



**Mining Engineering**



## OUR GOAL IS TO ACHIEVE SUCCESS

**AGL Mining Engineering Ltd.Sti** is a Mining Engineering Services company established in Turkiye in June 2016.

AGL has provided consultancy, geological research and reporting services with its experienced team in many projects until today.

In line with our company's future vision of "becoming a world-class mining engineering and mineral processing solution company", our company has the goal of realizing the stages detailed. Latest trend reporting and consultancy services will be provided to mining companies with the equipment to be purchased, engineers to be permanently on staff and the latest technology software to be used. With all these experiment, our engineering team is ready to consult you for **Mining & Process Plant & Project & Investment Inspection**.

AGL Mining focus on Copper, Zinc, Lead Flotation, and Gold-Silver Leaching Concentrator Process Plant installation & Project, optimization studies (Increase Capacity and Recovery) pre-commissioning and commissioning activities, concentrated production, and technical service, So far, it has completed 7 large-scale copper-zinc and gold-silver concentrator production plants. AGL continues its activities actively in every region of Turkiye in European countries, Saudi Arabia, Arab Emirates, Guinea, South Africa, Ghana, Niger, Sudan, Albania ,India and Kosovo.



## The services to be provided in terms of: Mining & Process Plant & Project & Investment Inspection

- Remote Sensing (Preliminary analysis of the structures of the field using special satellites)
- Topography Visualization and 3D Modeling
- Georadar and Geophysical Methods (3D imaging of the underground using IP, Resistivity and other Geophysical methods)
- Completion of Surface and Underground maps and planning of Geological Field Studies
- Geological mapping of the field
- Sample studies and Drilling Planning
- Drilling Management
- Execution of Drilling Activities
- Definitive reserve detection, 3D mapping and reporting
- Reporting in NI-43/101 or JORK standards and having a “Bankable Feasibility” report of the field
- EPC – M Facility Planning; Engineering, Equipment, Procurement, Facility Installation and Management
- Mine Management Consultancy.
- Construction Installation
- Steel installation
- Design and installation and commissioning of Copper-Zinc-Lead flotation and Gold-Silver leaching tanks and Cobalt Process
- Pre-Commissioning and Commissioning
- Detail Engineering and full range engineering studies
- Mixing tanks and Agitators
- Installation of Electrical and Automation Systems
- Complete selection and installation of filter presses of crushing group, milling group, flotation group
- Optimization studies
- Chemical Preparation Units are connected to full automation
- Fully Automatic Samplers
- Dense media separation Processes



# Mining Engineering Services

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AGL Mining Engineering , provides consultancy services for all Geological Exploration phases, starting from scratch and reporting according to JORK and NI 43 - 101 standards of mining projects

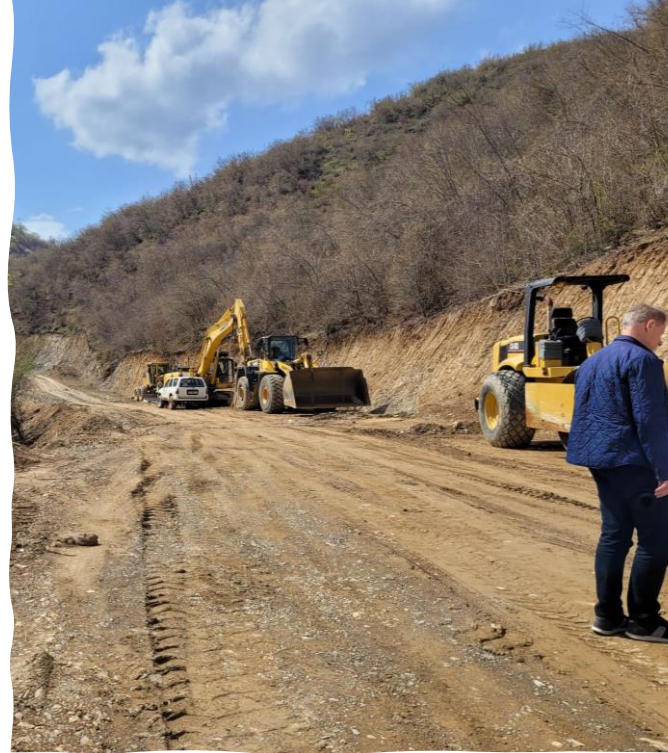
Regardless of the stage of the project, both Geophysical and Geological studies are carried out professionally by using the latest technology with our companies. At every stage, solutions are found together with the project owner to minimize the financial risk.

As a result of all the preliminary studies, detailed geology studies are started in the area where the presence of ore is observed.

The potential reserve is determined, and a report is prepared, together with the geological mapping studies, sampling, fault identification, determination of geological formations, and drilling plan.

We will assist you in all steps of the drilling phase according to international standards.

**AGL has worked for your project to get maximum efficiency with minimum cost.**



## Remote Sensing Studies

After collecting all the data of the project, Remote Sensing studies are started as the first step. These preliminary studies are very important in terms of efficient use of time and cost in large licenses..

The reports to be prepared by experienced engineers in the light of the information obtained through satellite signals help us to prepare our most efficient fieldwork.

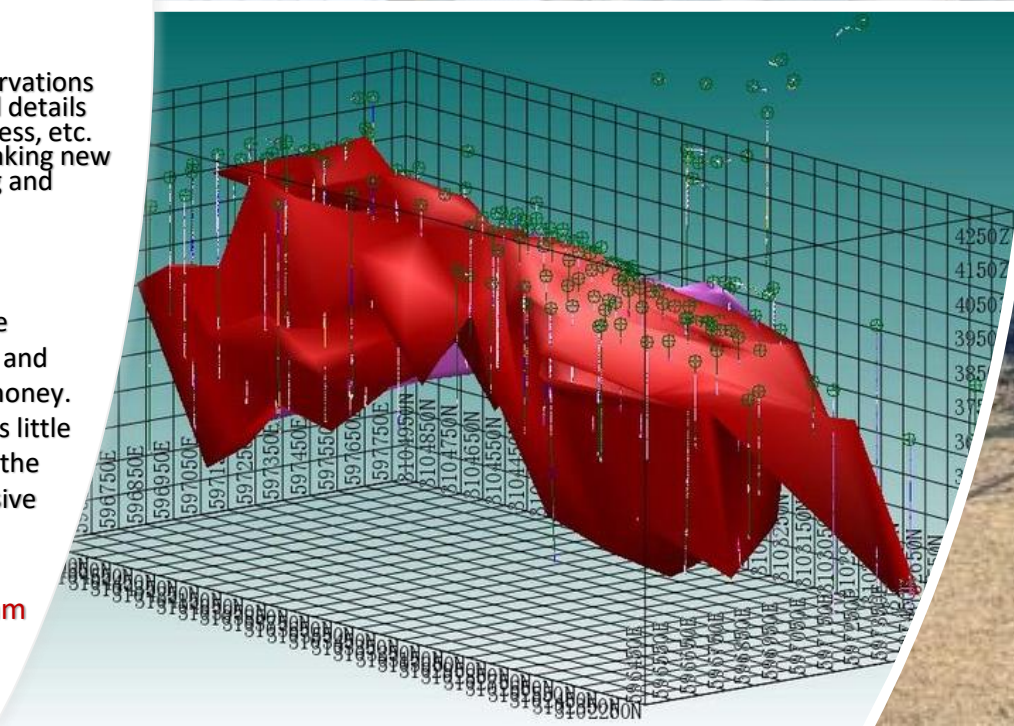
## Geophysical Studies

Jeoradar, IP, Resistivity, etc. underground on-site observations using the latest technology; It prepares many technical details such as ore structure, mineral presence, alluvial thickness, etc. As technology advances, imaging systems are also breaking new ground, greatly reducing the number of wasted drilling and other expensive operations that will all be done.

## Drilling Management

Drilling projects require a high degree of planning to be successfully implemented. Drilling programs are costly and therefore, good planning can go a long way in saving money. Further, due to the expense involved in drilling, there is little room for error. Proper drill planning can thus make all the difference between a successful project and an expensive failure.

**AGL has the expertise and experience to scope, design, implement and manage any drilling program according to your requirements.**





## NI-43 / 101 Geological Report

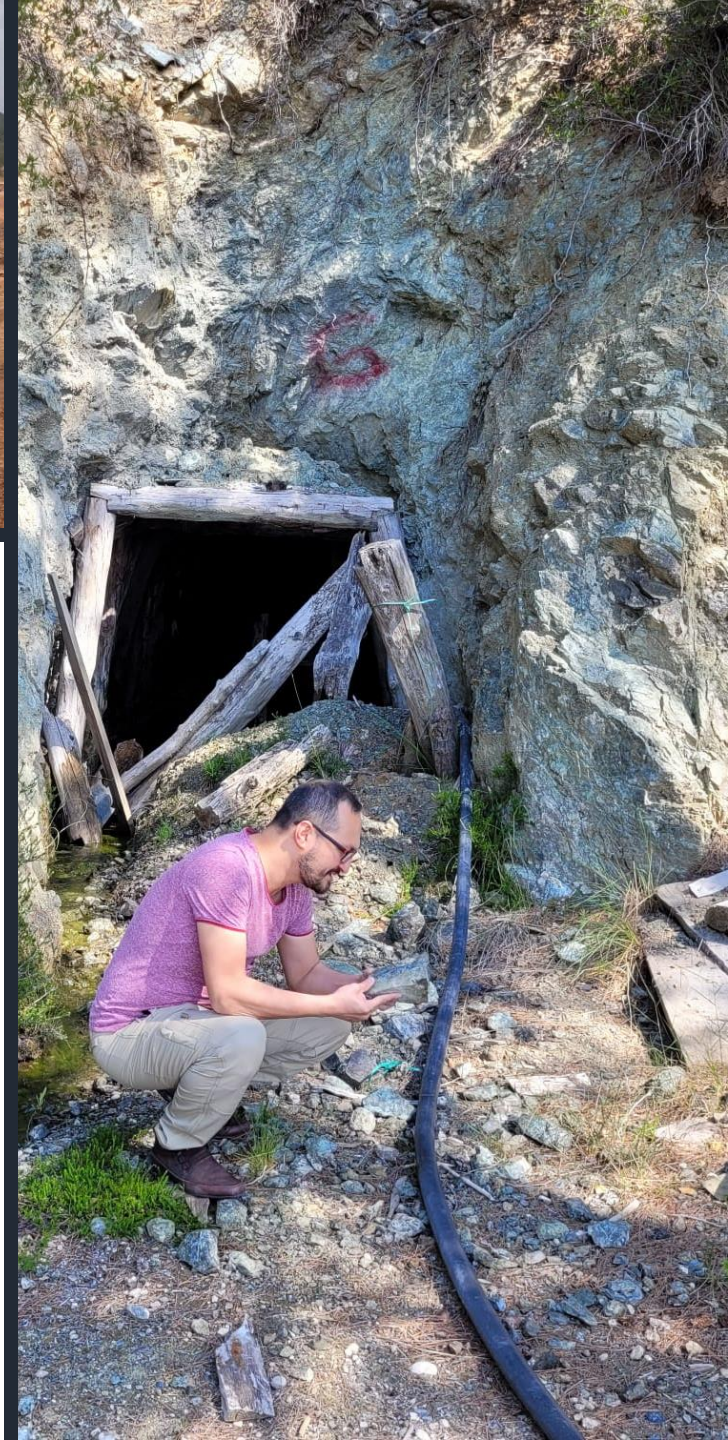


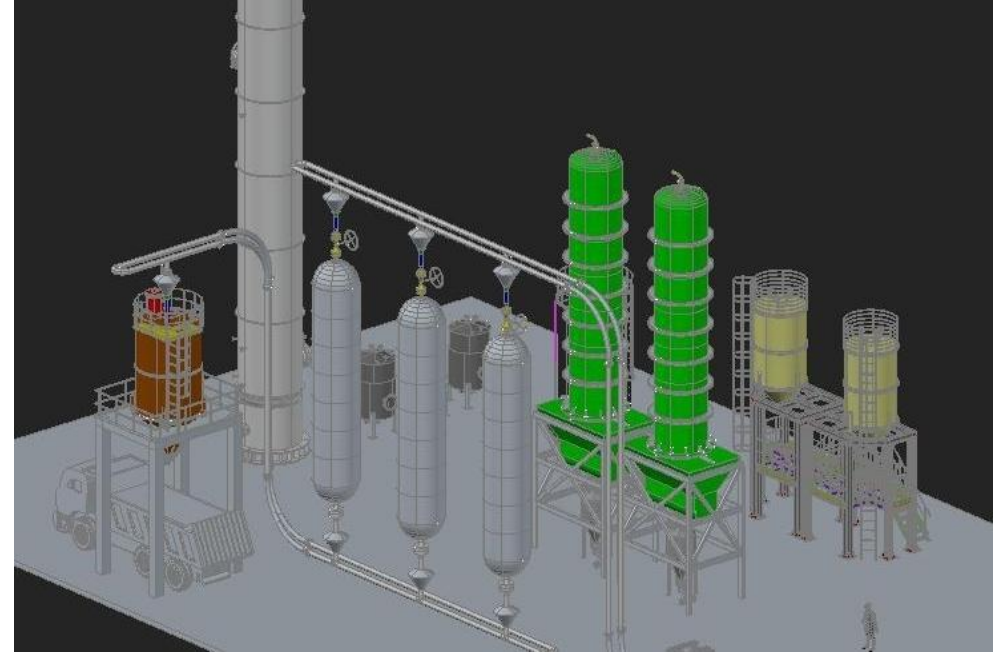
Congratulations! You took all the risks and now you have proven reserves and tenors. Now it is time to report it. AGL mining assist you to report your mine site in Canadian international mining standard NI-43/101 or Australian International mining report standard JORK standard.

The report will include the information like geography, geology, proven ore reserve, probable ore reserve, metallurgical test results, facility plant design etc. for your mine site.

There is a lot of difficulty in the search process for a gold mine project. But once you've proven your gold reserves, now is the time to talk about the mining activity plan and gold production facility.

**AGL Mining has an experienced team with facility engineering and construction experience. We will assist you at every stage of the mining industry.**





- Basic & Detail Engineering
- Mapping
- Design process Plant Construction
- All Equipment & Steel Installation



# Finance for Mining & Facility

The results in the reports will reveal what kind of mining we will do. It can approximate the costs of this and take steps in finance. However, the gold leach facility is an investment with high initial setup costs. At this stage, support should be obtained from professional companies for the following basic services

## Basic Engineering

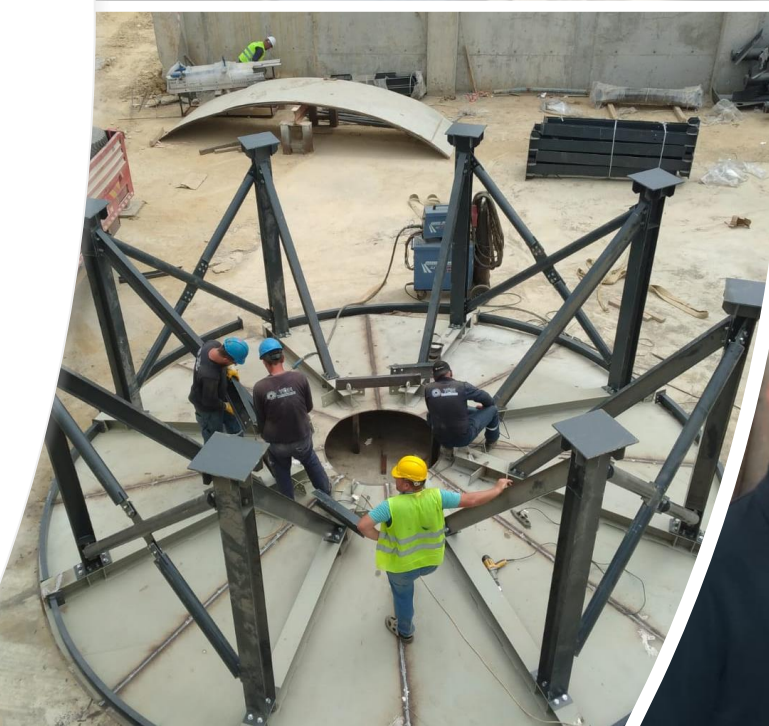
Process design, plant efficiency, metallurgical testing and ultimately plant design, etc.

## Detail Engineering

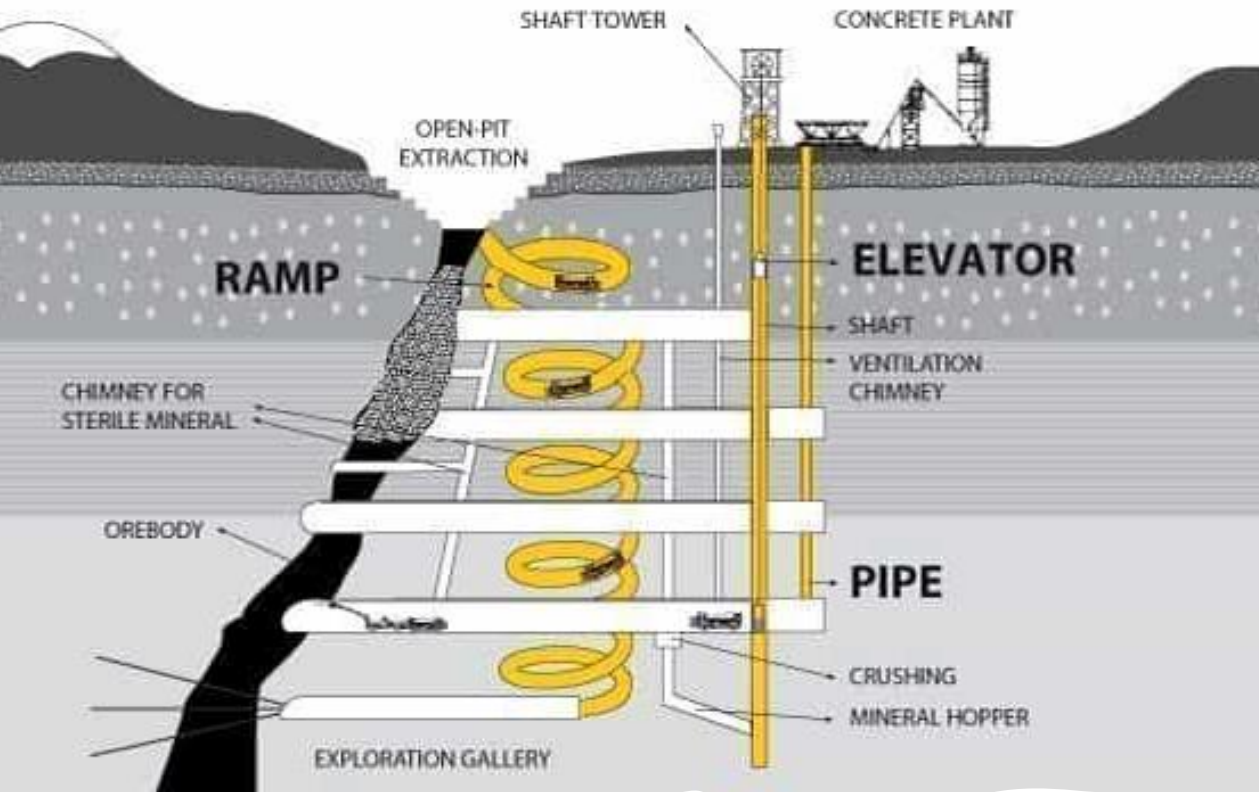
Water management, Chemical material management, Risk management, HSE Management, etc.

## Purchasing Management

RFQ Preparation, Tendering, Bid Evaluation, Purchase Order Preparing, Contract Management, Construction Management Civil, Mechanic, Piping, Electric and Automation works, Commissioning Startup, Training.







## Mine management



AGL Mining management has a wealth of mine management experience overseeing operations at a mine to keep it efficient and safe.

In addition to working in the field to monitor all personnel and conditions, the system also spends time in an office handling paperwork related to the daily operations of the mine.

This party is responsible to the mining company for events at the mine and is responsible for the overall safety of the facility. Mine managers often have assistants to help them do their job effectively and completely.

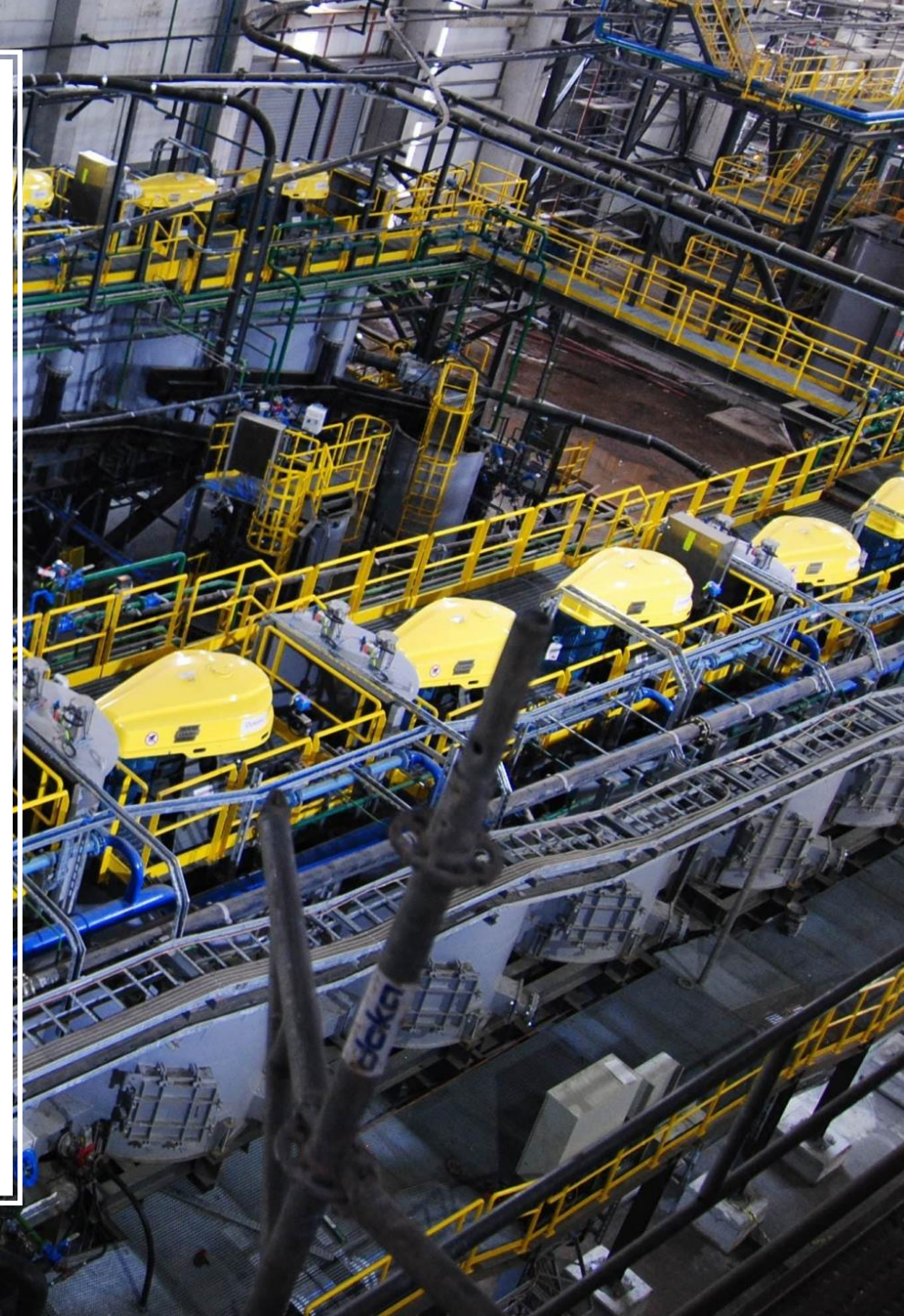
AGL Mining establishes an appropriate environmental monitoring program to ensure compliance with defined criteria and to enable authorities to evaluate the effectiveness of our management.

## Newly Developed Process Systems Integrated with Latest Technology and Automation Systems.

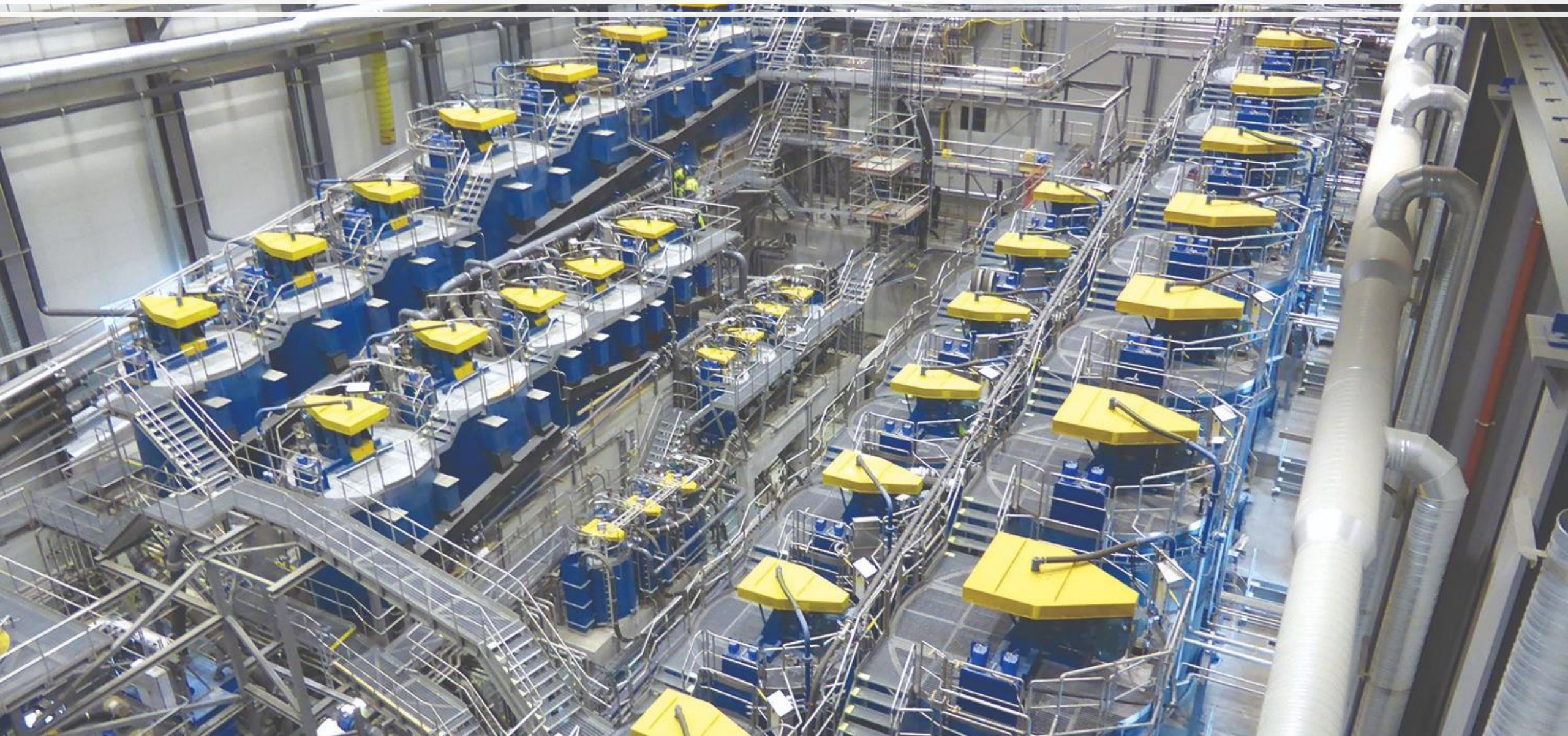
### Chemical preparation for Copper-Zinc flotation and Gold Silver Leaching-Distribution and Dosing Systems.

- Chrome AISI 316 reagent pumps
  - Tank mixers, high resistance to balance
  - Flotation reagent distribution tanks
  - Automatic dispensing valves for all tanks
  - Transparent and flexible chemical transfer pipelines
  - Electric panels Control with automation system
  - Easy reagent preparation and advantages for the operator
  - Easy dosing and cc measurements
  - Proportional valves
  - 2 years technical service warranty
  - 5 years working guarantee
- PAX (Potassium Amyl Xanthate)
  - SIPX (Sodium Isopropyl Xanthate)
  - 8045
  - Aerofin 3418
  - Spare tanks
- 
- CUS04 (Copper Sulphate)
  - SIBX (Sodium isobutyl xanthate)
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- NA2S (Sodium Sulfide)
  - 7260
  - Zinc Sulphate
  - Iron Sulphate
  - Sodium metabisulphite
  - Sodium Silicate

**Our company, which has all the infrastructure to manage the mining facility investment, starting from the first stage of the mine site, is ready to take a role in the mine management if necessary.**



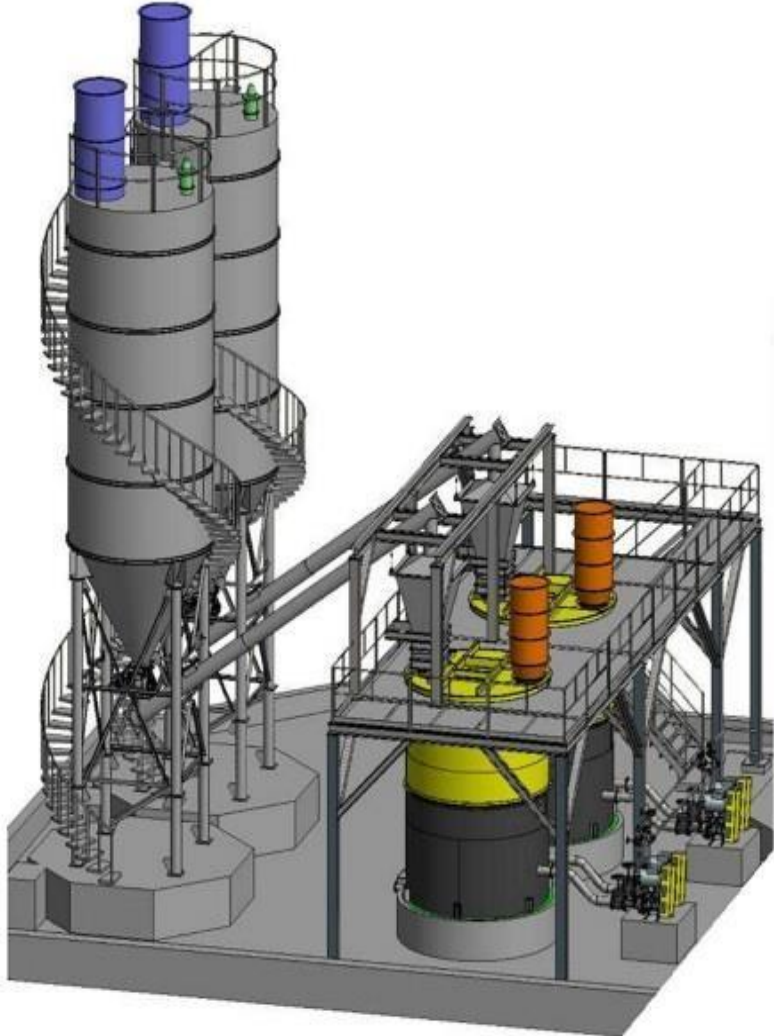
Basic & Detail Engineering  
Copper-Zinc Flotation and Gold-Silver Leaching Process Plant



## Copper-Zinc-Lead Flotation and Gold-Silver Leach LIME UNIT Preparation and Dosing Process.

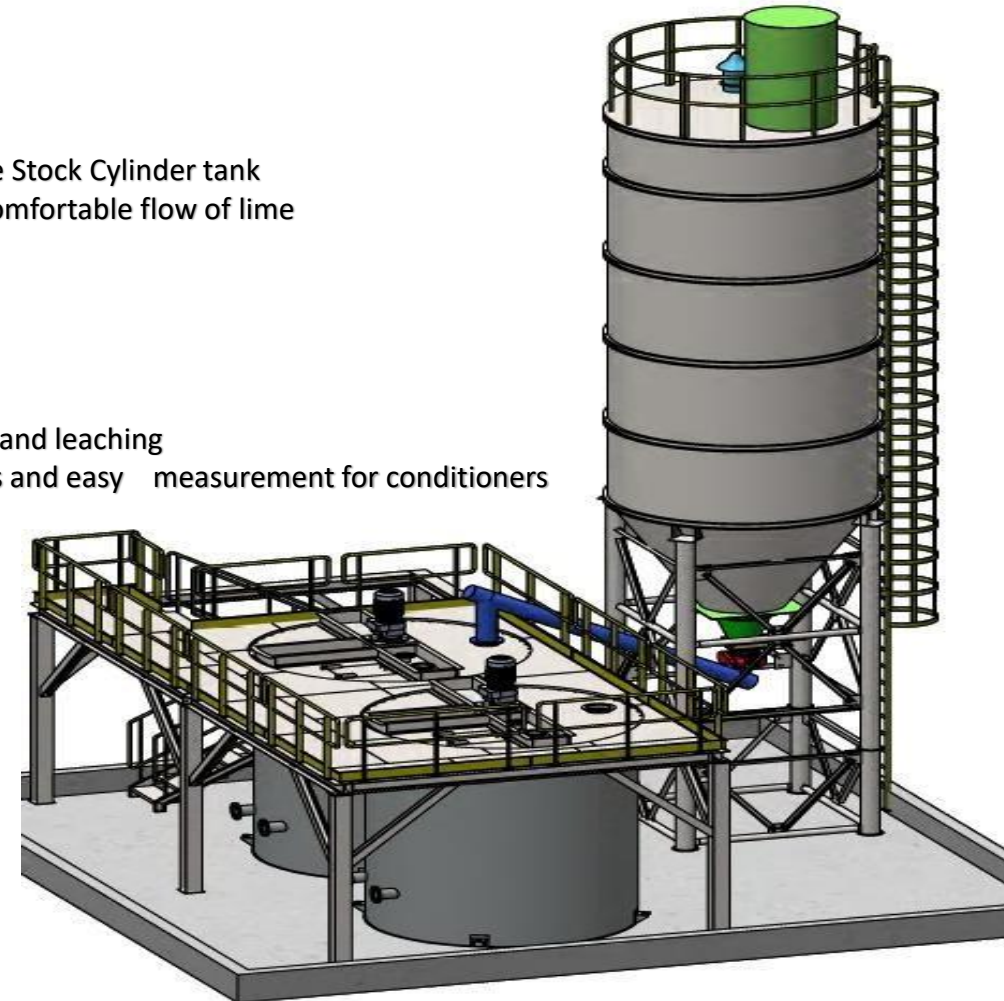
Consumption measurements with advantages and ease of use and convenience.

### Double Lime Cylinder Silo Box



- 1- 50m<sup>3</sup>-100m<sup>3</sup>-150m<sup>3</sup>-200m<sup>3</sup> Powder Lime Stock Cylinder tank
- 2- Integration of vibro motor systems for a comfortable flow of lime
- 3- Spiral Screw Feeder
- 4- Preparation Tank
- 5- Lime weighing unit under the silo box
- 6- Distribution tank
- 7- Tank mixers, also resistant to balance
- 8- Stable PH adjustment system for flotation and leaching
- 9- Provide PH meters and all electrical panels and easy measurement for conditioners
- 10- Easy control from automation room
- 11- Easy lime feeding
- 12- Two years technical service warranty
- 13- Five years working guarantee

### Single Lime Cylinder Silo Box



## OUR TEAM

### **Cem TEKİN – Founder Director / Geological Engineer**

EDUCATION: Hacettepe University - Engineering Faculty, Geological Engineering (English Education) University (master's degree) 09.2014 –05.2018. Çankırı Karatekin University - Chemical Engineering (Purification of metal mines)  
Foreign Language: English ,Native Language: Turkish

### **Ismail Hakan BUZCU – Process & Project Director**

EDUCATION: Mining Engineering-Mineral Processing-Metallurgical Suleyman Demirel University  
Faculty Of Engineering Mining Department Foreign Language: English Native Language : Turkish

### **Fahri KOYUTURK – Electric & Automation Director**

EDUCATION: Electrical Teaching Bachelors, Gazi University (2007), Faculty Of Technical Education.  
Foreign Language: English , Arabic (Intermediate) Native Language : Turkish

### **Bulent AKDOĞAN – Construction Manager**

EDUCATION: Saint-Petersburg State University of Architecture and Civil Engineering.  
Department of Civil Engineering. Foreign Language: English, Russian. Native Language: Turkish

### **Serkan KIRMACI – Process Manager**

EDUCATION: Mining Engineer- Istanbul Technical University- Maslak-İstanbul – Turkey  
Experiences. Process Department Manager, Process Mineral Engineering, Process Supervisor -Process Superintendent.  
Foreign Language: English , Arabic (Intermediate) Native Language : Turkish

### **Nazim Sencer ÇİFTÇİ – Maintenance Manager**

EDUCATION: Engineering Faculty, Department of Mechanical Eng. Cumhuriyet University- Turkey  
Experience, Plant management engineering and Mechanic Department Manager.  
Foreign Language: English, Arabic (Intermediate) Native Language: Turkish

### **Yiğit Ensar EROL – Hr & Finance**

EDUCATION: Real Estate Valuation and Financing 2022- Master Marmara University Istanbul – Turkey.  
Foreign Language: English, Arabic (Beginner) Native Language : Turkish

# References

## Exploration Studies

- **Yıldızlar Holding** : Ergani Bakır Copper Mine Development Project.( Elazığ Turkey)
- **Afarak Group** : Turk Maadin Company-Sazak Chrome Mine Development (Eskisehir-Turkey)
- **Kolin Construction** : Hekimhan Mining old Min-e Evaluation (Turkey)
- **Kolin Construction** : Hekimhan Mining - Iron Mine Evaluation Increased proven reserve from 45 million Tone to 75 million Tone ( (Malatya - Turkey)
- **Zubair Corporation** : 10 mine sites Evaluation of Company (Oman - Turkey)
- **Silverstone Mining** : Bauxite Mine Development 1 Million Ton proven reserve exploration,-(Antalya, Turkey)
- **Anka Mining Niger** : West Niamey Gold Mine Project – ( Niamey – Niger)
- **NA Global Ghana** : Farakoba Gold Mine Project - (Kouroussa - Guinea)

## Process & Plant & Project Engineering

- **Yıldızlar Inc** : Zinc-Gold Flotation and Leaching - (Gümüşhane – Turkey)
- **Etibakır Inc** : Copper Flotation Project –( Kastamonu –Turkey)
- **AMAK Mining Co** : Copper-Zinc - Gold-Silver – (Saudi Arabia)
- **Mir yıldız Mining Co** : Gold Mine – (Gaziantep – Turkey)
- **Delta Star mining INC** : Copper –zinc – lead Flotation – (Turkey)
- **Yıldızlar SSS Holding** : Zinc-Gold Flotation and Leaching – (Turkey)
- **Yıldızlar Holding SSS Star** : Copper-Gold – (Turkey)
- **Cengiz Holding** : Eti Bakır Küre Concentrate Plant – (Turkey)
- **Eti Copper** : Copper Flotation – (Turkey)
- **Nesco Holding** : Copper-Zinc- Gold-Silver – (Turkey)
- **Kaneh Pouyan E-Saba** : Copper-Zinc – (Turkey – Iran)
- **Star Gold Holding** : Gold-Zinc - Gold - (Turkey)



EXPLORATION STUDIES



MINERALS & METALS PROCESSING



## AGL MADENCİLİK MÜHENDİSLİK LTD. STİ.

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