



ANTAMINA

REACHING NEW HEIGHTS





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Operations Vice President, Jorge Gheresi discusses the continuing development of Antamina, site of the largest mining investment programme in the history of Peru

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Running along the western coast of South America, the Andes is the longest continental mountain range in the world. At around 7,000 kilometres in length, between 200 and 700 kilometres wide, and with an average height of approximately 4,000 metres, the Andes extends through seven countries, one of which is Peru.

It is within the central Peruvian Andes that one will find Antamina, one of the ten biggest mines in the world for its production volume and the site of the largest mining investment in Peru's history, totalling \$3,600 million. Responsible for the production of copper and zinc concentrate, as well as molybdenum, silver, lead and bismuth concentrates, the mine's capital today belongs to BHP Billiton, Glencore-Xstrata, Teck Resources and Mitsubishi Corporation.

The Antamina site, Antamina meaning 'copper mine' in the Quechuan language, has a rich history, having been documented as far back as the 19th century thanks to the work of researcher Antonio Raymondi. It was officially incorporated into the project portfolio of the Cerro de Pasco Mining Corporation in 1952, before then being passed into the hands of the State.

Following a process of privatisation in 1996, Antamina was acquired by the Canadian mining companies Río Algom and Inmet, which at the time estimated that the mine held reserves of around 500 million tonnes. A year after the privatisation of the mine the exploration of the site was formally completed, with trial operations, the first shipment of concentrates and the



Excavation and haulage taking place



Overview of the mine at night

start of commercial production all taking place in 2001.

“At the end of 2008,” explains Mine Manager, Jorge Gherzi, “we announced the increase of our mineral reserves, which was subject to a feasibility study, completed in 2009, which allowed us to evaluate the options of expansion. After receiving the authorisation of our shareholders and the permission of the Ministry of Energy and Mines, we announced an investment to expand our mining facility and the mineral processing capacity. This marked the official start of our Expansion Programme to increase processing capacity by 38 percent. The total investment in the programme represents more than \$1,400 million.”

This programme has resulted in the

extension of the life of the mine from 2023 to 2029, thus also extending the economic and social contribution it makes to the surrounding region. The operations of the Expansion Programme commenced in the last quarter of 2011 and subsequently led to the creation of 800 jobs.

The mine itself is an open pit operation and boasts various units. These include Camp Yanacancha, the location of Antamina’s


concentration plant. Equipped with state-of-the-art technology that allows the processing of mineral from the pit, the concentration plant is considered one the most automated facilities of its kind anywhere on the planet.

Meanwhile, the pipeline that runs from the mine to the nearby Punta Lobitos Port measures 302 kilometres and allows for the transportation of mineral concentrates to Huarmey, and thus facilitates subsequent shipping and export.

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Furthermore, the mine site’s tailings dam can be found located 4,075 metres above sea level in the Quebrada Huincush.

The tailing dam represents just one example of Antamina’s consciousness towards its impact on the environment, with the mine investing considerable capital over the years in various positive programmes and initiatives. “Since 2009,” Ghersi continues, “we have achieved 100 percent compliance with

regards to water and air quality standards. All of our operations are certified to ISO:14001 standards and the high level of performance achieved by our environmental management system has become one of the most respected within the sector here in Peru.”

Among the many key environmental initiatives that Antamina has been responsible for has been its environmental geochemistry research into understanding the hydrological

“OUR EMPLOYEES HAVE BEEN, AND ALWAYS WILL BE OUR MOST VALUABLE ASSET”



Workers gather for a security briefing



Antamina is committed to safeguarding the environment

and geochemical behaviour of waste rock at the mine, its Study of Coverage Project to assess the best alternative for application coverage in the closing of dumps, its initiative to protect and divert the waters coming from various springs located in the Eastern Dump and its sprinkler irrigation project designed to control the generation of dust at the various entrances to the mine.

In addition to the aforementioned initiatives Antamina is also responsible for several important conservation projects in the region. These include the Humboldt Penguin Conservation Project on the coast

2029

The extended estimated end of mine life as a result of the expansion programme

of Huarney, which has been established to reverse the threat to Humboldt penguin populations and other birds protected by the state on the coast of Huarney.

Another example would be the Puya Raimondi Project, one that helped transform 170 acres of desert area within the province of Ancash into

an innovative ecosystem that is now home to 50 species of birds, more than 200,000 trees and with a climate conducive to generating numerous environmental benefits for the region.

Turning back to the mine operations themselves, Ghersi is quite adamant about what is the source of Antamina’s success over the



decades. “Our employees have been, and always will be our most valuable asset. Currently we have a total of 2,949 direct employees and 3,169 indirect ones. Close to 50 percent of our payroll is made up of Ancash employees and 100 percent of our unskilled labour comes from our areas of influence. We attach great importance to the training and education of all of our employees, providing every opportunity for people to develop personally and professionally as they develop their skills and competencies through “on the job” methods.”

Antamina also promotes the philosophy that all of its workers can, and should, be part of what it dubs, “Continuous Improvement”, which essentially means the generation of new ideas and methodologies that can help to improve existing processes or create whole new ones.

“The starting point when it comes to this continuous improvement is the mapping out and prioritising of the most important processes,” Gherzi concludes. “From there we undertake a periodic review of all the macro processes that make up our operations using a root cause analysis of indicators and a methodology called “business review”. Furthermore, we participate in mining management benchmarking with the Chilean mining industry and various Peruvian mining companies, something that we consider to be another example of how serious we are about being a leading player in this part of the world.” **BE**

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