

# What is the sustainable mine that Minera Arqueros in Chile is aiming for?



**COMPAÑÍA MINERA  
ARQUEROS S.A.**

**Location:** Coquimbo, Chile

Minera Arqueros plant under construction,  
May 2025 (photo courtesy of Minera Arqueros)

In a harsh natural environment with limited water resources, Minera Arqueros is pursuing the development of a new mine while aiming to coexist harmoniously with local communities. Located in the Coquimbo Region of north-central Chile, this mining project is steadily progressing toward the start of operations. The plan is to mine 1.8 million tons of ore annually and produce 55,000 tons of copper concentrate. The primary copper minerals targeted are bornite and chalcocite. This is a conventional underground mining project in which ore is extracted and processed at an on-site concentrator plant. In addition, this project actively promotes water reuse and reduction of environmental impact. (Interview conducted in April 2025. Titles and project status are current as of June 2025.)

## Project Background and the Leader's Vision

"This is a significant investment for the company. Since the beginning of my career as a mining engineer, I had aspired to be involved in mine development and construction. Being entrusted with the role of leading the project, I felt a deep sense of responsibility," says Chief Executive Officer Mr. Yoshiharu Tsukayama, reflecting on his assignment to Chile in 2023. The project began with exploration activities in 2011. After more than a decade, in 2023, Nittetsu Mining Co., Ltd., the parent company, decided to proceed with development, and construction began in 2024. Preparations for the commencement of commercial operations in fiscal year 2026 are well underway, with steady progress being made on the development of the concentrator plant, underground infrastructure, and power transmission lines.



Mr. Yoshiharu Tsukayama,  
CEO, Minera Arqueros  
(photo courtesy of Minera Arqueros)

## Challenges Supporting the Sustainability of Water Resources

Minera Arqueros is planning to introduce a treatment technology that efficiently recovers water from the slurry-like waste (tailings) generated after ore processing, increasing the solid concentration before deposition. This process is expected to enable the reuse of approximately 80% of the process water, making a significant contribution to sustainable operations in Chile's arid regions, where water resources are limited. General Project Manager Mr. Omar Fernandez explains, "Northern Chile has limited water resources, and we are required by regulation to operate in an environmentally conscious manner, making efficient use of water. Removing water from the tailings and increasing the solid content before deposition also improves structural stability, making the operation more resilient to potential natural disasters."



Tailings treatment facility under construction, May 2025 (photo courtesy of Minera Arqueros)



Mr. Omar Fernandez, General Project Manager, Minera Arqueros (photo courtesy of Minera Arqueros)

## Chosen for its Trustworthiness and Flexibility, Yokogawa

Yokogawa was selected as the control systems partner, responsible for the core functions that ensure safe and efficient operation of the entire plant. Mr. Tsukayama recalls, "We place great importance on reliability when supplying machinery to plants and constructing mines. Having reliable partners enables us to start operations on schedule and improve efficiency afterward. The deciding factor in choosing Yokogawa's DCS(Distributed Control System) was its high reliability and flexibility. The reliability of Japanese companies, as well as their ability to accommodate future system expansions and changes, was also an important factor."

Mr. Fernandez stated, "We first considered cost-effectiveness, but the next priority was whether the partner was flexible and trustworthy. Yokogawa listened to our needs and presented various proposals throughout the process. That helped build a deep level of trust. Their proven track record at other mining sites in Chile, where systems are operating smoothly, was also a strong point." Yokogawa's willingness to engage closely with the project team and its consistent dialogue fostered not only technical confidence but a sense of security that went beyond technology itself.



Partnership between Minera Arqueros and Yokogawa



## Advancing Technology and Human Development in Tandem

Preparations for operations are already gaining full momentum. Training programs are being developed for operators and maintenance personnel to ensure a successful ramp-up. Considering the 15-year operational period, the level of proficiency achieved during the initial startup phase significantly impacts stable operations later on, making the commissioning period a very important step. Yokogawa also supports the Minera Arqueros team closely from the perspective of training DCS specialists, continuing to provide long-term support.



Supporting start-up and stable operations through technology deployment and training  
(image for illustrative purposes)

## Aiming for a Mine That Grows Alongside the Community

Regarding future prospects, Mr. Tsukayama stated, “We want to ensure the success of this mine operations and contribute to local employment and the regional economy.” Mr. Fernandez also emphasized: “We also hope to develop human resources, including employees of local companies and young people who have studied mining at universities.” Furthermore, both leaders expressed their wish to continue long-term collaboration with Yokogawa to address various challenges and enhance operational improvements. Working together, thinking and walking hand in hand toward the realization of a sustainable mine—this trust-based relationship is precisely the kind of partnership that Yokogawa strives to achieve.



Center: Mr. Yoshiharu Tsukayama, CEO of Minera Arqueros; Left: Mr. Omar Fernandez, General Project Manager;  
Right: Mr. Shunsuke Osato, General Manager of Project Management. (photo courtesy of Minera Arqueros)

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