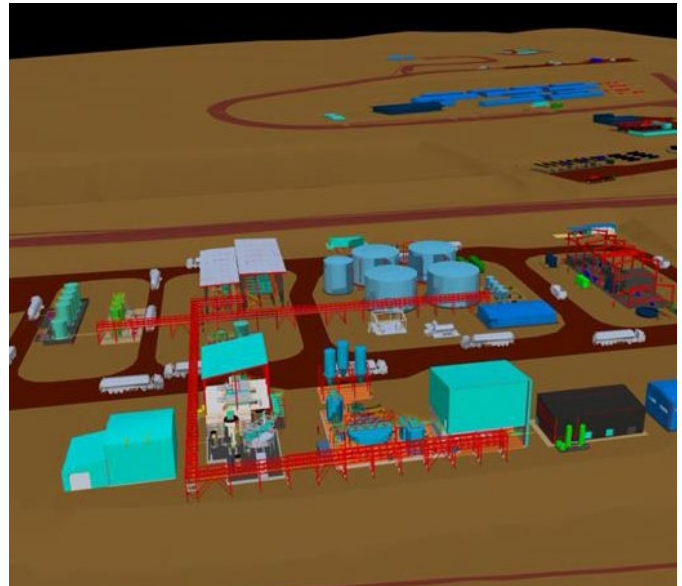
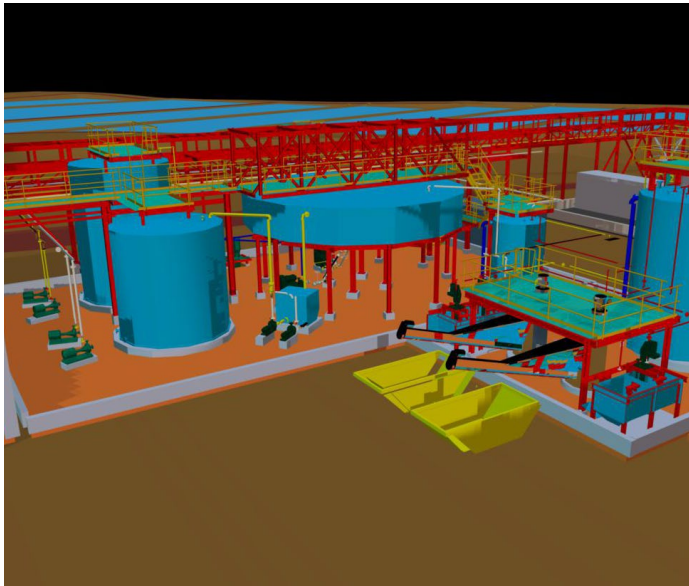


Alpha Minerals



# Multidisciplinary Engineering Services for Alpha Minerals at the Tolillar Salar, Argentina



Alpha Minerals S.A. has awarded SAXUM Engineered Solutions the development of the Conceptual and Basic Engineering for a new 6,000 t LCE/year brine concentration and purification plant located in the Hombre Muerto salar, Province of Salta, Argentina—one of the country’s most mature and productive lithium hubs.

The facility is designed to receive raw brine extracted from the salar, process it through successive stages of concentration, impurity removal, and purification, and deliver a high-grade brine stream that will feed the upstream section of Alpha’s integrated lithium development at the Tolillar salar.

### Conceptual Engineering Phase

During the first phase of the project, SAXUM reviewed the preliminary process engineering and redefined the overall process concept, including updated Process Flow Diagrams (PFDs) and mass and energy balances. SAXUM subsequently developed the initial plant layout, critical equipment lists,

multidisciplinary design criteria, and an assessment of utilities and off-sites. A key deliverable of this phase was an AACE Class IV CAPEX estimate (+30%/–20%), supporting Alpha’s early-stage project viability assessments.

### Basic Engineering Phase

Following the successful completion of the conceptual stage, SAXUM executed the Basic Engineering, which encompassed:

- Final Process & Instrumentation Diagrams (P&IDs)
- General Arrangement (GA) drawings and multidisciplinary engineering for all process areas
- Technical specifications for major equipment packages
- Electrical load definition, MCC configuration and distribution philosophy
- Full 3D modelling of process and utility areas
- Definition of auxiliary systems (water, reagents, compressed air, steam, HVAC)

- Issuance of the overall Project Execution Plan, including constructability considerations

This phase concluded with an AACE Class III CAPEX estimate (+20%/–10%), establishing the technical foundation for budget confirmation, procurement planning, and subsequent execution.

### HAZOP Workshop

As part of project execution, SAXUM coordinated and led a HAZOP workshop at Alpha Lithium’s offices to evaluate and mitigate operational risks across all process areas.

Through this assignment, SAXUM reinforces its technical leadership in lithium-brine process facilities, delivering a comprehensive multidisciplinary engineering framework aligned with international best practices, local regulatory standards, and the strategic development timeline of Alpha Minerals’ portfolio in the Argentine Puna. ■

THE COMPANY



## SAXUM's Experience in Power Supply Studies for Mining Projects

Electric power is one of the fundamental pillars of modern mining development. In projects located in remote regions — such as Argentina's Puna plateau or the Andean highlands — far from national interconnected systems, a reliable and efficient energy supply becomes a decisive factor for the technical and economic feasibility of each venture. Acknowledging this reality, SAXUM has built a strong track record in power supply trade-off studies and energy strategy evaluations for mining projects at different stages — from pre-feasibility and feasibility to operation — across Argentina and South America.



In recent years, SAXUM has carried out comprehensive energy supply assessments for leading mining clients, including Mansfield Minera (Lindero Gold Project), AbraSilver Resource Corp (Diablillos Project), Lake Resources and Liex S.A. (Kachi and Tres Quebradas Lithium Projects), Hanacolla S.A. (Doncella Oeste Project), and Yamana Gold (Cerro Moro Operation).

These studies included the technical and economic comparison of alternative power supply solutions, such as connection to the national grid, self-generation through diesel, natural gas, or virtual gas pipelines, and the integration of renewable energy sources — solar and wind — through hybrid and scalable configurations designed to optimize both CAPEX/OPEX and carbon footprint.

Each assignment combines SAXUM's multidisciplinary expertise — in electrical, mechanical, civil, and environmental engineering — with international-class methodologies and advanced energy modeling tools, ensuring that every study integrates technical, logistical, and financial perspectives.

Typical deliverables cover technical and economic feasibility reports, CAPEX/OPEX estimations, technology comparison matrices, risk and reliability assessments, comprehensive energy strategies, and technical specifications for tendering processes.

This experience positions SAXUM as a regional benchmark in energy planning for the mining industry, helping its clients identify sustainable, cost-effective, and technically sound energy solutions.

Confidential Client

## Strategic Advisory for a Global Mining Investor

A leading global industrial and mining investment company—with over 200 years of international presence—has chosen SAXUM to support its renewed focus on opportunities in Argentina's mineral sector.

Leveraging decades of regional experience, SAXUM is preparing a strategic assessment that provides:

- **Clear approval pathways:** For mining projects across key Argentine provinces and their municipal jurisdictions.
- **Regulatory and environmental requirements:** Including engineering approvals, permitting processes, and applicable standards.
- **Authority mapping and timeline insights:** Identifying key institutions, statutory timelines, required documentation and process interdependencies.



- **Risk and context evaluation:** Highlighting regulatory risks, social considerations, and province-by-province differences that influence investment timing and project readiness.

SAXUM's assessment also reviews the role and implications of provincial Engineering

Councils, identifying potential constraints and risks affecting project execution.

The final report equips our client with clarity, confidence, and strategic insight to guide investment decisions and long-term planning in one of the world's most dynamic mining regions.



SINTEK

## SAXUM Congratulates Çimsa Americas and SINTEK on a Successful Project Delivery in Houston

We are delighted to highlight the successful completion of a major cement project at the Port of Houston, USA. The new 600,000 tpa cement grinding facility has now commenced operations and passed all performance tests, further strengthening Çimsa's regional footprint by adding grey cement production to its existing 300,000 tpa white cement plant.

SAXUM is proud to have contributed to this important achievement. Our team delivered the basic and detailed multidisciplinary engineering—mechanical, civil, structural, and electrical—along with the fabrication and shop drawings for the steel structures, which were crucial to ensuring efficient and accurate erection of the facility's large-scale buildings.

A full 3D model of the plant was developed as part of our scope, providing highly detailed integration data



that supported seamless coordination throughout construction and erection.

Additionally, SAXUM provided on-site technical services through our experienced supervisors, coordinating activities with local contractors and managing equipment and materials arriving from Turkey.

This project stands as an excellent example of effective collaboration, engineering excellence, and disciplined execution.

THE COMPANY

## Meet Our Chief Operating Officer: Nestor Lares

Nestor Lares, an Industrial Engineer and experienced Project Manager, has led complex industrial and engineering projects across Argentina, Brazil, Mexico, and Russia. Known for his strong leadership, strategic planning, and negotiation skills, he brings the operational discipline and execution focus that drive SAXUM's performance.

As **Chief Operating Officer**, Nestor oversees operational performance, strengthens alignment across business units, and ensures continuous improvement in our processes and project delivery frameworks.

**Key Experience: Lindero EPCM Project**  
Before becoming COO, Nestor was General Project Manager for the Lindero

EPCM Project—one of SAXUM's most challenging and successful undertakings. His leadership included:

- Multidisciplinary Engineering Oversight.
- Procurement and contracting leadership.
- Construction planning and execution control.

Nestor's proven ability to lead large-scale, high-complexity projects reinforces SAXUM's commitment to operational excellence, strategic growth, and delivering high-value solutions to our clients.



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