

WWW.SAXUM.US



MINING QUALIFICATIONS

PROJECTS & EXPERIENCE

LOCATIONS

ENGINEERING AND EPCM CAPABILITIES ALL AROUND THE WORLD



ARGENTINA
TUCUMAN
BUENOS AIRES



BRAZIL
BELO HORIZONTE



UNITED STATES
DALLAS, TX



AUSTRALIA
PERTH



SAXUM in its continuous improvement process has adapted all the procedures to the highest international requirements with the ISO 9001:2015 quality certification.

SERVICES

INTEGRATED ENGINEERING SERVICES FOR PLANT DESIGN

PROCESS ENGINEERING FOR THE MINERAL PROCESSING INDUSTRIES

MECHANICAL ENGINEERING (PLANT DESIGN, PIPING, PROCESS GAS HANDLING, ENVIRONMENTAL CONTROLS, NUISANCE DUST COLLECTION AND MATERIALS HANDLING, CRUSHING AND GRINDING SYSTEMS)

CIVIL AND STRUCTURAL ENGINEERING (EARTH WORKS AND SLOPES, PONDS, TAILING DAM STABILITY, DRAINAGE, ROADS, FOUNDATIONS, STRUCTURES, CONNECTIONS DETAILING, SEISMIC ANALYSIS, ETC.)

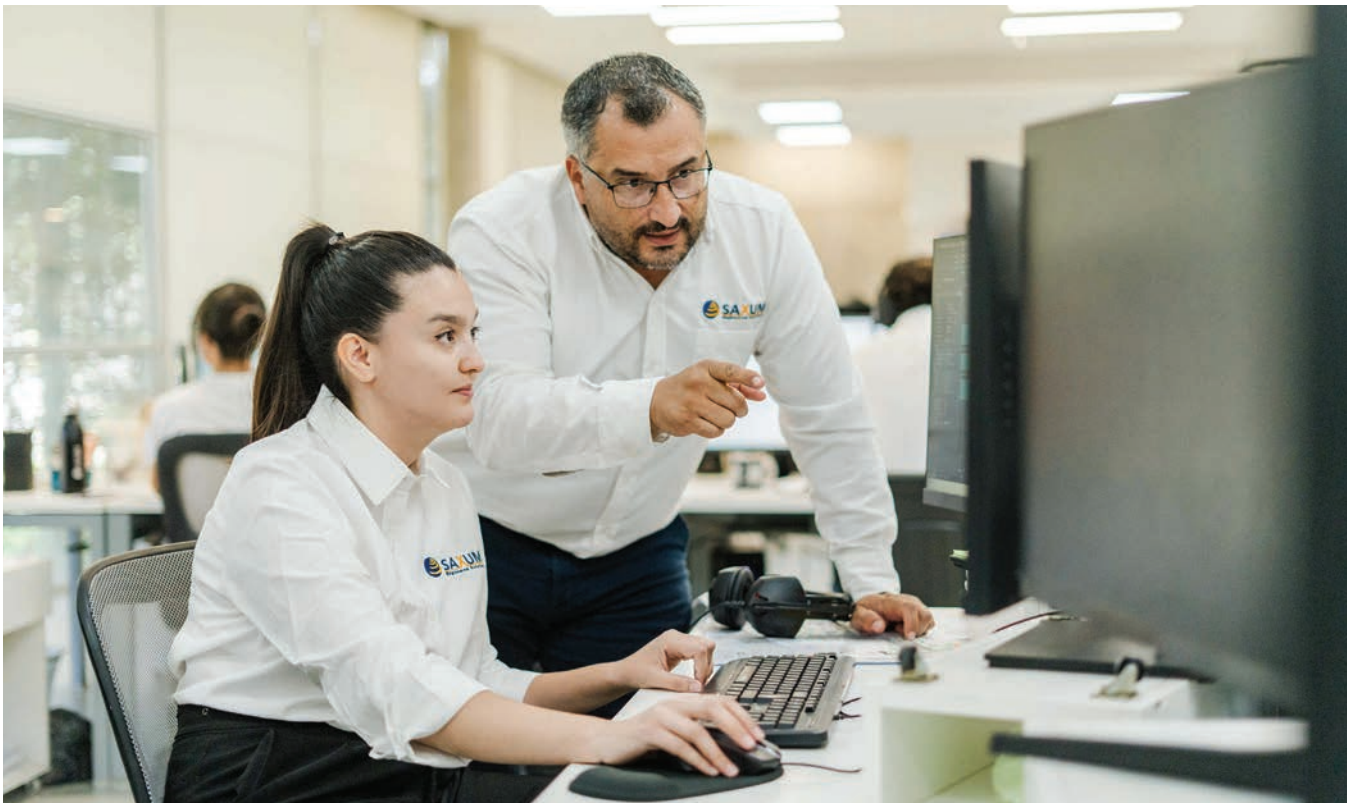
ELECTRICAL, INSTRUMENTATION AND CONTROL ENGINEERING



SERVICES

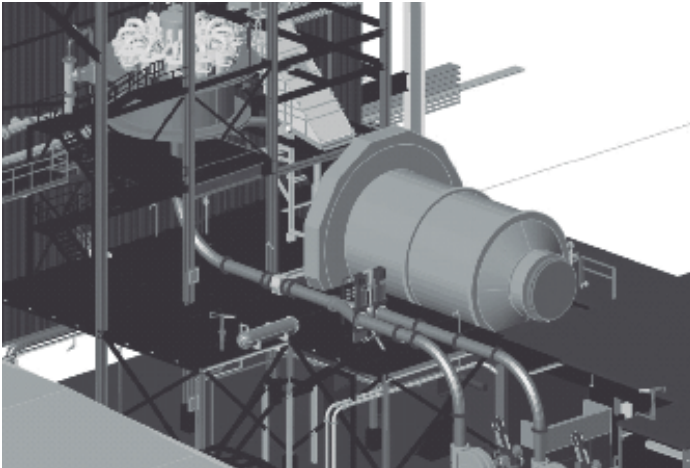
We stand out through our deep expertise in EPCM services for the mineral processing, oil & gas, and infrastructure industries. Our high-level engineering and project management teams ensure reliable execution, delivering optimized technical solutions on time and within budget—whether for new developments or facility upgrades.

Engineering & Design	Project Development	Execution & Delivery	Procurement
Multidisciplinary Engineering	Feasibility Studies	EPCM Services	Procurement
Conceptual, Basic & Detailed Designs	CAPEX/OPEX Evaluations	Site Supervision	Logistic & Expediting
Trade-Off Studies	Consulting Services	Commissioning	Auditing
		Planning & Project Control	



ENGINEERING

WE PROVIDE ENGINEERING SERVICES FROM CONCEPT TO REALITY



SCOPING STUDIES AND TRADE OFF ANALYSIS

CAPEX AND OPEX STUDIES

PREFEASIBILITY AND FEASIBILITY STUDIES BASED ON NI43-101 STANDARDS

COMPLETE ENGINEERING: CONCEPTUAL, BASIC AND DETAILED

PROCESS, MECHANICAL/PIPING/DUCT, CIVIL/STRUCTURAL, ELECTRICAL, I&C ENGINEERING

SCHEDULE DEVELOPMENT

MAIN PROCESS EQUIPMENT BID DOCUMENT PREPARATION

AUXILIARY EQUIPMENT SELECTION ASSISTANCE

CONSTRUCTION BID DOCUMENT PREPARATION

PROCUREMENT

CONSTRUCTION MANAGEMENT

SITE SUPERVISION

ENGINEERING

PROCESS ENGINEERING & PLANT OPTIMIZATION



PROCESS AUDITING, CAPACITY UPGRADES

TROUBLESHOOTING

OPERATIONS ANALYSIS

MASS AND ENERGY BALANCES

PROCESS CALCULATIONS AND FLOW DIAGRAMS

ANALYSIS OF OPTIMUM MATERIAL STORAGE REQUIREMENTS

COMMISSIONING

METALLURGY

CHEMICAL

PROCESS DEVELOPMENT & MODELLING

PILOT PROGRAMMES

HAZID / HAZOP

DYNAMIC SIMULATION

ENGINEERING

MECHANICAL ENGINEERING & PLANT DESIGN



SYSTEMS INTEGRATION WITH MULTIPLE VENDORS

PLANT LAYOUTS

GENERAL ARRANGEMENTS

FULL 3D MODELLING

EQUIPMENT TECHNICAL EVALUATIONS

EQUIPMENT SIZING AND CAPACITY DETERMINATION

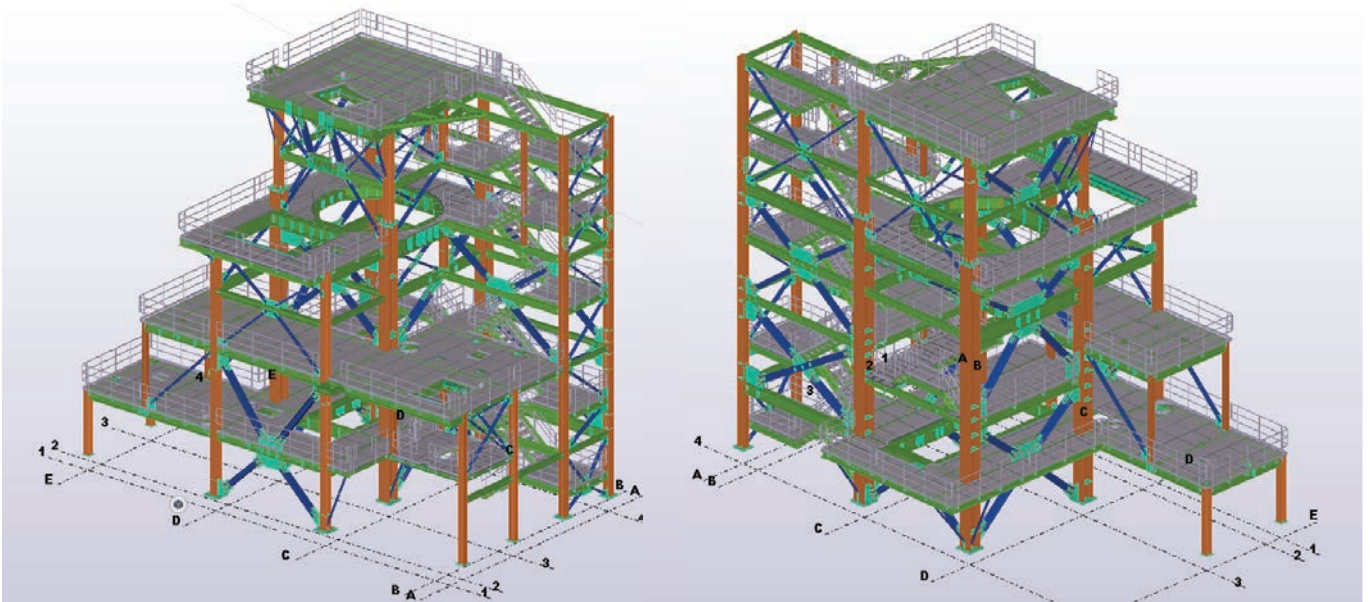
EQUIPMENT AND INSTALLATION SPECIFICATIONS

DUCTWORKS

ENGINEERING DESIGN: PIPING SYSTEMS - MATERIAL HANDLING SYSTEMS
PROCESS EQUIPMENT LAYOUTS

ENGINEERING

CIVIL & STRUCTURAL ENGINEERING



- STRUCTURAL ANALYSIS & DESIGNS (INCLUDING HIGH SEISMIC & HURRICANE ZONES) FOR INDUSTRIAL PLANTS
- EVALUATION AND IMPLEMENTATION OF GEOTECHNICAL REPORTS
- STRUCTURAL DESIGN BASED ON VIBRATION MITIGATION
- DYNAMIC FOUNDATION ANALYSIS
- DESIGN OF REINFORCED CONCRETE AND STEEL STRUCTURES
- CONCRETE SILOS AND BUNKERS
- STEEL BINS AND HOPPERS
- TUNNELS AND UNDERGROUND STRUCTURES
- DESIGN OF ROADS, EARTHWORKS, AND SLOPES.
- DESIGN OF PONDS AND TAILING DAMS.
- STABILITY ASSESSMENT OF SOIL/ROCK SLOPES.
- SOILS SLOPE STABILITY ANALYSIS

ENGINEERING

ELECTRICAL ENGINEERING



POWER DISTRIBUTION SYSTEMS

INSTRUMENTATION AND CONTROLS

HMI INTERFACE COORDINATION

PLC PROGRAMMING

MOTORS (MEDIUM VOLTAGE AND LOW VOLTAGE)

MEDIUM VOLTAGE STARTERS AND BREAKERS

TRANSFORMERS

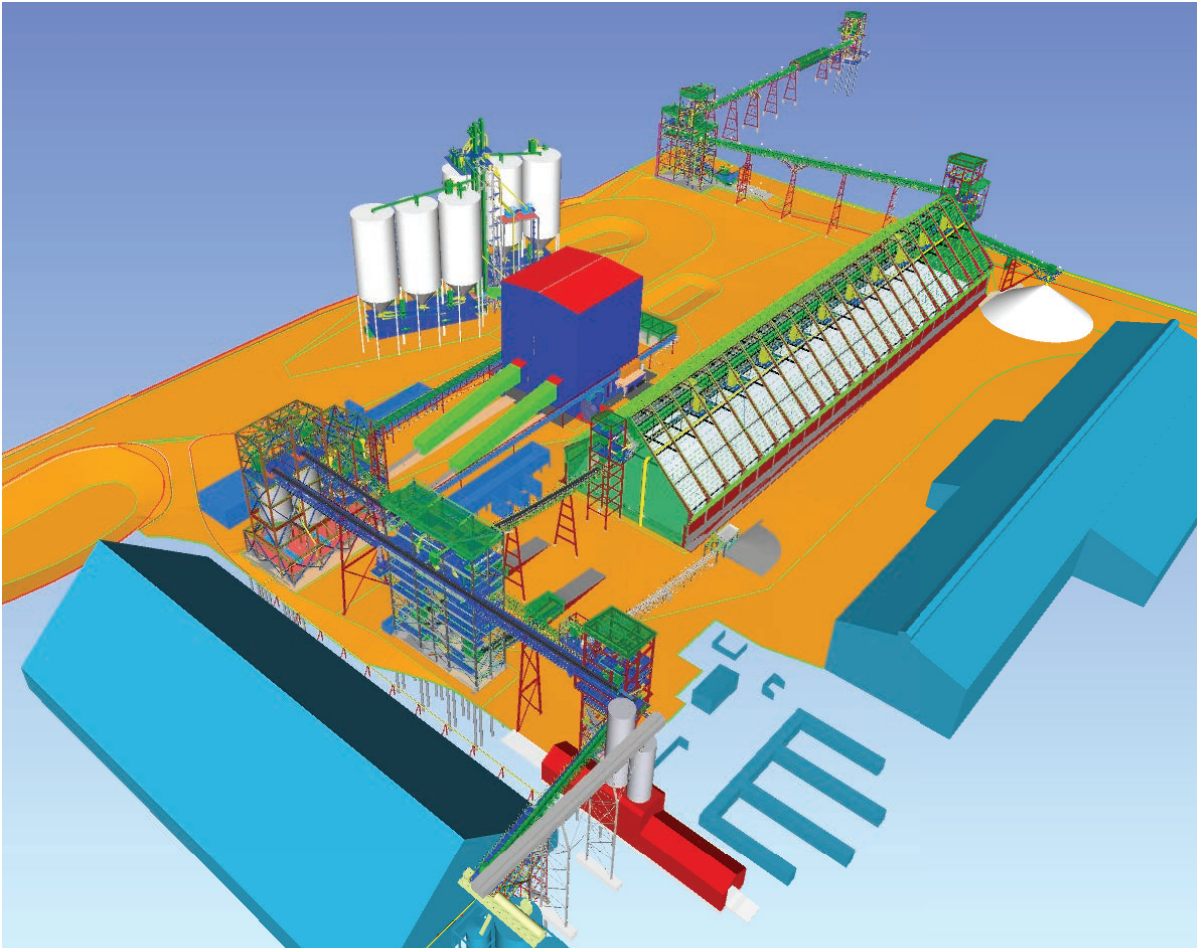
MOTOR CONTROL CENTERS

SHORT CIRCUIT ANALYSIS

POWER STUDIES

ENGINEERING

3D MODELLING FOR FULL PROJECT INTEGRATION



INTEGRATION OF EQUIPMENT ENGINEERING WITH THE CIVIL, MECHANICAL FABRICATION AND ELECTRICAL ENGINEERING

SHOP DRAWING REVIEWS

FABRICATION SHOP INSPECTIONS

COORDINATION OF MATERIALS FABRICATION FOR CONSTRUCTION AND DELIVERIES TO THE JOB SITES

WHY CLIENTS CHOOSE SAXUM

TOTAL RESOURCES IN HOUSE

KNOW-HOW AND EXPERIENCE IN MINING SOLUTIONS

LEADERSHIP IN DETAILED ENGINEERING SOLUTIONS

DEEP KNOWLEDGE OF STANDARDS AND CONSTRUCTIVE PROCEDURES

ENGINEERING MANAGEMENT ORIENTED TO SATISFY CLIENT TECHNICAL NEEDS

PROVEN PROCEDURES FOR PROCUREMENT, CONSTRUCTION
MANAGEMENT & PROJECT CONTROL.



PROJECTS

Fortuna Mining Corp. - Lindero Project

Location: Salta, Argentina

Commodity: Copper/Gold

Complete EPCM services for the Lindero gold mine project, including detailed engineering (civil, structural, mechanical, piping, electrical, instrumentation, and architectural), procurement support, construction management, and pre-commissioning and commissioning of key systems. Scope covered the full project cycle from preconstruction to start-up.

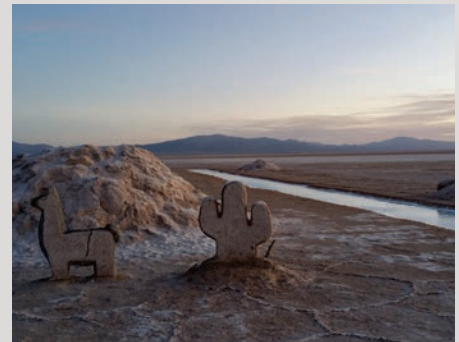


Sales de Jujuy S.A. - Olaroz Project

Location: Santa Cruz, Argentina

Commodity: Lithium

Conceptual and detailed engineering for CO₂ recovery and re-injection, including equipment sizing and gas consumption analysis. Thermal energy balance and evaluation of the optimal method to integrate a new steam generator into the existing system.

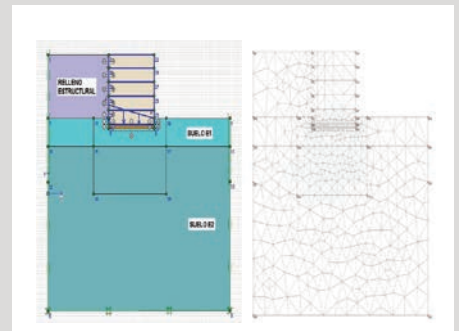


Glencore - Antapaccay Project

Location: Peru

Commodity: Copper/Gold

Value-added engineering services for CapEx optimization related to the SAG and Ball Mill foundations, as well as the structures and foundations of the secondary crushing system. Brownfield project associated with the Tintaya plant expansion.



Newmont - Cerro Negro Project

Location: Santa Cruz, Argentina

Commodity: Gold

Engineering design and project control during construction, covering all disciplines—mechanical, civil, structural, electrical, and instrumentation. SAXUM also prepares data sheets and specifications for equipment procurement and construction activities.



PROJECTS

Newmont - Cerro Negro Project

Location: Santa Cruz, Argentina

Commodity: Gold

Engineering support for multiple sites, including tunnel portals, facility installations, auxiliary services, and infrastructure works, with CapEx estimates. Onsite project control and field support at Cerro Negro, working alongside client teams to plan and monitor construction through a detailed work schedule.

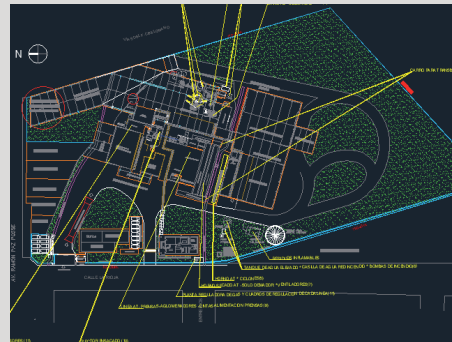


IMERYS Argentina - Plant Relocation Project

Location: Mendoza, Argentina

Commodity: Infrastructure

Feasibility study and CapEx estimate for relocating the entire plant from Tucumán to Mendoza. SAXUM provided engineering and project management support for plant demobilization, new facility planning, and CapEx/OpEx evaluation for IMERYS.

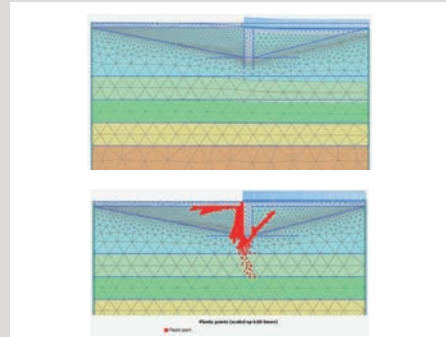


Pan American Silver - Cerro Moro Project

Location: Santa Cruz, Argentina

Commodity: Copper/Gold

SAXUM conducted geotechnical investigations to assess the static and dynamic properties of subsoils beneath the leaching tanks, evaluating the need for soil injection to improve ground conditions and prevent future foundation settlement.

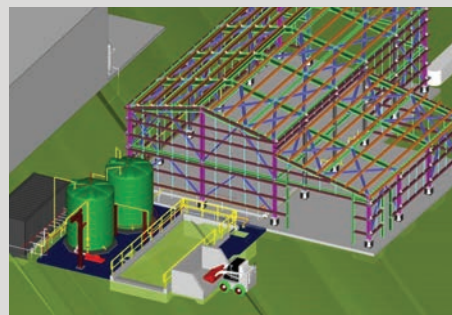


Newmont - East District Project

Location: Santa Cruz, Argentina

Commodity: Gold

Engineering for mechanical, civil/structural, electrical, and I&C disciplines to support early-stage capital estimates. Developed plans, drawings, and specifications for the San Marcos Portal, along with basic and detailed engineering for Bajo Negro and Silica Cap.



PROJECTS

AbraSilver Resource Corp. - Diablillos Project

Location: Salta, Argentina

Commodity: Silver/Gold

SAXUM conducted a trade-off study for the Diablillos project, evaluating five energy supply alternatives. The report included CapEx and OpEx comparisons and recommended the most efficient option.



LIEEX - Tres Quebradas Project

Location: Catamarca, Argentina

Commodity: Lithium Carbonate

Review of the feasibility study and third-party engineering designs for a greenfield lithium carbonate plant in Catamarca, Argentina, including all disciplines and the CapEx estimate.

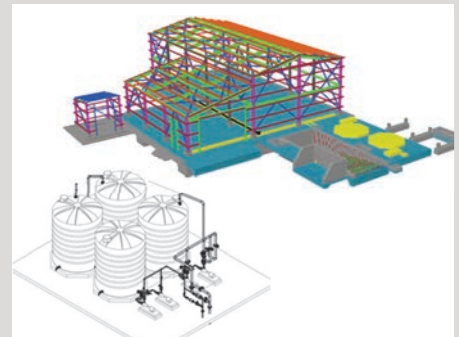


Newmont - Cerro Negro Project

Location: Santa Cruz, Argentina

Commodity: Copper/Gold

Engineering for the update of the Trackshop and Truck Wash Bay of Cerro Negro gold mine. FEL II & FEL III (Conceptual & Basic Engineering and CAPEX) and detailed mechanical and piping engineering for New Truck Ship and Truck Wash

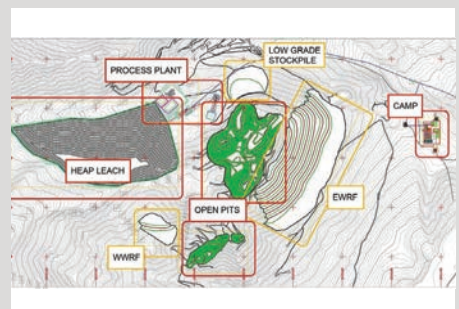


Orvana Minerals Corp. - Taguas Project

Location: San Juan, Argentina

Commodity: Gold

SAXUM performed the Project Economical Assessment (PEA) which was issued according to the NI43-101 standards.



PROJECTS

Pan American Silver - Manantial Espejo Project

Location: Argentina

Commodity: Gold/Silver

Engineering design and project control during construction, covering all disciplines, Mechanical, Civil, Structural, Electrical, and Instrumentation. SAXUM is also preparing data sheets and specifications for equipment procurement and construction activities.



Intrepid Mines Ltd - Casposo Project

Location: San Juan, Argentina

Commodity: Gold

EP & CM services from basic engineering, covering process, mechanical, civil/structural, electrical, and instrumentation, plus procurement and construction management.

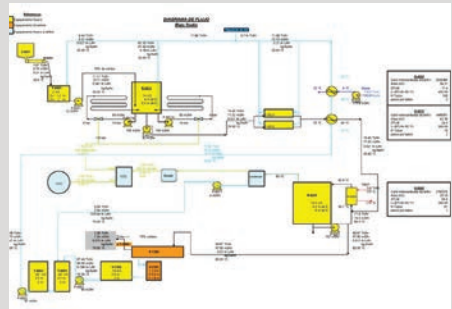


FMC/LIVENT - Salar del Hombre Muerto Project

Location: Salta, Argentina

Commodity: Lithium

Conceptual and basic engineering for a low-sodium lithium chloride brine plant, including process, civil, structural, mechanical, piping, electrical, and instrumentation. Project tied to the expansion of FMC's lithium operations.

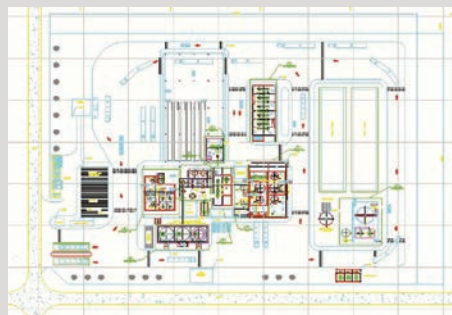


Eramet Ingenierie - Salinas Grandes Project

Location: Salta, Argentina

Commodity: Lithium

Full conceptual and basic engineering, including process, civil/structural, mechanical/piping, electrical, and instrumentation/control, for CapEx and OpEx evaluation.



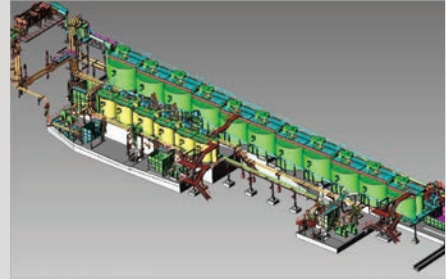
PROJECTS

Glencore - Minera Alumbrera Ltd.

Location: Catamarca, Argentina

Commodity: Copper/Gold

Complete conceptual, basic, and detailed engineering, along with CapEx analysis. Project related to the installation of new cleaning cells.



Glencore - Minera Alumbrera Ltd.

Location: Catamarca, Argentina

Commodity: Copper/Gold

Tailing Dam Water Recovery Project. Technical and economic analysis of alternative layouts and equipment configurations, along with conceptual and detailed engineering.

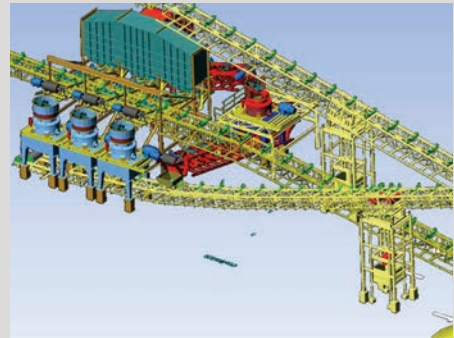


Glencore - Minera Alumbrera Ltd.

Location: Catamarca, Argentina

Commodity: Copper/Gold

Pebbles crushing plant expansion. Conceptual and detailed mechanical and structural engineering, including site supervision and RFI support during the construction phase.

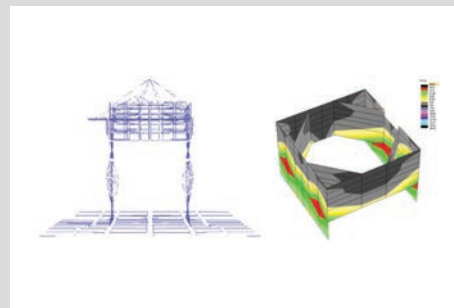


Barrick Gold Argentina - Veladero Project

Location: San Juan, Argentina

Commodity: Gold

SAXUM provided detailed mechanical and structural engineering for the primary and secondary crushing systems at the Veladero greenfield project.



PROJECTS

CODELCO - Chuquimata Project

Location: Chile

Commodity: Copper

SAXUM provided detailed engineering and construction support for a value recovery project using fresh tails at the Chuquicamata Concentrate Plant in Chile.



Cerrado Gold - Don Nicolas Project

Location: Santa Cruz, Argentina

Commodity: Gold

Pre-feasibility and feasibility studies, including preliminary process design criteria, plot plan, and facilities layout. Scope also covered tailings management design, hydrological studies, and water development planning.

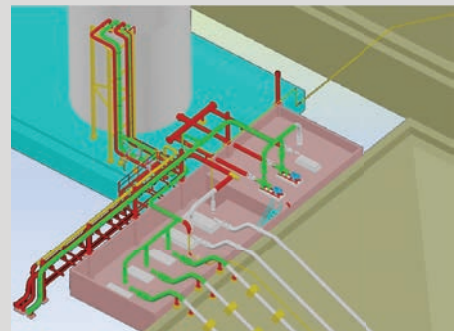


AngloGold Ashanti - Cerro Vanguardia Project

Location: Santa Cruz, Argentina

Commodity: Gold

SAXUM provided basic and detailed engineering, along with construction assistance services, for a crushing/agglomerating plant and a heap leach pumping station.



Glencore - Antapaccay Project

Location: Peru

Commodity: Copper/Gold

Review and verification of the stacker design prepared by Thyssen-Krupp, along with the design of its foundation system. Brownfield project related to the Tintaya plant expansion.



PROJECTS

PROJECT	CS / SS / ECS & Consulting	PFS	FS / DFS / BFS	PROJECT DELIVERY	CLIENT	LOCATION	PROCESSING	COMMODITY
Afema					Teranga Gold Corp	Côte d'Ivoire	1 Mtpa	Au
Agbaou					Endeavour Mining Corporation	Côte d'Ivoire	1.6 Mtpa	Au
Agbaou Secondary Crusher					Endeavour Mining Corporation	Côte d'Ivoire	1.6 Mtpa	Au
Agnew					Gold Fields Australasia Pty Ltd	Australia (WA)	1.35 Mtpa	Au
Ahafo					Newmont Ghana Gold Ltd	Ghana	7.5 Mtpa	Au
Ahafo Cyanide Recovery					Newmont Ghana Gold Ltd	Ghana		Au
Ahafo North					Newmont Ghana Gold Ltd	Ghana	3.4 Mtpa	Au
Ahafo South Water Treatment Plant Expansion					Newmont Ghana Gold Ltd	Ghana		Au
Akyem					Newmont Ghana Gold Ltd	Ghana	8.5 Mtpa	Au
Back Forty					Aquila Resources	USA		Au, Zn, Cu, Ag, Pb
Banfora					Teranga Gold Corp	Burkina Faso		Au (refract)
Baomahun					FG Gold Limited	Sierra Leone	2 Mtpa	Au
Batie West					Centamin Plc	Burkina Faso	3 Mtpa	Au
Bibiani					Ashanti Goldfields Ltd	Ghana	2.6 Mtpa	Au
Bissa					Nordgold	Burkina Faso	3 Mtpa	Au
Block 14					Orca Gold	Sudan	6 Mtpa	Au
Blue Bird					St Barbara Ltd	Australia (WA)		Au
Bomboré					Orezone	Burkina Faso	5.2 Mtpa	Au
Boto					IAMGOLD	Senegal	2.7 Mtpa	Au
Bouly Heap Leach					Nordgold	Burkina Faso	7.5 Mtpa	Au
Browns Creek					Hargraves Resources NL	Australia (NSW)	0.5 Mtpa	Au, Cu
Buzwagi					Barrick Gold Corporation	Tanzania	8.5 Mtpa	Au, Cu
Cadia Valley Cleaner Upgrade					Cadia Holdings Pty Ltd	Australia (NSW)	0.6 Mtpa	Au, Cu
Cadia Vertimill Project					Newcrest Mining Ltd	Australia (NSW)	4 Mtpa	Au, Cu
Chirano					Red Back Mining Limited	Ghana	2 Mtpa	Au
Chirano Upgrade					Red Back Mining Limited	Ghana	3.5 Mtpa	Au
Dandoko					Oklo Resources	Mali	1 Mtpa	Au
Edikan Upgrade					Perseus Mining Ghana Ltd	Ghana	2.6 Mtpa	Au
Elang					PT Amman Mineral Nusa Tenggara	Indonesia	60 Mtpa	Au, Cu
Essakane Debottlenecking					IAMGOLD	Burkina Faso		Au
Fekola					B2Gold Corporation	Mali	4 Mtpa	Au
Fekola Expansion					B2Gold Corporation	Mali	7.5 Mtpa	Au

PROJECTS

PROJECT	CS / SS / ECS & Consulting	PFS	FS / DFS / BFS	PROJECT DELIVERY	CLIENT	LOCATION	PROCESSING	COMMODITY
Golden Pride / Golden Pride Upgrade					Resolute Tanzania Limited	Tanzania	3 Mtpa	Au
Granny Smith					Gold Fields Australasia Pty Ltd	Australia (WA)	2.9 Mtpa	Au
Gruyere JV					Gruyere JV	Australia (WA)	10 Mtpa	Au
Gruyere JV - Cone Crushers Upgrade					Gruyere JV	Australia (WA)	10 Mtpa	Au
Gruyere JV - Pebble Crusher Maintenance Platform					Gruyere JV	Australia (WA)	10 Mtpa	Au
Hidden Valley Operations					Hidden Valley Services Ltd	Papua New Guinea	5.5 Mtpa	Au
Hillgrove					Hillgrove Resources Ltd	Australia (NSW)	7,500 tpa	Au
Houndé					Endeavour Mining Corporation	Burkina Faso	3 Mtpa	Au
Ity					Endeavour Mining Corporation	Côte d'Ivoire	5 Mtpa	Au
Kalana					Endeavour Mining Corporation	Mali	3 Mtpa	Au
Karma					Endeavour Mining Corporation	Burkina Faso	4 Mtpa	Au
Kiaka					West African Resources	Burkina Faso	7 Mtpa	Au
Koné					Shark Mining	Côte d'Ivoire	11 Mtpa	Au
Kurmuk					Allied Gold Corp	Ethiopia	4 Mtpa	Au
Lafigué					Endeavour Mining Corporation	Côte d'Ivoire	4 Mtpa	Au
Lihir					Lihir Gold Ltd	Papua New Guinea	12 Mtpa	Au
Los Filos CIL Plant					Equinox Gold	Mexico		Au
Mako					Toro Gold Ltd	Senegal	1.8 Mtpa	Au
Mallina					De Grey Mining Ltd	Australia (WA)	10 Mtpa	Au
Masbate					B2Gold Corp, previously CGA Mining Ltd	Philippines	4 Mtpa	Au
Masbate Expansion 1 & 2					B2Gold Corp	Philippines	6.5 Mtpa	Au
Misima					Kingston Resources Ltd	Papua New Guinea	5.5 Mtpa	Au
Montagne d'Or					Nordgold	French Guiana		Au
Namdini					Cardinal Resources Ltd	Ghana	9.5 Mtpa	Au
Natougou					Semafo Boungou S.A	Burkina Faso	1.3 Mtpa	Au
Navachab					QKR Namibia Navachab Gold Mine Pty Ltd	Namibia	2.5 Mtpa	Au
Nyanzaga					OreCorp Tanzania Limited	Tanzania	4 Mtpa	Au
Nzema					Adamus Resources Limited	Ghana	2.1 Mtpa	Au
Obotan					Resolute Mining	Ghana	1.2 Mtpa	Au

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