A.C.	CONSOLIDATED
Ancash	0.2%	0.2%	0.4%	0.9%		0.2%
Arequipa	0.4%	1.0%	1.3%		4.5%	0.7%
Ayacucho	0.1%					0.0%
Callao	0.2%	0.3%	0.5%			0.2%
Cajamarca	0.1%					0.0%
Cusco		0.1%	0.4%			0.0%
Huancavelica		0.2%				0.1%
Huánuco	0.2%	0.4%				0.3%
Ica	0.1%	0.1%		0.9%		0.1%
Junín	4.9%	3.9%	1.3%	1.8%		4.1%
La Libertad	0.1%	0.4%	2.6%	0.9%		0.4%
Lambayeque		0.1%				0.0%
Lima	6.8%	5.6%	3.1%	7.1%		6.0%
Moquegua			1.0%			0.0%
Pasco	1.7%	3.9%	12.2%	5.3%		3.2%
Tacna	0.1%					0.0%
<b>Total</b>	<b>14.8%</b>	<b>16.4%</b>	<b>21.3%</b>	<b>16.8%</b>	<b>4.5%</b>	<b>15.5%</b>

This level of turnover requires rapid, appropriate actions to cover positions and ensure that the Company's activities are not affected. During the year, the Company was able to fill positions vacated due to layoffs and other positions, for a total of 684 new hires. All positions have been budgeted and authorized by Management. 103-1

The majority of personnel hired in 2017 work in Lima, Junín, and Pasco. It is also worth mentioning that most of these hires are from the local community or skilled workers who live close to operations.





› **HIRING BY PLACE OF ORIGIN**

REGION	VOLCAN CÍA. MINERA S.A.A	CÍA. MINERA CHUNGAR S.A.C.	EMP. ADMIN. CERRO S.A.C.	ÓXIDOS DE PASCO S.A.C.	HIDROELÉCTRICA HUANCHOR S.A.C.	CONSOLIDATED
Amazonas	1	1	0	1	0	3
Ancash	7	3	1	3	0	14
Apurímac	7	2	0	0	0	9
Arequipa	15	12	1	0	1	29
Ayacucho	4	4	0	0	0	8
Callao	5	1	0	0	0	6
Cajamarca	2	0	2	0	0	4
Cusco	4	3	2	0	0	9
Huancavelica	42	3	1	0	0	46
Huánuco	10	6	0	0	0	16
Ica	4	2	0	0	0	6
Junín	157	34	15	5	0	211
La Libertad	6	7	3	2	0	18
Lambayeque	4	1	0	0	0	5
Lima	94	31	7	3	0	135
Loreto	0	1	0	0	0	1
Madre de Dios	0	1	0	0	0	1
Moquegua	2	0	0	0	0	2
Pasco	56	38	34	10	0	138
Piura	7	3	0	0	0	10
Puno	6	2	2	0	0	10
San Martín	0	1	0	0	0	1
Tacna	0	1	1	0	0	2
Ucayali	0	0	0	0	0	0
<b>Total</b>	<b>433</b>	<b>157</b>	<b>69</b>	<b>24</b>	<b>1</b>	<b>684</b>





## LOCAL HIRING

# PROVIDING EMPLOYMENT TO TRAINED PERSONNEL IN THE AREA OF THE DIFFERENT MINING UNITS IS A KEY FACTOR IN PROMOTING LOCAL DEVELOPMENT AND STRONG COMMUNITY RELATIONS.

103-1 / 103-2

In this aspect, Volcan has maintained its commitment, in conjunction with local communities, with an emphasis on hiring personnel for operations. The number of local residents working at Volcan operations and the way they apply for employment varies in each community.

The local hiring process begins with identifying the position, then determining the worker profile and seeking candidates. The position requirements are communicated to the communal resident committee through the Corporate Social Responsibility office in each unit. The ultimate goal is to meet, in a reasonable manner, the demand for work in accordance with operating needs.

### Yauli Unit (employment offers sent)

Yauli Community: 24 offers for positions at Volcan and 164 offers at subcontractors.

San Juan Bautista Pachachaca Community: 24 offers for positions at Volcan and 164 offers at subcontractors. Two employees were hired.

Pomacocha Community: 28 offers and 150 offers at subcontractors. No applicants.

### Chungar Unit

The Local Employment Program was implemented at Chungar to prioritize community personnel hiring, following the established procedure. The percentage of community members on Chungar (Animón and Islay) payroll totaled 46.3%; and on Chungar (Animón and Islay) subcontractor payrolls was 20%.

## FIRMLY RESPECTING HUMAN RIGHTS

**RESPECT FOR HUMAN RIGHTS IS A THEME THAT VOLCAN PROMOTES BOTH INSIDE AND OUTSIDE THE COMPANY, INCLUDING SUPPLIERS AND SUBCONTRACTORS. TO PROMOTE COMPLIANCE, THE COMPANY SPONSORS TRAINING TALKS ON LABOR REGULATIONS AND HAS A PROCESS FOR PERMANENT OVERSIGHT AND ENFORCEMENT OF SUBCONTRACTOR HIRING. IN ADDITION, AS PART OF THEIR ORIENTATION WHEN JOINING THE COMPANY, NEW EMPLOYEES RECEIVE A COPY OF THE CODE OF ETHICS AND CONDUCT AND SIGN A COMMITMENT TO RESPECT THE CORPORATE VALUES AND PRINCIPLES.**

103-2

To provide guarantees and prevent possible cases of human rights abuses, Volcan offers an anonymous "Complaint Line". In 2017 the Company did not receive any reports or become aware of any incidents of discrimination, forced labor, or child labor in its operating units.

406-1 / 408-1 / 409-1

### Non-discrimination

Eradicating discrimination of any kind is important to Volcan. Managing this issue strengthens the Company's workplace climate. Towards that end, Volcan has programs to support employees, their families, and the community in general that are based on prevention, education, and advice. In addition, the Complaint Line is provided to detect cases of discrimination. Reports can be made confidentially and anonymously.

103-1 / 103-2

### Forced labor

Volcan condemns any form of forced labor in all of its operations. Compliance with measures to eliminate poor labor practices is an opportunity to improve workplace climate.

103-1

In 2017, there were no reports of forced labor. Volcan complies with labor laws and requires respect for recognition of employee overtime. The Company's Internal Workplace Regulation is aligned with the General Law on Workplace Inspection, the Internal Regulation on Workplace Health and Safety, the Code of Ethics and Conduct and the Policy on Safety, Occupational Health, Environment and Quality. Volcan also offers support programs for its employees and their families that include prevention of forced labor risks.

103-2 / 409-1

### Child labor

Under the Code of Ethics and Conduct, Volcan has a Human Rights declaration (item 2.15) wherein it stipulates that no minor will be hired, except as provided by Law.

103-1

Management: Under the agreement executed with the Huayllay and Huaychao communities, Volcan opens Community Employment positions for children of community members during the summer months of January, February and March. The participants are not forced or coerced to do the job, and the activities are coordinated and led by Community Boards, with the authorization of the minors' legal tutors.

408-1

In addition, child labor is forbidden by the procedures, regulations and internal management controls in place for hiring personnel.

To prevent the risk of child labor, Volcan is firmly committed to help communities grow by providing education, aiding the implementation of educational infrastructure, providing teachers and a psychologist, holding extracurricular workshops and a school for parents, among others.

103-2





# FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

**VOLCAN RESPECTS THE RIGHT TO COLLECTIVE BARGAINING, AS ESTABLISHED IN THE COLLECTIVE BARGAINING AGREEMENT AND INTERNAL WORK REGULATIONS. THESE DOCUMENTS INCLUDE COMMITMENTS TO IMPROVE WORKING CONDITIONS AND ECONOMIC BENEFITS THE COMPANY PROVIDES IN AGREEMENT WITH EIGHT UNIONS TO AVOID THE IMPACT OF LABOR STRIKES OR STOPPAGES.** 103-1

In addition, Volcan respects its employees' freedom to join unions and participate in collective bargaining, as established by both domestic and international law.

Employees are completely free to meet and associate with one another in the entity or union of their choice.

Collective bargaining with Volcan's unions is carried out through direct dialogue.

Toward that end, the Company signs collective bargaining accords or agreements with unions that represent the majority of its employees. During these negotiations, the parties evaluate salary increases and working conditions in the operating units. (Freedom of Association and Collective Bargaining DMA). It should be noted that employees of subcontractor or supplier companies are not represented by unions. 103-2 / 103-3

› **SUMMARY OF UNIONIZED PERSONNEL BY OPERATING UNIT** 407-1

UNIT	UNIONIZED		NON-UNIONIZED		TOTAL
	WORKER	EMPLOYEE	WORKER	EMPLOYEE	
Yauli	377	200	50	456	1,083
Chungar	161	50	176	147	534
Cerro de Pasco	83	0	84	0	167





› UNIONS IN EACH OPERATING UNIT 407-1

UNIT	UNION	COLLECTIVE BARGAINING	STATUS
Yauli	San Cristóbal Mine Workers' Union	Metallurgical Mining Workers Federation of Volcan Compañía Minera S.A.A.	Began in July 2017
	Andaychagua Metallurgical Mine Workers' Union	2017/2018 period	
	Mahr Tunel Concentrate Plant Workers' Union		Direct bargaining
	Carahuacra Workers' Union		
	Volcan Cía. Minera S.A.A. – Yauli Employees Union	Volcan Cía. Minera S.A.A. – Yauli Employees Union 2018 period	Not started
Chungar	Animón Mine Workers' Union	Animón Mine Workers' Union 2017/2018 period	Started March 2017 Direct bargaining
	Compañía Minera Chungar S.A.C. Workers' Union	Compañía Minera Chungar S.A.C. Workers' Union 2017/2018 period	Not started
Cerro de Pasco	Trade Union of Mining Workers Metallurgists of Cerro de Pasco	Cerro de Pasco Metallurgical Mine Workers' Union 2017/2018 period	Started August 2017 Direct bargaining



**UNDER THE COMPANY'S POLICY, BENEFITS CONTAINED IN COLLECTIVE BARGAINING AGREEMENTS APPLY TO ALL VOLCAN EMPLOYEES, REGARDLESS OF WHETHER THEY BELONG TO A UNION. (G4-11). IT IS IMPORTANT TO NOTE THAT 67% OF WORKERS AND 29% OF EMPLOYEES BELONG TO SOME KIND OF UNION AND THEIR SALARY INCREASES AND WORKING CONDITIONS ARE REGULATED THROUGH COLLECTIVE BARGAINING PROCESSES.** 102-41

As in other areas, the Company provides a “Complaint Line” for reporting cases of discrimination or infringement of the rights of unionized employees. The Company did not receive any reports in 2017. 406-1

**Regulatory compliance with unions**

Compliance with legal labor obligations and collective bargaining agreements improves relations with employees, strengthens the continuity of operations, and enables the Company to understand personnel concerns and needs. 103-1

Volcan uses the following tools to manage labor relations and compliance with legal labor obligations and agreements: 103-2

- Regular meetings with union representatives, as established by the Company and the unions. These meetings take place every two weeks or every month. They are an opportunity to hear grievances or contributions from the employees represented.
- Continuous improvement meetings. These meetings include the participation of Operations Management. The purpose of these meetings is to obtain regular feedback from employees through their unions, and follow up on implementation.
- Meetings with union representatives and the Financial Management and Accounting to provide regular updates on the economic and financial situation of the operations.

Finally, labor relations committees meet monthly to evaluate management indicators related to: 103-3

- The number of items addressed in the bi-weekly or monthly agendas with different unions.
- Compliance with commitments made to unions arising from internal items (agendas).
- Number of workers who belong to unions, of total operations personnel.
- Number of days of labor stoppages due to union grievances.





# 08

## CUSTOMER MANAGEMENT





**SATISFYING ALL OF OUR CUSTOMERS IS PART OF THE MISSION OF VOLCAN'S EXECUTIVE MANAGEMENT.** 103-2

At the start of each fiscal year, management evaluates the production budget of the Operations area and agrees on a delivery plan with each customer for the coming year. Therefore, efforts throughout the year are focused on fulfilling each customer plan, which includes details on tonnage, material quality, description of delivery methods, schedules, and destinations.

Volcan has good relations with its customers, based on constant, fluid communication throughout the year. This way, any event or change that occurs during the contract term is promptly communicated. 102-43

Customer satisfaction evaluation includes analysis of annual delivery plan fulfillment in terms of the quantity and quality of concentrates delivered. 103-3

In addition, to anticipate, evaluate, and communicate any deviation from planned deliveries to the customer, meetings and committees are organized with the Operations and Logistics Division. It is worth emphasizing that possible deviations occur mainly due to production, logistics, or operational reasons.

Executive Management evaluates the following indicators:

- International prices of metals sold by Volcan.
- Concentrates delivered under the sales contract with each client.
- Quality of concentrates in relation to agreed technical specifications. 102-44

**VOLCAN'S GOOD  
RELATIONSHIP WITH  
ITS CLIENTS IS BASED  
ON CONSTANT  
AND FLUID  
COMMUNICATION  
THROUGHOUT  
THE YEAR**







# 09

## MANAGEMENT OF SUBCONTRACTORS AND SUPPLIERS



Volcan's 2017 supply chain is shown in the figure below. 102-9



## EFFICIENT MANAGEMENT OF SUBCONTRACTORS AND SUPPLIERS

**SUBCONTRACTORS AND SUPPLIERS ARE A FUNDAMENTAL PART OF THE VOLCAN SUPPLY CHAIN. THEY PROVIDE GOODS, SERVICES, INFORMATION, AND RESOURCES TO MEET THE NEEDS OF ALL FUNCTIONAL AND OPERATING UNITS.** 103-1

In 2017 Volcan disbursed USD 347 million to subcontractors and suppliers. Annual procurement of supplies and regular spare parts totaled USD 155 million and subcontractors' procurement totaled USD 192 million.

### › AVERAGE AMOUNT AND PAYMENTS TO SUPPLIERS AND SUBCONTRACTORS IN 2017 102-9

CLASSIFICATION	AVERAGE AMOUNT	ANNUAL PAYMENT (MM USD)
Suppliers	358	155
Contractors	76	192
<b>Total</b>	<b>434</b>	<b>347</b>

To ensure appropriate economic, social, and environmental performance, Volcan supervises its subcontractors to ensure that they comply with labor laws and are aligned with Company principles, values, and policies. Toward that end, the Company strictly controls compliance with regulations and obligations in the operating units. In addition, the subcontractor invoice payment procedure is subject to controls; payment is released only after the subcontractor submits evidence of compliance with labor obligations for the previous month. 103-2

Consequently, all subcontractor personnel must work in accordance with the Volcan Occupational Health and Safety and Environment System, as well as best practices in social responsibility promoted by the Company. Each worker is required to receive a minimum number of hours of training

and actively participate in all programs and talks given each month.





## PROCUREMENT PRACTICES

**VOLCAN'S PROCUREMENT POLICY PRIORITIZES LOCAL HIRING FOR SERVICES AND CERTAIN INPUTS, AS LONG AS REQUIRED QUALITY CONDITIONS ARE MET AND GOODS AND SERVICES ARE OFFERED AT COMPETITIVE PRICES. THE COMPANY ALSO ENCOURAGES SUBCONTRACTORS OR SUPPLIERS TO HIRE PERSONNEL FROM THE AREA OF INFLUENCE OF THE OPERATING UNIT, MAINLY FOR POSITIONS REQUIRING UNSKILLED AND NON-TECHNICAL LABOR.** 103-2

In addition, Volcan has quality standards for the raw materials it purchases and makes periodic visits to different suppliers. The Company also follows a procedure that establishes technical and financial mechanisms for procuring goods and services.

In 2017 materials and supplies purchased domestically represented 96.4% of all procurement, while imported purchases represented 3.6%. 204-1

Volcan set aside a percentage of its annual budget for local suppliers to purchase products and services in the areas of its major operations (defined as any company that provides services or goods and is located within the area of influence of mine operations).

- 17% of all service contracts are local
- 3.4% of all goods purchases were local.

**VOLCAN APPLIES QUALITY STANDARDS FOR THE RAW MATERIALS THAT IT ACQUIRES AND PERFORMS PERIODIC VISITS TO THE VARIOUS SUPPLIERS**





## PROPER **PRODUCT MANAGEMENT**

**CORRECT HANDLING  
AND MANIPULATION  
OF VOLCAN PRODUCTS  
NOT ONLY ENSURES  
EFFICIENT MANAGEMENT  
BUT ALSO APPROPRIATE  
ENVIRONMENTAL CARE  
THROUGHOUT THE LOGISTICS  
CHAIN.**

103-1/103-2

Toward that end, the Company strives to work with partners who specialize in transportation, storage, shipping, etc. In addition, the Company uses Material Safety Data Sheets (MSDS) for each of its products. These reports are available to all agents in the chain. This procedure enables the Company to ensure the transparency of information about the chemical composition, use, storage, handling, emergency procedures, and potential health effects of its products. As a result, customers, shipping companies, logistics agents, and warehouses are duly informed, as deliveries are fulfilled. All MSDS reports are reviewed and periodically updated to ensure their applicability.





10

## COMMUNITY RELATIONS MANAGEMENT





# SOCIAL RESPONSIBILITY IS A STRATEGIC AREA OF THE VOLCAN CORPORATE VISION TO REACH ITS GOAL OF BECOMING A LEADING MINING COMPANY BY 2021.

Toward that end, our social management is focused as a tool that enables us to carry out operations in a sustainable manner and have a positive impact on the development of communities within our direct area of influence. In this way, we strive to strengthen our relationship and dialog with community leaders as well as important government authorities and social groups to generate a partnership committed to development and community well-being.

103-1

Our sustainable management activities are established in Sustainable Development Plans and Community Relations Plans, which are focused on collaboration through:

- Productive development projects that involve diversification beyond mining itself
- Promoting local employment through formalization and growth of community enterprises that provide goods and services to the mining industry
- Strategic areas of development such as education, health, nutrition, institution-building, and infrastructure
- Public-private partnership mechanism to reduce the infrastructure and utilities gap. 103-2

The basis of open and harmonious communication is respect for people, their customs, and their traditions. That is the essence of Volcan's relations with one of its main stakeholder groups: the communities within its area of influence. One of the pillars of community relations management is the expectations that communities have of the Company.

In this aspect, Volcan has Open Door Policies to receive all members from stakeholder groups. It also has communication mechanisms, such as: Procedures to address complaints and grievances, and inquiries directly related to the operations, environmental matters, among others.

As part of its communication efforts, Volcan publishes a journal at each unit to explain what it does for the community and share relevant articles related to education, health, safety, environment, among others. In addition, public communications are made on local radio stations. 102-43

## KEY COMMUNITY EXPECTATIONS

- A strategic alliance that promotes community development
- Development interventions based on the sustainable development plan
- Expectation that the Company will prioritize hiring members of the local community and their families (direct or indirect hiring)

Current law requires that companies conduct environmental and social studies before initiating any extractive activity. These instruments clearly establish the mechanisms for assessing and managing the impacts of operational activities on the surrounding population. This information enables development of environmental and social baselines that describe the environmental and socioeconomic characteristics of the area prior to the start of activities. 103-1

The baselines are used to determine the potential social impacts of the activity or mining project and to develop measures to mitigate or control negative impacts and reinforce positive ones. These measures are set forth in the Community Relations Plan (CRP) which also documents the population's concerns and desires. 103-2

Based on this analysis, the following programs were established:

- Communication and information programs
- Education programs
- Health programs
- Employment promotion programs
- Local goods and services procurement programs
- Cultural promotion programs, among others 413-1

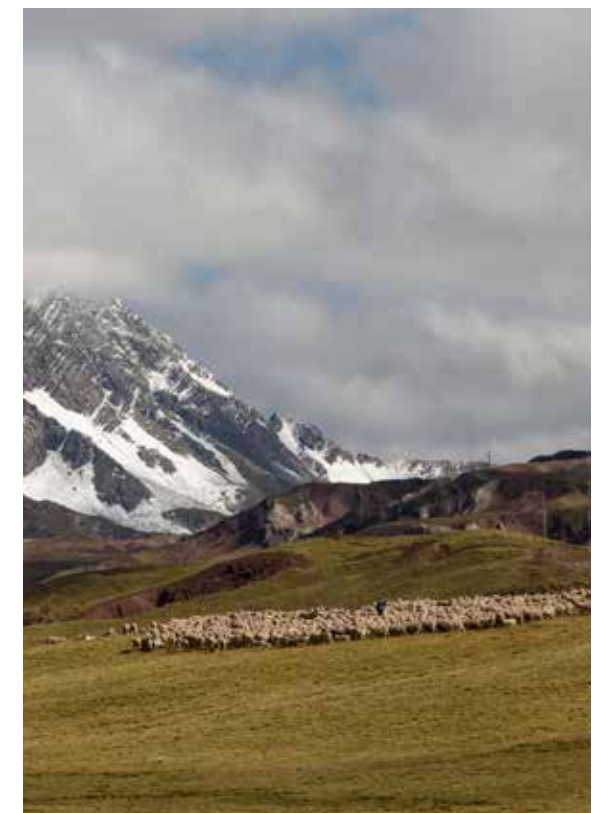
Volcan manages mechanisms for involvement, follow-up, and control of the community relations activities contained in its policies, rules, and procedures, including:

- Community Relations Plans (CRP), register commitments acquired by the Company each year
- Community relations protocols that govern the conduct

and performance of all management personnel at operating units or projects

- Current regulations, which include mechanisms for enforcement and control of compliance with commitments
- Involvement of the Office of Social Management and Dialog of the Presidential Council of Ministers, which channels community grievances, coordinates dialog, and facilitates consensus
- Participation by the Ministry of Energy and Mines, which through the Social Management Office facilitates dialog and verifies the information in the Annual Consolidated Declaration, which is a sworn statement
- Permanent Information Offices (PIO), which are a channel for community concerns, complaints, and grievances regarding social and environmental matters.

103-3 / MM7





# AREAS OF INFLUENCE

Each Volcan operating unit has signed agreements with the communities in its direct area of influence. Shown below are the operating units and the communities within their direct and indirect areas of influence.



AREA OF INFLUENCE 413-1 / 413-2

RURAL COMMUNITIES (84)				
YAULI (11) COMMUNITY MEMBERS	CHUNGAR (4) COMMUNITY MEMBERS	CERRO (27) COMMUNITY MEMBERS	BAÑOS (21) COMMUNITY MEMBERS	EXPLORATIONS (21) COMMUNITY MEMBERS
Huayhuay	Huayllay	CC San Antonio de Rancas	San José de Baños	San Gregorio de Huamanmarca
Andaychagua	Huaychao	CC de Quiulacocha	Vichaycocha	San Antonio de Rondoni
Pachachaca	Vichaycocha	CC Yurajhuanca	Santa Cruz	Quio
Yauli	San José de Baños	CC Sacra Familia	Santa Catalina	San Agustín de Huaychao
Pomacocha		CC Racracancha	Chauca	San Miguel de Vichaycocha
Suitucancha		CC Tingo Palca	Viscas	Santa Catalina
CC San Mateo de Huanchor		CC 8 de Mayo de Anasquizque	Ravira	Carhuacayán
CC San Francisco de Asís de Pucara		CC Espiritu Santo de Chacayan	Pacaraos	Cochahuayco
San Antonio		CC Santa Ana de Tusi	Pirca	Sisicaya
Colpa		CC San Miguel	Pasac	Pacaraos
Tincocancha		CC La Candelaria	Huaroquin	La Merced de Jarria
Huari		Cc Santa Rosa de Pitic	Chisque	San José de Baños
		CC La Quinua	Cormo	Pirca
		CC San Francisco de Asís de Yarusyacán	Huascoy	Huayhuay
		Cc. San Miguel De Pallanchacra		
		CC La Merced de Jarria	Uchucuanico	Suitucancha
		Barrio de Santa Rosa	Pampas La Florida	Rancas
		Cu. Champamarca	Coto	San Juan de Yanacachi
		Cp. Paragsha	Huaychao	Calango
		Coop Agraria de Producción	Carhuacayan	Uquira
		Yanamate	Chuquiquirpay	San Miguel de Pallanchacra
		Ltda. N° 143	Huayllay	San Miguel
		Barrio de Buenos Aires		
		Barrio de Uliachín		
		Barrio de Ayapoto		
		Coop. Agraria de trabajadores Pucayacu		
		AA.HH José Carlos Maríategui Sectores 1,3 y 4 y sector 2		
		Anexo Yacutingo, Cochacharao, Junipalca		



# BUILDING HARMONIOUS COMMUNITY RELATIONS

## 1. COMMITMENT TO EDUCATION Primary and secondary education

In 2017, the partnership between Volcan and Enseña Perú carried out its activities at the Yauli, Chungar and Cerro de Pasco units, and had a direct impact on more than

612 students, and an indirect impact on 1,550 students. Students improved their math, language comprehension, physics, English, and science and technology levels. This was possible thanks to the strengthening of Volcan's partnership with the Enseña Perú (Teach Peru) program, which promotes transformation in education.

203-1

### AREAS OF ENSEÑA PERÚ'S PROGRAM INTERVENTION 203-1

UNIT	DEPARTMENT	COMMUNITY	NUMBER OF PROGRAMS
Cerro de Pasco	Pasco	Rancas	2
Chungar	Pasco	Huayllay	4
		Huay-huay	2
Yauli	Junín	Yauli	2
		Suitucancha	1
		Andaychagua	1
Total			12



## 2017 VOLCAN SUSTAINABILITY REPORT COMMUNITY RELATIONS MANAGEMENT

### Yauli Unit

The following projects and contests were possible thanks to the presence of Enseña Perú in Yauli:

- Huayhuay Community:
  1. Eco-Friendly School
  2. Pythagoras Circle
  3. Strengthening leadership capacities and skills among youth in Huayhuay Community.
- Suitucancha Community
  1. Movistar's I Want Internet

### Higher Education:

#### Yauli

The Integral Scholarship Program was continued through the National Service for Training in Industrial Work (SENATI). In 2016 two scholarships were awarded to youth from the Yauli rural community for technical training in heavy machinery mechanics and industrial electronics. In addition, one young woman from the same community graduated from programs in maintenance mechanics. Also, two scholarships with SENATI were awarded in the community of Suitucancha. In total, nine youth from both communities completed or are studying for a three-year technical degree at SENATI.

#### Chungar:

Thanks to the agreement executed with the Technological Mining Center (CETEMIN), in 2017 two full scholarships for the technical career program were granted to youth in Huaychao rural community.

#### Cerro:

In San Antonio de Rancas, 27 scholarships were awarded for studies at Daniel Alcides Carrión National University (UNDAC) and 13 students received full scholarships at SENATI.

In Quiulacocha, three students received scholarships

#### Alpamarca/CH's Chungar:

In the community of San José de Baños, eight full scholarships for technical studies at SENATI were granted to community members and youth.

### Training

#### Yauli Unit

- In 2017, 39 women from the community of Yauli were trained in operation of sewing machines and adult sports wear sewing at SENATI. In addition, the Agricultural Training Program was carried out in Pomacocha Rural Community; 30 people participated in the course.
- San Francisco De Asís de Pucará Community: Forty students attended the session and learned about alcoholism and sexual education. Moreover, 60 community members received environmental management training at SENATI.
- In Suitucancha Community, 16 community members received business management and administration training at SENATI.
- In San Antonio Community, 120 students learned about alcoholism and sexual education. Similarly, 100 community members received business management and administration training at SENATI.

#### Cerro Unit

- In 2017, the training sessions focused on different topics, such as communications, education, health and environment. All of them aimed at the population in Volcan's direct area of influence. The topics included: worker's code of ethics and conduct, community relations with subcontractors and community businesses, health education, training for teachers on how to encourage children to read, training in participatory socio-environmental monitoring, and awareness-raising sessions focused on how to care and protect the environment.
- On May 19 and 20, the first Finance at School program was carried out through a strategic partnership formed with the Superintendence of Banking, Insurance and Pension Fund Managers (SBS). The program aimed to provide financial knowledge to teachers enabling them to share it with their students. The goal is to enable students to manage their resources appropriately and perform well in the financial market, fulfilling their obligations and enforcing their rights as users.

#### Chungar Unit

- The Heavy Equipment Operator course was held at SENATI, aimed at Huayllay and Huaychao rural



- communities. Thirty five students attended the course.
- Moreover, two information technology courses were held at SENATI to train 42 students in the use of software like Power Point and Excel.
  - The first Motivation and Self-Esteem workshop was held for women in Huayllay. Fifty mothers participated in the workshop.

#### › Baños

Basic computer skills, sewing, and electric installations training programs were held at SENATI. The course was attended by 120 people from Ravira, Viscas, Pacaraos, Vichaycocha, Santa Cruz and Santa Catalina communities.

#### Health

Volcan has committed to generating material and sustainable improvements in community health standards. Therefore, in alliance with Prisma, a non-governmental organization and strategic health partner,

the Company has designed a corporate project with a 2018 timeline. **203-1**

The aim of the project is to identify the principal diseases in each community, monitor their evolution over time, and develop medical campaigns to address them. Another aspect of this work is prevention, which is carried out through advocacy meetings, raising awareness among authorities, and in-person educational sessions on key topics, which are determined by the community's needs. In addition, conscious of the important role played by the government in the project's sustainability, Volcan brings together the corresponding public entities to contribute to its implementation and management.

A total of 2,988 people were served during the campaigns and 9,648 services were provided in diverse specializations.

#### › NUMBER OF GENERAL HEALTH CARE INTERVENTIONS BY SPECIALIZATION AND SERVICES **203-1**

DIVISION	UNIT	LOCATION (NO. OF PERSONS)	CAMPAIGN	MEDICAL ATTENTION CASES	SPECIALIZED MEDICINE CASES
Mining	Yauli	Pachachaca	1°	214	721
		Pomacocha	1°	94	430
		Suitucancha	1°	203	727
		Yauli	1°	281	718
			2°	334	876
	Cerro de Pasco	Quiulacocha	1°	197	623
			2°	243	880
		Yurajhuanca	1°	136	300
	Chungar	Huaychao	1°	241	834
			2°	203	888
		Huayllay	1°	665	1,999
	CH Baños	Ravira	1°	76	275
		Viscas	1°	101	377
Total				2,988	9,648

## 2.

### ECONOMIC DEVELOPMENT

**CONSERVATION AND PROTECTION OF TRADITIONAL BUSINESSES, AS WELL AS DEVELOPMENT OF PRODUCTION AND INNOVATION, ARE FACTORS THAT HAVE A POSITIVE IMPACT ON THE ECONOMIES OF THESE LOCAL COMMUNITIES. WITH THIS PERSPECTIVE, VOLCAN AND THE NGO PRISMA HAVE DESIGNED AN ACTION STRATEGY WITH A 2018 TIMELINE.**

**103-2/ / 203-1**

In this area, the Company has developed farming campaigns to improve the production chain for 689 people in the area of influence



#### › FARMING DEVELOPMENT RESULTS IN 2017 **203-1**

UNIT	MANAGEMENT/COMMUNITY	CAMPAIGN	NO. OF HEAD OF CATTLE DOSED
Cerro de Pasco	Cooperativa Yanamate	1°	11,929
	Quiulacocha	1°	13,613
	Quiulacocha	2°	13,613
	Yurajhuanca	1°	4,180
Chungar	Huayllay	1°	27,887
	Huaychao	1°	24,601
Baños	San José de Baños	1°	1,988
	Santa Cruz de Andamarca	1°	2,101
	San Miguel de Vichaycocha	1°	6,365
	San Juan de Chauca	1°	232
	Santa Catalina (includes Chauca)	1°	1,021
	Viscas	1°	683
	Ravira (Pacaraos)	1°	1,134
	Pomacocha	1°	6,313
Yauli	Yauli	1°	6,858
	Suitucancha	1°	24,003
<b>Total</b>			<b>146,521</b>



Volcan provided financial support to the rural community of Ravira, in Paracaos, who won the 2017 National Program for Agrarian Innovation for Agrarian Extension services. The community was awarded PEN 196,000 to carry out the Improved Pastures and Irrigation Technologies project to enable future sustainable milk production in the area.

203-1

This initiative stressed the benefits of access to public funds to improve the quality of life of the communities.

### Local Employment Development

#### › Chungar Unit

Volcan implemented a local employment procedure to meet the subcontractors' hiring needs and become a link between these companies and Huaychao and Huayllay communities. By December 2017, the Company registered 649 requests from subcontractors, 155 applicants and 116 hires.

#### › Yauli Unit

Six workers from Huayhuay Community, six from Yauli Community and two from Pachachaca Community were incorporated to the Company.

#### › Baños Unit

In line with commitments, work opportunities were provided to the communities in the area of influence and 22 members of the Ravira and Viscas communities were hired.

#### › Cerro Unit

According to commitments for local employment generation through service demand, Volcan created opportunities to benefit members of communities in the direct area of influence of Cerro de Pasco mining unit.

### Infrastructure

Volcan promotes the development of infrastructure to generate a positive social impact on quality of life, in line with the commitments assumed by the Company and the needs of the communities within its direct area of influence. In 2017, the following was implemented: 203-1

#### › Yauli Unit

- Suitucancha Community: Completion of a forest nursery under the Zoraida I Agreement. The budget for the project was PEN 76,837 plus taxes.
- Yauli Community: CITE second stage completion reached 98%. The budget executed in 2017 totaled USD 97,216, under the Rumichaca Tailings Dam 24 ha Expansion agreement executed in 2012. Average investment: PEN 579,000, to benefit education.  
A permanent substation and its relevant facilities to supply electricity to the thermal springs was completed with a total budget of PEN 230,867, under the Victoria Tailings Dams 52.5 ha Remediation agreement.
- Pomacocha Community: Execution of the second stage of the sprinkler irrigation project and installation of 13 ha of pastures. The budget in 2017 was PEN 83,451 (progress at 80%), under the Rumichaca Tailings Dam 10.9 ha Expansion agreement executed in 2014. Average investment: PEN 460,000, to benefit agriculture.

#### › Cerro Unit

- Improvement to the electric infrastructure of Colegio Nacional Integrado N° 31774 San Andrés of Paragsha Settlement.
- Painting the Quiulacocha Settlement health post.
- Implementation of school libraries at educational centers (pre-school, primary and secondary) in the direct areas of influence: Paragsha, Rancas, Barrios de Ayapoto, Barrio Buenos Aires, Champamarca, Yurajhuanca, Quiulacocha settlements, and Uliachín neighborhood.
- Concrete blocks were purchased to construct 144 cattle sheds for Rancas Community.
- Average investment: PEN 460,000, to benefit cattle owners.

#### › Chungar Unit

- The sports field in Canchacucho was improved by adding stands and a small restaurant. The approximate budget was PEN 100,000.
- Construction and implementation of commercial premises in Andacancha. Budget was PEN 350,000.
- Construction of restaurant at La Hacienda facilities

and implementation of bungalows in León Pata. The approximate budget was PEN 148,000.

- Construction of organic vegetable gardens in La Cruzada, to benefit the educational center. The approximate budget was PEN 18,000.
- Improvement of main pipeline at La Cruzada. The approximate budget was PEN 6,000.

#### › Baños Hydroelectric Plants

- In May, June, July, August, September, October and November, the Company actively participated in the irrigation of the road section between Tingo bridge and San José de Baños community, as part of Volcan's

commitment to environment protection and pollution reduction.

- Preparation of rural electrification technical file and redesign of the primary and secondary networks in 13.2 kV and a 30 kw demand, and purchase of a generator set for Santa Catalina rural community.
- Construction of 1,000 meter long perimeter fence to demarcate the Santa Cruz de Andamarca community.
- Delivery of 500 meters of cattle fence and 100 posts to San José de Baños community and 1,000 m of cattle fence to Carhuacayan community to improve cattle production.





### 3. COMPLIANCE OVERSIGHT

Volcan's activities are supervised by government agencies that enforce fulfillment of commitments to communities and application of standards to prevent significant impact on the environment that could harm human health and lives. **103-3**

The Agency for Environmental Assessment and Enforcement (OEFA) assesses, oversees and, in some cases, sanctions Volcan's activities. OEFA is a specialized technical body attached to the Ministry of Environment, it enforces and ensures an adequate balance between private investment for economic activities and environmental protection. In addition, it controls the National System for Environmental Assessment and Enforcement (SINEFA). **103-3**

In 2017, agencies, such as OEFA, made oversight visits to the Company.

### 4. FORMAL GRIEVANCE MECHANISMS

As part of its environmental policy and to comply with citizen engagement regulations (Supreme Decree No. 028-2008-EM, Regulation on Citizen Engagement in the Mining Subsector), Volcan and its subsidiaries implement citizen engagement mechanisms for the different stages of mining activity, such as exploration, production, or mine closure. In addition, the Company has a Permanent Information Office in all units that make approved environmental impact assessments available to the community and provide information about project and operational progress. **102-43 / 103-2 / 413-1 / MM7**

These offices receive suggestions, comments, reports, and grievances from stakeholders in the areas of influence. The documentation is promptly processed and addressed. Depending on the type of grievance, meetings are organized to clarify questions; these are complemented by guided visits when necessary.

In 2017, the Company successfully implemented a formal complaint and grievance system at Chungar unit, which will

be applied at all units since 2018. Moreover, 36 complaints were registered, out of which 31 were related to employment, four to accounting matters, and one to environmental matters.

In addition, informative meetings were held at Cerro de Pasco, aimed at regional and local authorities and the population of communities within the area of influence (Quiulacocha, Yurajhuanca, Paragsha, Rancas, Champamarca). The population's opinions on the project have been registered as indicators. Moreover, a guestbook was made available for complaints, grievances and inquires at the Social Responsibility facilities, which also act as information office.

### 5. SOCIAL INVESTMENT

The goal of Volcan's social investment is to contribute to sustainable human development in the 60 communities in its direct area of influence. In 2017, Volcan invested USD 4.7 million in this area. The investment is primarily based on the Company's 84 agreements and commitments with rural communities, established in sustainable development and community relations plans arising out of environmental impact assessments. They are concentrated in three areas: education, health, and economic development. In addition, to strengthen the local economy, Volcan worked with 17 community enterprises with total billing around USD 4.2 million per month for civil works, mining operations, and hauling services, among others. **103-1 / 103-2 / 203-1**

#### › SOCIAL INVESTMENT BY DIVISION AND UNIT **203-1**

SOCIAL INVESTMENT	(MM USD)
Yauli	1.60
Chungar	1.50
Cerro de Pasco	0.80
CH Baños	0.80
<b>Total Social Investment</b>	<b>4.70</b>

There are currently no impact evaluations being implemented for the main projects and investments made,

as it is necessary to establish a baseline that would enable analysis of the current situation. In 2016 the baseline created for Huayllay and Huaychao was used to establish intervention priorities in accordance with the most critical indicators in those communities. This resulted in prioritizing investment in education, health, and nutrition. **103-3 / 203-2 / DMA consecuencias económicas indirectas)**

### 6. SIGNIFICANT INVESTMENTS IN SOCIAL INFRASTRUCTURE

Since 2010, Volcan has committed PEN 126 million to finance 15 infrastructure and utilities project of great social impact related to education, water and sanitation, solid waste management and transport, among others. These projects benefit almost 500 people and incorporate sustainability and innovation components and comprehensive solutions. **203-1**

Volcan continued to actively participate in the Public Works Tax Credits program. Public Works Tax Credits projects were oriented toward improving the quality of life in nearby communities through adequate basic services and better infrastructure, as well as establishing an internal strategy to prioritize investment in certain sectors to achieve greater social impact. **103-2**

**IN THIS REGARD, THE PROJECT FOR THE NEW FOOD MARKET OF CHANCAY WAS AWARDED TO THE COMPANY. IT WILL HAVE A BUDGET OF PEN 22 MILLION TO ENABLE 85,000 PEOPLE TO BUY AND SELL THEIR BASIC PRODUCTS IN A SAFE, CLEAN AND ORDERLY ENVIRONMENT.**

Moreover, public bodies and communities received support for the startup of two major projects in the direct area of influence: a) Water and Sewer System in San Agustín de Huaychao Settlement (Huayllay-Pasco), with a

total investment of PEN 8.1 million in a joint venture with Ferreyros and Unimaq; and b) Water and Sewer System of Yauli, in the Aguas Calientes, Santa Rosa, Bolognesi, Centro Yauli, Las Brisas, Manuel Montero and San Juan Bautista de Pachachaca neighborhoods (Yauli-Junín), with a total investment of PEN 9.5 million, also a joint venture, with Ferreyros and Chinalco. It is important to note that the works were completed in 2016.

Volcan ranks third among mining companies in terms of the number of Public Works Tax Credits projects won, and in terms of committed funding amount. Moreover, the Company is a founding member of ALOXI, the Partnership for Public Works Tax Credits, which includes companies responsible for 80% of projects funded under this mechanism.

#### › RANKINGS OF COMPANIES BY INVESTMENT AMOUNT AND NUMBER OF PROJECTS (2011-2017)

Nº	COMPANY	TOTAL 2009-2017
1	Banco de Crédito del Perú - BCP	1,103.80
2	Southern Peru Copper Corporation	586.11
3	Compañía Minera Antamina SA.	570.40
4	Telefónica del Perú S.A.A.	210.80
5	Banco Internacional del Perú S.A.A. Interbank	179.10
6	Optical Technologies S.A.C.	167.50
<b>7</b>	<b>Volcan Compañía Minera S.A.A.</b>	<b>125.90</b>
8	Unión de Cervecerías Peruanas Backus y Johnston S.A.A. - BACKUS	97.00
9	Cementos Pacasmayo S.A.A.	66.80
10	Ferreyros S.A.	57.90

Source: Decentralized Investment Office - ProInversión





# 11

## **RESPONSIBLE ENVIRONMENTAL MANAGEMENT**





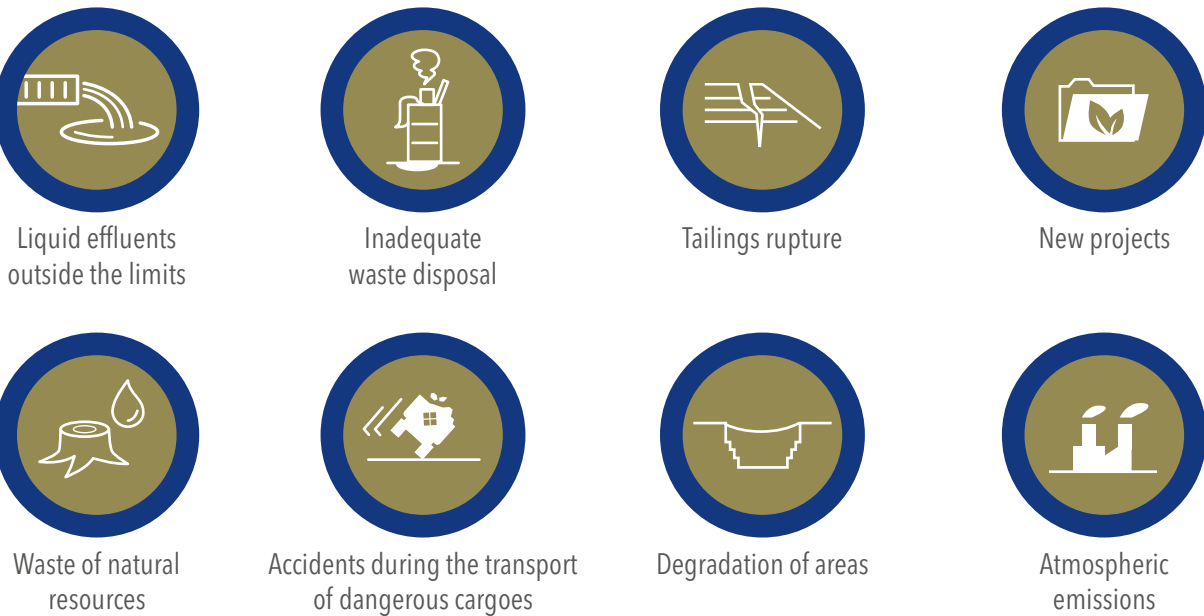
# ENVIRONMENTAL MANAGEMENT

IN CONTINUING ITS ENVIRONMENTAL MANAGEMENT STRATEGY, IN 2017 VOLCAN IMPLEMENTED CRITICAL ENVIRONMENTAL RISKS TO FOCUS EFFORTS ON PREVENTION AND CONTROL OF ENVIRONMENTAL RISKS, STANDARDIZING OPERATIONAL CRITERIA BASED ON THE BEST PRACTICES IDENTIFIED IN THE MARKET. 103-1 / 102-11

Figure 9 shows Critical Environmental Risks controls that were implemented. Efforts are focused on controlling liquid effluents that exceed the limits, tailings dam ruptures, inappropriate solid waste disposal and new projects. 102-11



## › CRITICAL ENVIRONMENTAL RISKS



## › MEASURES TO ENSURE PROPER ENVIRONMENTAL MANAGEMENT AND COMPLIANCE WITH DOMESTIC LAW 103-2

MEASURES	DESCRIPTION
Dissemination of environmental obligations	Current environmental legislation is described
Implementation of the Regulatory Affairs Committee with the UEAs	Implies a closer approach and coordination with units
Application of corrective measures Alerts	Follow-up and verification of compliance with corrective measures imposed by OEFA These alerts indicate when mandatory periodical environmental reports have been turned in
SGA Audits	These audits prevent, mitigate and control environmental risks and guarantee compliance with environmental obligations
Strategic Committees	The SGA implements these, and they are made up of Senior Management and the heads of each UEA
Level 2 Committees	The SGA implements these and they are made up of the superintendents of each UEA. This is where the environmental situation and areas for improvement are presented.

In 2017, the corporate standards book was published, as a vital tool to manage Critical Environmental Risks in the operation.



## › KEY CORPORATE STANDARDS DEVELOPED TO MANAGE CRITICAL ENVIRONMENTAL RISKS





# EMISSIONS AND AIR QUALITY

**AIR QUALITY AND EMISSIONS ARE CONTROLLED THROUGH AN ENVIRONMENTAL MONITORING PROGRAM IMPLEMENTED ACROSS ALL MINING UNITS.** 103-3

In 2017 the Company continued to implement and internalize the Air Emissions Standard, which establishes concrete actions for better, safer, and more effective management of emissions from operating units.

Air quality is monitored in operations and in the environmental area of influence through a network

of monitoring stations, which enables observation and measurement of the impact of mining activities. Monitoring is performed by a specialized company using inertial separation/filtration (gravimetric analysis) for 24 hours. According to the 2017 results, emissions of particulate matter, measured in parts per million (ppm), met the Environmental Quality Standard (EQS) established by Supreme Decree 003-2017-MINAM. 305-7

Also, as part of compliance with environmental commitments and regulations, monitoring results are reported each quarter to the Ministry of Energy and Mines.

› ENVIRONMENTAL QUALITY STANDARD FOR PARTICULATE MATTER 305-7

PARAMETER	VALUE (ANNUAL)	STANDARD
Particulate matter under 10 micra PM 10	50 ug/m3	D.S. 003-2017-MINAM
Particulate matter under 2.5 micra PM 2.5	2 ug/m3	

› QUANTITY OF PM 10 AND PM 2.5 PARTICULATES BY UNIT

UNIT	PARTICLE NUMBER (PPM)	
	PM2.5	PM 10
Yauli	4.7	47.0
Chungar	7.3	21.1
Cerro de Pasco	9.7	21.6
Alpamarca	1.1	10.8
Environmental Quality Standard (EQS)	25 ug/m³	50 ug/m³

Table 47 shows annual PM 2.5 and PM 10 values at each mining unit. In 2017, Volcan's mining unit recorded emissions below the limit established by air quality standards for metals and particulate matter.





## BIODIVERSITY

**BIODIVERSITY IS AN IMPORTANT ASPECT OF VOLCAN'S ENVIRONMENTAL PROTECTION POLICY. HOWEVER, IT SHOULD BE NOTED THAT NONE OF VOLCAN'S OPERATIONS ARE LOCATED WITHIN PROTECTED NATURAL AREAS THAT ARE PART OF THE NATIONAL SYSTEM OF PROTECTED NATURAL AREAS (SINANPE).** 103-1

Volcan has one mining project in the buffer zone of the Nor Yauyos Cochas Landscape Reserve. The Company conducts biological monitoring of flora and fauna biannually and reports the results to the Ministry of Energy and Mines and the Agency for Environmental Assessment and Enforcement. 304-1 / MM2

In addition, the Alpamarca unit has nine flora and fauna monitoring stations. Monitoring activities take place twice a year as established in commitments made in environmental management instruments. 103-2

As part of mine closure activities, Volcan has implemented revegetation plans using native species for the recovery of disturbed areas.

**THE MONITORING,  
PERFORMED  
SEMESTERLY, FORM  
PART OF THE  
COMMITMENTS  
ASSUMED IN THE  
INSTRUMENTS OF  
ENVIRONMENTAL  
MANAGEMENT.**





# TRANSPORT

TRANSPORT MANAGEMENT IS PART OF THE COMPANY'S ENVIRONMENTAL MANAGEMENT SYSTEM. THIS SYSTEM CONTROLS ENVIRONMENTAL RISKS THROUGH CONTINUOUS ASSESSMENT USING THE COMPANY'S HAZARD IDENTIFICATION PROCEDURE, RISK ASSESSMENT AND CONTROL, INTERNAL AUDITS, AND AIR QUALITY MEASUREMENT. 103-1

With respect to personnel, Volcan transports its employees to and from operations areas in its own 4X4 trucks and also uses third-party bus transport services.

Mineral is transported in dump trucks, belts and/or passes from underground extraction areas and pits to concentrate plants, while concentrates are transported from mining units to the port of Callao in enclosed trailers, containers and via the Central Andino Railway.

All transport vehicles are part of the Preventive and Predictive Maintenance Program to mitigate and control significant environmental impacts. 103-2



## › ENVIRONMENTAL IMPACTS GENERATED 103-1 / 103-2

ENVIRONMENTAL IMPACT	ENVIRONMENTAL CONTROL
Gass emissions such as CO and Co2 due to diesel consumption.	Preventive maintenance
Oil Spill	Preventive maintenance
High noise	The Internal Traffic Regulations (RITRA) establishes when and where the horns can be used
Particled materials	Road watering with cisterns in the sourrounding areas and sprinklers located in the operation

# WASTE MANAGEMENT

WITH THE IMPROVEMENT OF ITS ENVIRONMENTAL MANAGEMENT SYSTEM IN 2017, VOLCAN HAS CONTINUED STRENGTHENING STANDARDS FOR SOLID WASTE MANAGEMENT, INCLUDING CONTROLS AND INDICATORS. THE COMPANY PLANS TO IMPLEMENT REDUCTION, STORAGE, REUSE, SALE, TRANSPORT, RECYCLING, AND FINAL DISPOSAL OF WASTE INDICATORS THROUGHOUT THE ENTIRE VALUE CHAIN BY 2018. IT IS CURRENTLY IN THE PROCESS OF IMPLEMENTING AND INTERNALIZING THE STANDARD. 103-2

All operations have stockpile points at strategic locations for separating waste by color code. A service provider company collects hazardous waste from temporary storage facilities located at the units. Non-hazardous waste is disposed of at landfills; one part is marketable and/or reusable.

Waste management policies are aligned with current environmental regulations. To comply with the regulatory provisions of the General Law on Solid Waste approved by Supreme Decree 014-2017-MINAM, Volcan submits a Solid Waste Management Plan to the government each year. Hazardous solid waste manifests are reported each month to the Agency for Environmental Assessment and Enforcement. Annual Statements for the previous period and the Solid Waste Management Plan for the following year are reported no later than the 15th of April of the following year. 103-3

In 2017, Volcan generated 9,832 MT of solid waste across all units; a 1% increase as compared to 2016. Out of this volume, 71% was non-hazardous: domestic and industrial. Domestic waste are disposed of at the unit's landfill; industrial waste is sold, donated and reused. By 2018, one of the main efforts will include reducing solid waste where it is generated. 306-2

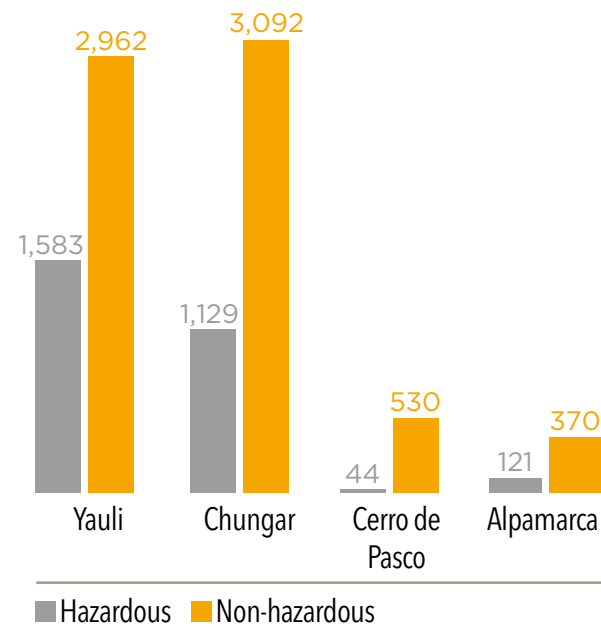
## › MAIN WASTE GENERATED IN 2017

TYPE OF WASTE	WASTE
Hazardous	Used oils
	EEAW* (Batteries, used fluorescents, toner, etc.)
	Plastic waste (Bags, bottles, PVC pipes)
	Waste with cyanide and sulfate
	Material with hydrocarbons
	Heavy metals (soldering waste)
Nonhazardous	Explosives remains
	Organic waste
	Wood remains
	Plastic waste
	Paper and cardboard
	Metal waste (scrap)

\* RAE: Electric and Electronic Appliances Waste



› **HAZARDOUS VS. NON-HAZARDOUS WASTE GENERATION (MT) BY VOLCAN MINING UNITS AND SUBSIDIARIES** 306-2



Volcan contracts service provider companies at each of its units for final disposal of hazardous and non-hazardous waste. 103-2 / 306-2

› **EPS-RS**

UNIT	EPS	SANITARY REGISTRY
Yauli	D&D / GSA- DISAL	EPNA- 968-14 / EP - 1501-067.17
Chungar	Emiconsath S.A y D&D	EP-1901-088.16 / EPNA-968-14
Cerro de Pasco	D&D	EPNA-968-14
Alpamarca	Emiconsath S.A /D&D	EP-1901-088.16 / EPNA-968-14

› **WASTE GENERATION (MT) BY VOLCAN MINING UNITS AND SUBSIDIARIES** 306-2

UNIT		ANNUAL WASTE GENERATION (MT)		
		HAZARDOUS	NON-HAZARDOUS	TOTAL
Yauli	Andaychagua	410	923	1,333
	San Cristóbal	682	1,095	1,777
	Carahuacra	382	812	1,195
	Ticlio	109	132	241
Chungar		1,129	3,092	4,221
Cerro de Pasco <sup>1</sup>		44	530	574
Alpamarca		121	370	491
<b>Total</b>		<b>2,878.00</b>	<b>6,954.00</b>	<b>9,832</b>

<sup>1</sup> Includes wastes from Oxides Plant

## ENERGY

**ENERGY MANAGEMENT AT THE COMPANY HAS TWO FRONTS: THE GENERATION OF ENERGY FROM RENEWABLE SOURCES AND THE OPTIMIZATION OF ENERGY USE THROUGH IMPROVING OPERATING EFFICIENCIES.** 103-2

With regard to renewable energy, Volcan is developing hydraulic generation projects: the expansion of Tingo Hydroelectric Plant and Chancay 2 and 3 projects. Both projects are still in the permitting process.

To increase operational efficiency, the Company created the Corporate Energy Efficiency Program aimed at maintaining energy costs at 8-10% of mineral production cost. This program consists of minimizing service interruptions, turning off equipment during peak hours and using condenser banks to efficiently compensate for reactive energy. 302-4

› **ELECTRICITY CONSUMPTION**

302-1 / 302-4

ELECTRIC POWER BALANCE (GWH)	2016	2017	VAR %
<b>Energy Production</b>	<b>322.6</b>	<b>352.5</b>	<b>9.2</b>
CH's Chungar	137.8	161.9	17.5
CH Tingo	9.3	9.0	-2.7
CH Huanchor	139.3	146.9	5.5
CH Rucuy	36.3	34.6	-4.9
<b>Energy Consumption</b>	<b>634.9</b>	<b>706.7</b>	<b>11.4</b>
<b>Energy Purchase</b>	<b>487.5</b>	<b>541.4</b>	<b>11.0</b>

Source: Volcan Cía. Minera





Volcan energy consumption is calculated as follows:

- Monthly readings from meters: Consolidated monthly consumption information from meters; they provide energy procurement data (MWh). The information is provided by the electricity supplier or monitoring center.
- Monthly generation reports: Information from terminal meters at Volcan's hydroelectric plants; they provide power generation data (MWh). The information is provided by the Operations/Electric Maintenance Area and the Hydroelectric Operations Division.
- Tons processed monthly reports (MT): Tons processed at the mining units' concentrator plants.

Finally, energy consumption costs versus tons processed are registered and consolidated in a monthly report prepared by the Budget and Management Control Division. **103-3**

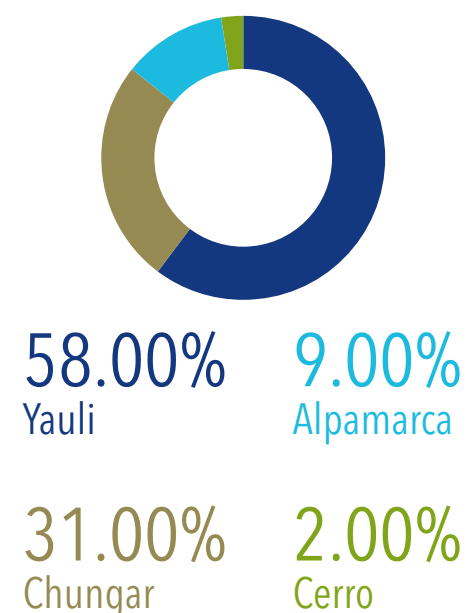
The source used to calculate conversion reports can be found in the GRI G4 Guidelines for preparing Sustainability Reports.

At Volcan, non-renewable fuel sources are used for transport vehicles, machinery and equipment, recording a total of 8.1 million gallons of diesel in 2017.

#### › FUEL CONSUMPTION (DIESEL) BY UNIT (G4-EN3) **302-1**

UNITS	CONSUMPTION (THOUSAND GALLONS)
Yauli	4,787
Chungar	2,514
Alpamarca	753
Cerro de Pasco	133
<b>Total</b>	<b>8,187</b>

#### › FUEL CONSUMPTION % **302-1**



**IN 2017, FUEL CONSUMPTION AT VOLCAN AND SUBSIDIARIES INCREASED 8% AS COMPARED TO 2016, DUE TO THE PROJECTS EXECUTED DURING THE YEAR.**



## WATER MANAGEMENT

**WATER IS AN ESSENTIAL RESOURCE FOR MINING THAT IS USED PRIMARILY IN THE MINERAL CONCENTRATION PROCESS AND TO A LESSER EXTENT IN AUXILIARY FACILITIES AND FOR HUMAN USE. THE MAIN SOURCES OF SUPPLY ARE SURFACE WATER AND WATER FROM THE INTERIOR OF THE MINE. **103-1****

Volumes of water used by operations are approved by licenses and permits granted by the National Water Authority, for which Volcan pays an annual usage rights fee. This restriction requires efficient use of the resource by the Company, which is why it has been implementing measures to optimize water use: **103-2**

- Recirculation of water in operations
- Inspections to detect leaks and/or poor practices in order to identify opportunities for improving water and liquid effluent standards
- Annual audits to identify process improvements and reduce water consumption
- Personnel training in rational water use.

Proper control of water consumption in relation to authorized flow volume is possible thanks to installation of equipment that measures volumes consumed via conventional methods, based on a water gauge and the hydraulic structure sections implemented at each authorized water capture point. The locations of this equipment have been reported to the Local Water Authority in compliance with Resolution No. 250-2015-ANA. **303-1**

At year-end 2017, Volcan was authorized to use an annual flow of 46.9 million m<sup>3</sup>, of which 59% is for mining and 41% is for domestic use. **303-1**

To safeguard, preserve, and protect water, Volcan conducts monthly environmental monitoring activities and submits the results each quarter to the Ministry of Energy and Mines and the National Water Authority. The Company also monitors water and effluent quality, not only at points approved by the authorities but at strategic locations to identify operational deviations that could put water at risk, in order to prevent, control, and mitigate such situations.

#### › AUTHORIZED WATER VOLUMES BY UNIT

		ANNUAL VOLUME (THOUSAND M <sup>3</sup> )		
UNITS		MINING	DOMESTIC	TOTAL
Yauli	Andaychagua	2,017	426	2,443
	San Cristóbal	5,046	1,700	6,746
	Carahuacra	735	536	1,271
	Tidlio	237	410	647
Chungar	Animón	2,996	158	3,154
	Islay	158	0	158
Cerro de Pasco		14,822	15,768	30,590
Alpamarca		1,734.00	156.00	1,891.00
<b>Total</b>		<b>27,745</b>	<b>19,154</b>	<b>46,899</b>



To improve water quality and usage, in 2017 the Company internalized the Water and Liquid Effluent Management Standard which will enable it to implement Environmental Performance Indicators in 2018. 103-2/102-11

As part of compliance with Supreme Decree No. 015-2015-MINAM, in 2017, the units submitted the

updated Plan for Integral Adaptation to Water Quality Standards and Maximum Permissible Limits to the Ministry of Energy and Mines, including projects and activities aimed at comprehensive water management, such as separation of contact and non-contact water and water recirculation.



## EFFLUENTS MANAGEMENT

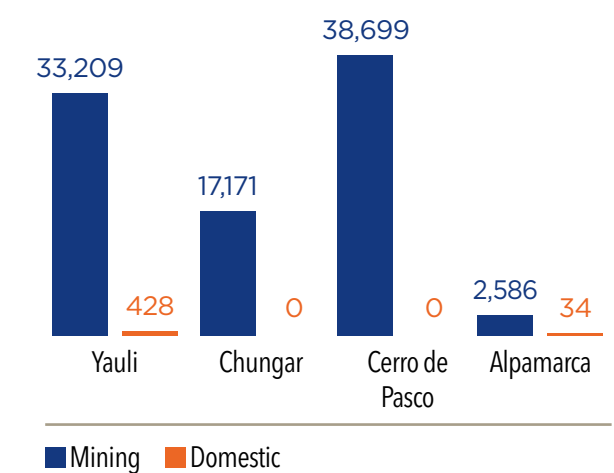
**TO IMPROVE CONTROL OF DISCHARGE VOLUMES, IN 2017 THE COMPANY IS MIDWAY THROUGH THE INSTALLATION OF FLOW MEASUREMENT EQUIPMENT LOCATED AT DOMESTIC AND INDUSTRIAL EFFLUENT DISCHARGE POINTS. IT IS IMPORTANT TO NOTE THAT VOLCAN HAS BEEN GRANTED THE REQUISITE DISCHARGE AUTHORIZATIONS FROM THE NATIONAL WATER AUTHORITY. IN THIS ASPECT, DISCHARGE QUALITY AND QUANTITY MEET THE MAXIMUM PERMISSIBLE LIMITS IN EFFECT AND ARE REPORTED TO THE COMPETENT AUTHORITIES EACH QUARTER.** 103-2

At the end of 2017, Volcan authorized discharges totaled 92.1 million m3, of which 99% are from mining activities. The Cerro de Pasco unit has the largest authorized volume (38.7 million m3), followed by Yauli (33.6 million m3), Chungar (17.2 million m3) and Alpamarca (2.6 million m3)

306-1

For 2018, the Company plans to implement environmental performance indicators to promote safe and efficient management of liquid waste produced at the operation.

### ANNUAL AUTHORIZED DISCHARGE VOLUME BY UNIT 306-1



### ANNUAL AUTHORIZED DISCHARGE VOLUME BY UNIT 306-1

		ANNUAL VOLUME (THOUSAND M3)		
UNITS		MINING	DOMESTIC	TOTAL
Yauli	Andaychagua	7,070	52	7,122
	San Cristóbal - Marh Tunel	2,551	210	2,761
	Carahuacra	15,704	163	15,867
	Tidlo	7,884	3	7,887
Chungar	Animón	17,171	0	17,171
Cerro de Pasco		38,699	0	38,699
Alpamarca		2,586	34	2,620
<b>Total</b>		<b>91,666</b>	<b>461</b>	<b>92,127</b>



# TAILINGS DAM MANAGEMENT

TAILINGS GENERATED BY PRODUCTION PROCESSES ARE ACCUMULATED IN DEPOSITS THAT MUST BE MANAGED EFFICIENTLY TO ENSURE PROPER FUNCTIONING AND PREVENT POTENTIAL ENVIRONMENTAL DAMAGE. VOLCAN HAS SIX OPERATIVE TAILINGS DAMS. 103-2 / MM3

The Waste Storage Management System (tailing dams and overburden) (SIGDERE) focused on the following modules:

- Module I: Planning
- Module II: Documentation
- Module III: Monitoring
- Module IV: Assessment
- Module V: Information
- Module VI: Training
- Module VII: Operation
- Module VIII: Risks
- Module IX: Contingency
- Module X: Legislation

SIGDERE enables the Company to make comprehensive planning, meet geotechnical monitoring programs, integrate different areas for Monitoring Program enforcement, and



empower operators at concentrator plants allowing them to make a critical analysis and follow up on compliance.

In 2017, the Company strengthened the training modules on the SIGDERE standard. The main objective of the standard is to ensure safe operation of the geotechnical aspects of dams at all units. The standard incorporates best engineering practices, following the premises of the project, environmental laws, and Volcan corporate policies.

## › STORAGE VOLUME BY UNIT 306-2 / MM3

UNIT	DEPOSIT	TYPE ELEVATIONS	ENVIRONMENTAL INSTRUMENT
Yauli	Mahr Tunel N°6	Pulp	EIA /ITS
	Rumichaca	Thickening	EIA
	Andaychagua Alto	Pulp	EIA
Alpamarca	Alpamarca	Pulp	ITS
Animón	Animón	Thickening	ITS
Cerro de Pasco	Ocroyoc	Pulp	EIA

(1) Partial volume from the day data became available. (Volcan started operations at Ocroyoc deposit at an elevation of 4262 masl.  
(2) General storage volume, water management volume is not included.

# REGULATIONS, FINES AND SANCTIONS

Volcan manages its compliance with environmental regulations and the impacts generated by its operations through the following actions:

- Dissemination of environmental obligations required under current regulations.
- Execution of internal audits in mining units to verify environmental obligations.
- Follow-up and verification of compliance with corrective measures imposed by the Agency for Environmental Assessment and Enforcement (OEFA).
- Follow-up through alerts to operations regarding compliance with the required periodic environmental reports.
- Environmental management system audits aimed at preventing, mitigating, and controlling environmental risks of the operation and therefore compliance with environmental obligations. 103-2 / 307-1

The framework of the Environmental Management System includes strategic committees comprised of management and those responsible for each mining unit, charged with

making decisions regarding environmental performance. In addition, there is a committee (Committee Level 2) comprised of superintendents for each operation, who share information on environmental situations and opportunities for improvement.

**IN 2017 21 ENVIRONMENTAL SUPERVISIONS WERE REGISTERED AMONG SPECIAL AND REGULAR CARRIED OUT BY OEFA, 5 OF WHICH CORRESPOND TO VOLCAN COMPAÑIA MINERA AND 16 TO SUBSIDIARY COMPANIES. NO FINES WERE RECORDED BY THE AUDIT ENTITY.**

Likewise, regulatory compliance is evaluated through the following mechanisms:

- Correction of findings identified in environmental inspections.
- Reduction of findings detected during inspections conducted by the environmental authority.
- Decrease in fines imposed by the environmental authority.





# COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

## THE COMPANY MET ALL REQUIREMENTS OF ENVIRONMENTAL REGULATIONS ON MINING REQUIRED BY THE PERUVIAN GOVERNMENT.

In addition, the Company submitted quarterly reports to the Ministry of Energy and Mines on water and air quality, and noise levels. It also submitted quarterly reports to the National Water Authority on effluent and water quality in receiving water bodies.

Volcan also submitted reports on its environmental obligations to the Ministry of Energy and Mines as established by Supreme Decree No. 040-2014-EM, as well as the Environmental Sustainability Report, the Environmental Strategy Compliance Report, the Annual Report on Significant Impacts, and the Annual Report on Reagents and Operational Inputs.

Finally, environmental training was provided to personnel in all mining units in compliance with Article 153 of Supreme Decree No. 040-2014-MEM. One of the most important training topics was environmental obligations in the framework of approved environmental instruments. 103-3 / 307-1

# CLOSURE PLANS

The final stage of a mine requires appropriate procedures to ensure that disturbed areas are able to recover both socially and environmentally and to avoid generating environmental liabilities that affect future generations. To date, all Volcan units have mine closure plans in place. The Company developed its first closure plans starting in 2009, under Law No. 28090 and its regulation, Supreme Decree No. 033-2005. Those plans have been updated, and in some cases modified, since 2012. 103-1 / 103-2 / 103-3 / MM10

As part of the execution of government-approved mine closure plans, the re-vegetation and progressive restoration program has been implemented to recover areas affected by mining activities, to benefit communities in the area

of influence. Progress in the activities executed and their results are reported to the Ministry of Energy and Mines; these are then enforced by the Agency for Environmental Assessment and Enforcement.

Commitments in mine closure plans in 2017 were centered around carrying out activities in relation to inoperative mine components and environmental liabilities incorporated in the mine closure plans. Closure activities were executed by Volcan and its subsidiaries as part of the progressive closure program.

It should be noted that during the year, Volcan provided a financial guarantee of USD 71.9 million to the Ministry of Energy and Mines for final closure and postclosure commitments, in accordance with the program approved each year. This ensures sufficient funding for closure activities or remediation in the final stage. In addition, the closure plans for the Carahuacra and Ticio (Yauli) mines were modified, and new closure schedule were established. 307-1

### › MINE CLOSURE BUDGET APPROVED BY THE MINISTRY OF ENERGY AND MINES 2017

			MINE CLOSURE BUDGET (USD 000)				
UNIT		MINE CLOSURE PLAN APPROVED BY:	PROGRESSIVE CLOSURE	FINAL CLOSURE	POSTCLOSURE	TOTAL	GUARANTEES
Yauli	Andaychagua	RD.176-2013-MEM-DGAAM	6	9.9	1.1	16.5	6.1
	Carahuacra	RD N° 074-2017-MEM- DGAAM	14	16	2.8	32.8	25.7
	San Cristóbal	RD.142-2016-MEM-DGAAM	10	21.5	1.8	32.9	11
	Ticio	RD.055-2017-MEM-DGAAM	1	2.7	0.8	4.9	3.4
Chungar	Alpamarca	RD.096-2016-MEM-DGAAM	2	8	1	11.3	4
	Animón	RD.096-2016-MEM-DGAAM	2	10.5	1.1	13.5	11.5
Cerro de Pasco	Cerro de Pasco	RD.514-2015-MEM-DGAAM	20	22.9	2.6	45.5	7.2
	Vinchos	RD.116-2016-MEM-DGAAM	6.30	1.1	1	8.4	2.7
San Sebastián	San Sebastián	RD.458-2014-MEM-DGAAM	0	0.3	0.2	0.5	0.4
Total			60.78	93.18	12.25	166.21	71.89



# ENVIRONMENTAL CERTIFICATIONS AND PERMITS GRANTED IN 2017

The following environmental certificates and permits were granted to Volcan and its subsidiaries in 2017: 307-1

## ENVIRONMENTAL CERTIFICATIONS AND PERMITS

COMPANY	AUTHORIZATION	DESCRIPTION	STATUS
Volcan Compañía Minera S.A.A.	R.D N° 083-2017-mem-DGAAM	ITS of reconfiguration of old tailing deposits and equipment replacement of Mahr Tunnel concentrator plant.	Approved
	R.D N° 298-2017 -MEM-DGAA	Detailed technical report of Ticlio Mine	Approved
	N°004-2017-MEM- DGAA	Chumpe mining explorations	Approved
	RDN° 021-MEM-DGAAM	Ticlio Mine exploration	Approved
Empresa Administradora Cerro S.A.C.	RD_249_2017_SENACE_DCA	ITS Paragsha Concentrator Plant optimization for stock piles treating	Approved
	RD 009-2017-MEM-DGAAM	Chuco Project - Environmental Impact Declaration	Approved
Empresa Administradora de Vinchos S.A.C.	R.D.037-2017-SENACE-JEF-DEAR	ITS Vinchos Exploration	Approved
Compañía Minera Chungar S.A.C.	R.D. N° 288-2017-MEM-DGAAM	ITS modification of the Environmental Impact Declaration of Romina 2	Approved
	R.D. 236-2917- mem/DGAAM	Seconfd modification of the semidetailed Environmental Impact Declaration of Palma Project tunnel	Approved

IST: technical report







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# ABOUT THE SUSTAINABILITY REPORT



# THIS DOCUMENT REPORTS ON ECONOMIC, SOCIAL, AND ENVIRONMENTAL MANAGEMENT BY VOLCAN COMPAÑÍA MINERA S.A.A. AND ITS SUBSIDIARIES IN PERU, INCLUDING MINE OPERATIONS, HYDROELECTRIC PLANTS, AND ADMINISTRATIVE OFFICES, FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2017.

102-1 / 102-45 / 102-50 / 102-51 / 02-52

For the third consecutive year, it was prepared in accordance with the methodology and guidelines of the Global Reporting Initiative (GRI), in Essential Option, being the first version in accordance with the new GRI Standards. The periodicity of its publication is annual, the date of the previous report was on March 28, 2017, corresponding to the year 2016.

To determine the contents, an internal and external documentary review was carried out, as well as the monitoring of indicators of performance in economic, environmental and social issues, which have followed the technical protocols established by the GRI. These contents were modified and expressed according to the tool "Mapping G4 to the GRI Standards - Disclosures - Full overview".

102-49

## MATERIALITY PROCESS

In 2015, Volcan carried out a preparatory cycle to prepare a sustainability report for the first time according to the GRI protocols. In June 2016 he commissioned a consultancy to identify and select your topics materials that determine the contents of your reports, reflecting the expectations of its stakeholders and the management of the potential impacts that could affect the sustainability of its operations. The identification of Material issues were determined by the following process:

102-46



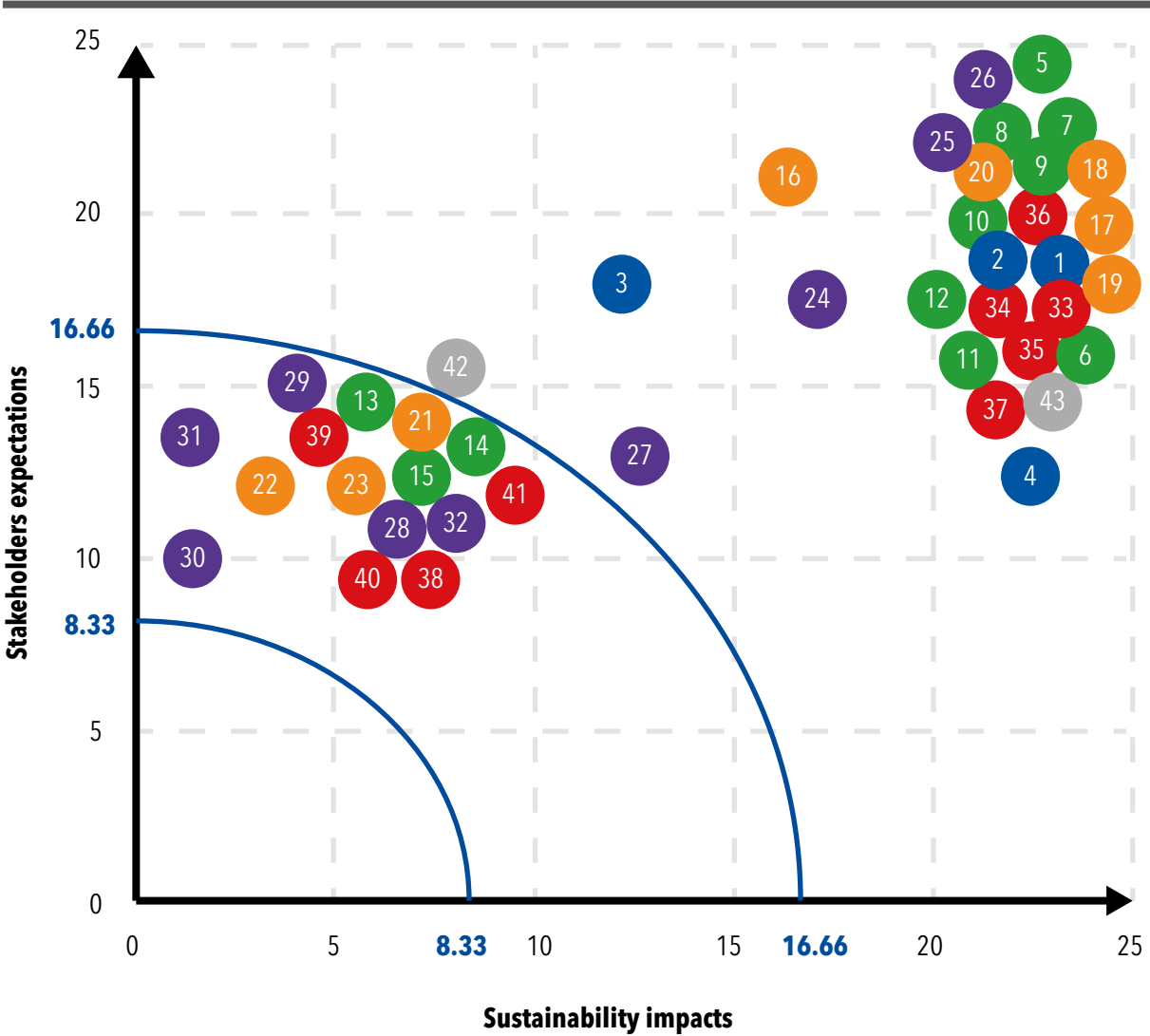
### › PROCESS STAGES

STAGE	DESCRIPTION
Stage 1: Review	To identify expectations and perceptions regarding management, as well as the aspects to be included in this report, the results of 166 online surveys targeted at collaborators and suppliers were used, together with community consultations prepared in 2015. In 2016, this stage was concluded through the evaluation carried out by report 2015, where improvement opportunities are identified. In addition, sustainability surveys were taken by managers and the Company's shareholders, and customers were also surveyed.
Stage 2: Identification	On the basis of the information obtained and the analysis of different management tools, interviews with Volcan officers were held to identify the main impacts of operations with regard to sustainability. Emerging sustainability topics defined in Robeco Sam's "The sustainability yearbook 2016" were identified and comparisons were made against sustainability reports of other international mining companies to identify aspects that are common across the sector.
Stage 3: Prioritization	To determine their maturity, relevance and prioritization of the topics addressed in this report, Perú2021's risk assessment methodology was used. This assessment takes into account the expectations of stakeholders, as well as the review of documents and reports related to management of economic, social and environmental aspects.
Stage 4: Validation	The materiality matrix obtained was validated by managers, community representatives and collaborators, and was followed by the selection of indicators and management approaches needed for the Sustainability Report. In 2016, the material aspects identified in 2015 were validated through feedback meetings held with officers of strategic areas. Focus groups were held with community representatives and Yauli collaborators, and the person in charge of community relations in Chungar and CH Baños was interviewed. Moreover, an induction workshop on GRI standard for Data Managers in charge of providing information was held. Finally, the responsibility process 2016 was launched through a meeting held with 24 managers of the Company.



As a result of this process, a list of material issues that remain valid was prioritized. Your level of coverage<sup>1</sup>, the Interest groups and related business units are shown below: 102-46

› PRIORITIZATION OF MATERIAL ASPECTS



<sup>1</sup> Coverage: Description of where impacts are generated in each aspect.

› MATERIAL ASPECTS INCLUDED 102-47 / 103-1

GRI CATEGORY	N°	GRI MATERIAL ASPECT	COVERAGE	RELATED STAKEHOLDERS
Economy	1	Indirect economic consequences	External coverage	Community
	2	Economic performance	Internal coverage	Shareholders, collaborators, government and civil society
	3	Acquisition practices	External coverage	Suppliers
	4	Market presence		
Environment	5	Water	External coverage	Community and environment
	6	Biodiversity		
	7	Regulatory compliance (environmental)	External coverage	Community and environment
	8	Effluents and waste	External coverage	Community and environment
	9	Emissions		
	10	Energy	External coverage	Clients, community and environment
	11	Environmental grievance mechanisms		
	12	Transport	External coverage	Clients, community and environment
	13	Training and education	Internal coverage	Collaborators
	14	Employment	Internal and external coverage	Collaborators and community
Social: labor practices and dignified work	15	Evaluation of suppliers' labor practices	Internal and external coverage	Collaborators and suppliers
	16	Relations between workers and directors	Internal coverage	Collaborators
	17	Occupational health and safety	Internal and external coverage	Collaborators and suppliers
	18	Local communities	External coverage	Community
Social: Society	19	Regulatory compliance (society)	Internal and external coverage	Collaborators, clients, suppliers, Government and community
	20	Closure planning	Internal and external coverage	
	21	Social impact grievance mechanisms	Internal and external coverage	
	22	Freedom of association and collective bargaining	Internal and external coverage	Collaborators and suppliers
	23	Safety measures	Internal and external coverage	Collaborators and suppliers
	24	Non-discrimination	Internal and external coverage	Collaborators, suppliers and community
	25	Forced labor	External coverage	Collaborators and suppliers
	26	Child labor	External coverage	Collaborators and suppliers
	27	Labeling of products and services	External coverage	Customers
	28	Client confidentiality	External coverage	Customers



GRI STANDARDS 102-55

GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
GENERAL DISCLOSURES						
GRI 102	1. ORGANIZATIONAL PROFILE					
		102-1	Name of the organization			Core
		102-2	Activities, brands, products, and services			Core
		102-3	Location of headquarters			Core
		102-4	Location of operations			Core
		102-5	Ownership and legal form			Core
		102-6	Markets served			Core
		102-7	Scale of the organization			Core
		102-8	Information on employees and other workers			Core
		102-9	Supply chain			Core
		102-10	Significant changes to the organization and its supply chain			Core
		102-11	Precautionary Principle or approach			Core
		102-12	External initiatives			Core
		102-13	Membership of associations			Core
	2. STRATEGY					
		102-14	Statement from senior decision-maker			Core
		102-15	Key impacts, risks, and opportunities			
	3. ETHICS AND INTEGRITY					
		102-16	Values, principles, standards, and norms of behavior			Core
		102-17	Mechanisms for advice and concerns about ethics			
	4. GOVERNANCE					
		102-18	Governance structure			Core
		102-19	Delegating authority			
		102-20	Executive-level responsibility for economic, environmental, and social topics			
		102-21	Consulting stakeholders on economic, environmental, and social topics			
		102-22	Composition of the highest governance body and its committees			
		102-23	Chair of the highest governance body			
		102-24	Nominating and selecting the highest governance body			
		102-25	Conflicts of interest			
		102-26	Role of highest governance body in setting purpose, values, and strategy			
		102-27	Collective knowledge of highest governance body			

2017 VOLCAN SUSTAINABILITY REPORT  
MANAGEMENT OF SUBCONTRACTORS AND SUPPLIERS

GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
		102-28	Evaluating the highest governance body's performance			
		102-29	Identifying and managing economic, environmental, and social impacts			
		102-30	Effectiveness of risk management processes			
		102-31	Review of economic, environmental, and social topics			
		102-32	Highest governance body's role in sustainability reporting			
		102-33	Communicating critical concerns			
		102-34	Nature and total number of critical concerns			
		102-35	Remuneration policies			
		102-36	Process for determining remuneration			
		102-37	Stakeholders' involvement in remuneration			
		102-38	Annual total compensation ratio			
		102-39	Percentage increase in annual total compensation ratio			
	5. STAKEHOLDER ENGAGEMENT					
		102-40	List of stakeholder groups			Core
		102-41	Collective bargaining agreements			Core
		102-42	Identifying and selecting stakeholders			Core
		102-43	Approach to stakeholder engagement			Core
		102-44	Key topics and concerns raised			Core
	6. REPORTING PRACTICE					
		102-45	Entities included in the consolidated financial statements			Core
		102-46	Defining report content and topic Boundaries			Core
		102-47	List of material topics			Core
		102-48	Restatements of information			Core
		102-49	Changes in reporting			Core
		102-50	Reporting period			Core
		102-51	Date of most recent report			Core
		102-52	Reporting cycle			Core
		102-53	Contact point for questions regarding the report			Core
		102-54	Claims of reporting in accordance with the GRI Standards			Core
		102-55	GRI content index			Core
		102-56	External assurance			Core
GRI 103	MANAGEMENT APPROACH					
		103-1	Explanation of the material topic and its Boundary			Core



## MANAGEMENT OF SUBCONTRACTORS AND SUPPLIERS

GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
		103-2	The management approach and its components			Core
		103-3	Evaluation of the management approach			Core
<b>GRI 200</b>	<b>ECONOMIC PERFORMANCE</b>					
		201-1	Direct economic value generated and distributed			
		201-2	Financial implications and other risks and opportunities due to climate change			
		201-3	Defined benefit plan obligations and other retirement plans			
		201-4	Financial assistance received from government			
	<b>MARKET PRESENCE</b>					
		202-1	Ratios of standard entry level wage by gender compared to local minimum wage			
		202-2	Proportion of senior management hired from the local community			
	<b>INDIRECT ECONOMIC IMPACTS</b>					
		203-1	Infrastructure investments and services supported			
		203-2	Significant indirect economic impacts			
	<b>PROCUREMENT PRACTICES</b>					
		204-1	Proportion of spending on local suppliers			
	<b>ANTI-CORRUPTION</b>					
		205-1	Operations assessed for risks related to corruption			
		205-2	Communication and training about anti-corruption policies and procedures			
		205-3	Confirmed incidents of corruption and actions taken			
	<b>ANTI-COMPETITIVE BEHAVIOR</b>					
		206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices			
<b>GRI 300</b>	<b>MATERIALS</b>					
		301-1	Materials used by weight or volume			
		301-2	Recycled input materials used			
		301-3	Reclaimed products and their packaging materials			
	<b>ENERGY</b>					
		302-1	Energy consumption within the organization			

GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
		302-2	Energy consumption outside of the organization			
		302-3	Energy intensity			
		302-4	Reduction of energy consumption			
		302-5	Reductions in energy requirements of products and services			
	<b>WATER</b>					
		303-1	Water withdrawal by source			
		303-2	Water sources significantly affected by withdrawal of water			
		303-3	Water recycled and reused			
	<b>BIODIVERSITY</b>					
		304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas			
		304-2	Significant impacts of activities, products, and services on biodiversity			
		304-3	Habitats protected or restored			
		304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations			
	<b>EMISSIONS</b>					
		305-1	Direct (Scope 1) GHG emissions			
		305-2	Energy indirect (Scope 2) GHG emissions			
		305-3	Other indirect (Scope 3) GHG emissions			
		305-4	GHG emissions intensity			
		305-5	Reduction of GHG emissions			
		305-6	Emissions of ozone-depleting substances (ODS)			
		305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions			
	<b>EFFLUENTS AND WASTE</b>					
		306-1	Water discharge by quality and destination			
		306-2	Waste by type and disposal method			
		306-3	Significant spills			
		306-4	Transport of hazardous waste			
		306-5	Water bodies affected by water discharges and/or runoff			
	<b>ENVIRONMENTAL COMPLIANCE</b>					
		307-1	Non-compliance with environmental laws and regulations			
	<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>					



GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
		308-1	New suppliers that were screened using environmental criteria			
		308-2	Negative environmental impacts in the supply chain and actions taken			
<b>GRI 400</b>	<b>EMPLOYMENT</b>					
		401-1	New employee hires and employee turnover			
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees			
		401-3	Parental leave			
	<b>LABOR/MANAGEMENT RELATIONS</b>					
		402-1	Minimum notice periods regarding operational changes			
	<b>OCCUPATIONAL HEALTH AND SAFETY</b>					
		403-1	Workers representation in formal joint management-worker health and safety committees			
		403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities			
		403-3	Workers with high incidence or high risk of diseases related to their occupation			
		403-4	Health and safety topics covered in formal agreements with trade unions			
	<b>TRAINING AND EDUCATION</b>					
		404-1	Average hours of training per year per employee			
		404-2	Programs for upgrading employee skills and transition assistance programs			
		404-3	Percentage of employees receiving regular performance and career development reviews			
	<b>DIVERSITY AND EQUAL OPPORTUNITY</b>					
		405-1	Diversity of governance bodies and employees			
		405-2	Ratio of basic salary and remuneration of women to men			
	<b>NON-DISCRIMINATION</b>					
		406-1	Incidents of discrimination and corrective actions taken			
	<b>FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>					
		407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk			
	<b>CHILD LABOR</b>					

**MANAGEMENT OF SUBCONTRACTORS AND SUPPLIERS**

GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
		408-1	Operations and suppliers at significant risk for incidents of child labor			
	<b>FORCED OR COMPULSORY LABOR</b>					
		409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor			
	<b>SECURITY PRACTICES</b>					
		410-1	Security personnel trained in human rights policies or procedures			
	<b>RIGHTS OF INDIGENOUS PEOPLES</b>					
		411-1	Incidents of violations involving rights of indigenous peoples			
	<b>HUMAN RIGHTS ASSESSMENT</b>					
		412-1	Operations that have been subject to human rights reviews or impact assessments			
		412-2	Employee training on human rights policies or procedures			
		412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening			
	<b>LOCAL COMMUNITIES</b>					
		413-1	Operations with local community engagement, impact assessments, and development programs			
		413-2	Operations with significant actual and potential negative impacts on local communities			
	<b>SUPPLIER SOCIAL ASSESSMENT</b>					
		414-1	New suppliers that were screened using social criteria			
		414-2	Negative social impacts in the supply chain and actions taken			
	<b>PUBLIC POLICY</b>					
		415-1	Political contributions			
	<b>CUSTOMER HEALTH AND SAFETY</b>					
		416-1	Assessment of the health and safety impacts of product and service categories			
		416-2	Incidents of non-compliance concerning the health and safety impacts of products and services			
	<b>MARKETING AND LABELING</b>					
		417-1	Requirements for product and service information and labeling			



GRI STANDARD NUMBER	GRI STANDARD TITLE	DISCLOSURE NUMBER	DISCLOSURE TITLE	DISCLOSURE TITLE	COMMENTS	REQUIRED FOR CORE
		417-2	Incidents of non-compliance concerning product and service information and labeling			
		417-3	Incidents of non-compliance concerning marketing communications			
		CUSTOMER PRIVACY				
		418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data			
		SOCIOECONOMIC COMPLIANCE				
		419-1	Non-compliance with laws and regulations in the social and economic area			



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