

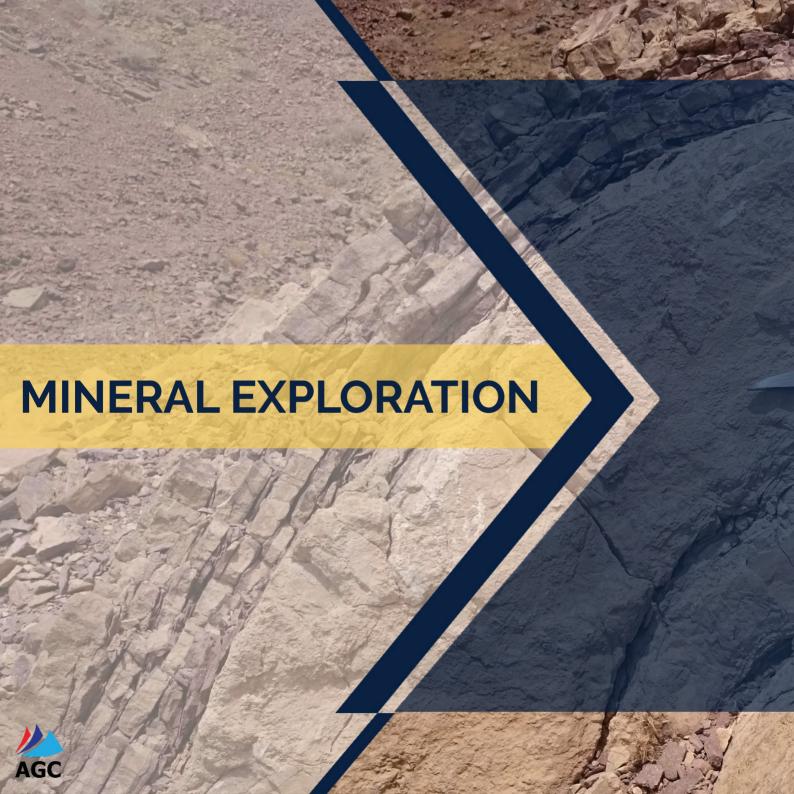


# **AL HAYTHAM**

MINERAL EXPLORATION
AND GEOTECHNICAL SERVICES

VISION Œ LIĐI

المملكة العربية السعودية KINGDOM OF SAUDI ARABIA



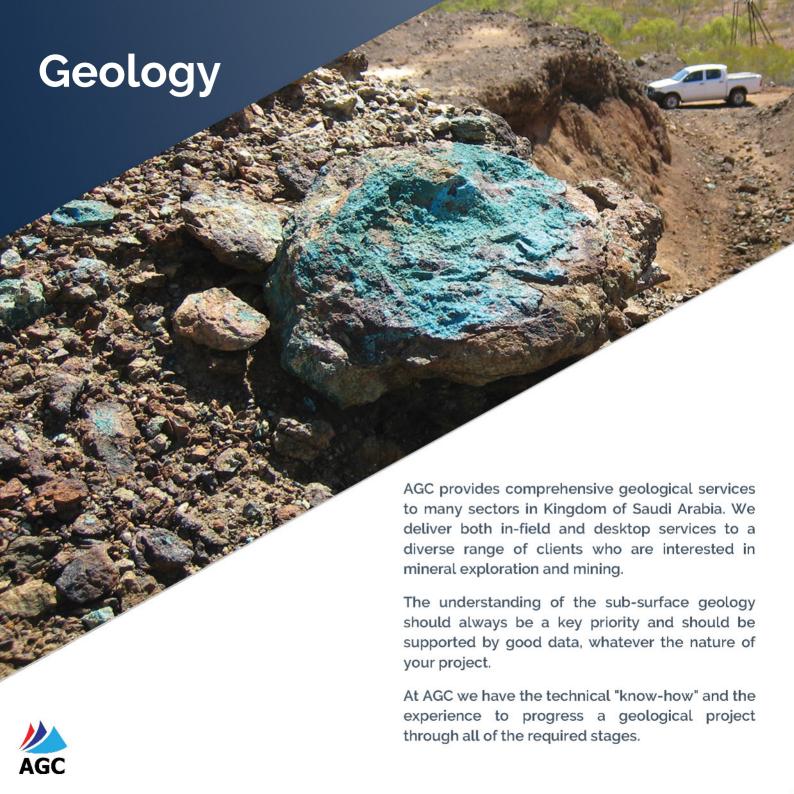
We offer a wide range of exploration services, reflecting our broad geological interests and the diverse expertise of our team. In general, we get involved with projects from grassroots exploration through to the pre-feasibility stage, and these can range from a simple property evaluation and technical report preparation to running and managing entire exploration programs, depending on the client's needs.

AGC's team has proven expertise in a wide variety of geological settings and deposit types. We always adhere to current best practices in health and safety and environmental management, while ensuring that all exploration work is undertaken and completed in compliance with international standards.

#### **Our Mineral Exploration Services**

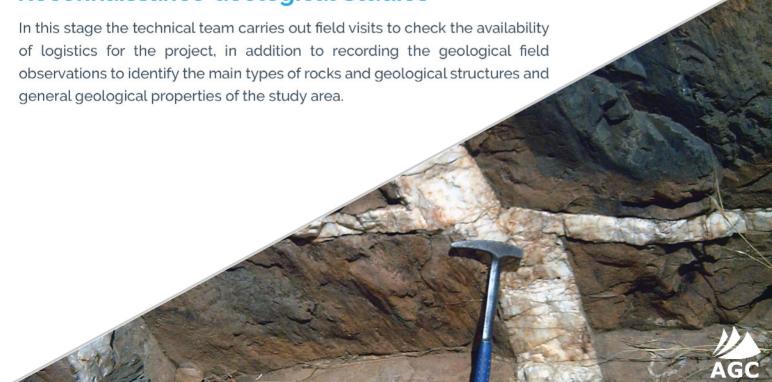
- ➤ Geology
- > Samples Preparation
- Orebody Modelling and Mineral Resource and Mineral Reserve Estimation
- Mineral Exploration Project Management







### **Reconnaissance Geological Studies**



of the rocks and the topography of the area and regional structural geology.

# Geology

#### **Surface Geological Exploration Studies**

#### **Lithostratigraphic Studies**

- ➤ Identify the time of deposition and depositional environment of sedimentary deposits
- > Petrographic and ore-microscopy studies
- ➤ Geological Mapping

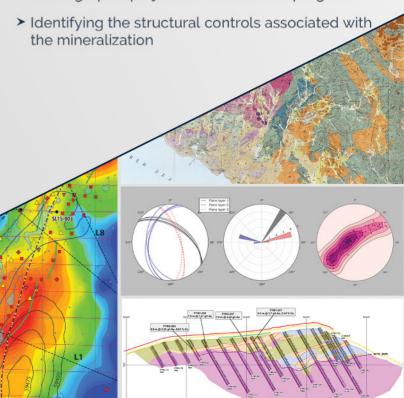
#### **Geochemical Studies**

- > Geochemical programs design and implementation
- Collecting geochemical samples such as stream sediments, soil samples and rock chip samples, in addition to trench sampling
- Alteration mapping to determine the concentrated mineral domains and to define controls on mineralization

Generate geochemical maps using Encom Discover and MapInfo Software.

#### **Structural Studies**

- > Carrying out geological structures measurements
- Defining the structural relationship between rock units
- ➤ Plotting the structural maps using Encom Discover and MapInfo Software
- Statistical analysis of structural data using stereographic projection of Stereonet program





**Exploration Studies for Drilling Programs** 

- ➤ Core/RC geological logging and core structural and geotechnical logging in compliance with international industry standards.
- > Capturing and analyzing core samples photography.
- > Storing, managing and validating all drilling data (eg. collars, downhole survey, core orientation, geological, structural and geotechnical logging, photography, assay results and specific gravity measurements).
- > Generation of drillhole logs.
- ➤ Interpretation of multiple datasets in an integrated 2-Dimensional environment using Encom Discover MapInfo Software.
- > Generation of Isopach maps to determine the thickness of the subsurface layers.
- > Generation of Isopleth (Grade) maps to determine the chemical properties distribution of the subsurface layers.



# Orebody Modelling and Mineral Resource and Mineral Reserve Estimation

Cost effective field exploration requires thinking in a three dimensional framework (3D Modelling), as ore deposits are characterized by inherently 3D geological processes.

Our modelling workflow enables the integration of multiple 3D and 2D datasets, and the real-time, rapid evaluation of exploration targets. These tools and our experience allows for rapid and seamless incorporation of results into resource and reserve estimations, mine planning and exploration targeting.

A mineral resource estimate carries out to international best practice is vital for evaluating a deposit with confidence and planning the development of a mine. We follow the principles of competency, transparency and materiality in preparing technical reports of mineral resource and reserve estimates, all is done in compliance with international industry standards.

Drawing on knowledge gained from exploration projects, development projects and operating mine sites, we develop or audit geological models and resource estimations for all major commodities and deposit types for inclusion in almost all levels of study. We use a variety of tools including Geovia Surpac and Encom Discover.

#### Our services include:

- · Appraisal of data collection techniques
- · Optimizations of drillhole targeting for resource definition
- · Mineral resources and reserves estimation, geostatistical and spatial analysis.
- Density measurements
- · Mineral Resources and Mineral Reserves Classification
- · Conditional Simulation Studies "Risk Analysis"





# Samples Preparation

Sample preparation is a vital stage in the analytical process. Correct preparation procedures allow representative sub-sampling which is the foundation of quality analysis. The selection of the specific sample preparation procedures will depend on the type and size of the sample and the mineralogy as well.

AGC is capable of carrying out samples preparation (drying, crushing, splitting, pulverizing and packing). We have all the equipment and workforce necessary to carry out this mission successfully.

Our samples preparation facility is equipped with the following:

- Ovens
- Rocklabs Boyd Standard Crushers
- · Riffle Splitters
- FLSmidth LM2 Pulverizing Mills
- · Normal and Digital scale
- Sieves





Our specialties in mine development, planning and project management can extend the life of a mine, using the latest techniques and specialized equipment, and also provides more profitable approaches to mining projects, new ways to overcome problems and ensuring optimal equipment utilization with safety as a priority.



## **Our Partners**



































# **Our Services Coverage in KSA**

