



Innovation and integrated solutions  
with Masharef for geological  
consulting

[www.masharef.org](http://www.masharef.org)



# Introduction

Masharef Company is a leading Saudi geological consulting company, specializing in providing high-quality consulting services. Masharef provides its services locally in the Kingdom of Saudi Arabia as well as globally, across a variety of locations and materials, in line with the Kingdom's Vision 2030.

The company is committed to providing the highest levels of quality in its services to its clients and is keen to ensure the success and development of projects, while adhering to the highest international laws and standards.

Masharef has extensive experience in all stages of mining, from the initial exploration stages through mine development, to initial production and large-scale operation.

The company includes a team of highly qualified professionals with extensive experience in multiple fields, including geology, mining engineering, geophysics, geochemistry, mineral resource estimation, project management, data management, in addition to experts in geographic information systems.





## **Our Vision**

To become the pioneer in providing consulting solutions and services in the field of geology and mining, with our commitment to innovation and quality to meet the needs of our clients and achieve the goals of Saudi Vision 2030.



## **Our Mission**

To be your trusted partner in your exploration journey, providing you with the advisory and technical support you need to achieve success in your projects while adhering to the highest standards of quality, safety and compliance with international specifications.



# Our Values

- **Innovation:** We keep pace with the latest developments in the mining and geology industry.
- **Quality:** Providing high-quality services and products that meet our customers' expectations and comply with international standards.
- **Professionalism:** We strive to achieve outstanding results through a qualified and specialized team.
- **Integrity:** We deal transparently with our customers and partners and adhere to the highest standards of ethics in all our dealings.
- **Cooperation:** We believe in effective cooperation with our customers and partners to achieve common goals.

# The most prominent **advantages** of Masharef Advanced Company



## **Comprehensive and integrated services**

Providing integrated consultations in the fields of geology and mining covering all stages from exploration to operation, with a focus on resource evaluation, geological modeling, geophysical and hydrogeological studies, geotechnical and economic feasibility studies while adhering to the highest standards of quality and safety and compliance with international specifications.



## **Modern technologies**

We use the latest technologies and advanced tools in exploration and mining, including modern software and advanced geophysical systems, to ensure accurate and reliable results.



## **Deep and reliable expertise**

We have a team of specialized experts with extensive experience in all aspects of geology and mining, ensuring accurate consultations and effective solutions.



## **Commitment to quality and international standards**

We adhere to the highest standards of quality and safety in accordance with national and international standards, ensuring the achievement of outstanding results.



## **Innovation and research and development**

We invest in research and development to enhance our ability to provide innovative solutions that meet changing challenges and keep pace with the latest trends in the industry.



## **Experience in large and complex projects**

We have a proven track record of success in managing large and complex projects, reflecting our ability to deal with challenges and achieve the desired results.



## **Sustainability and Environmental Responsibility**

We pay great attention to environmental sustainability and responsible management of resources, to ensure positive impact and preservation of the environment.



## **Community Management**

Masharef pays great attention to the local communities in its franchise locations to provide services to the local population.

# Objectives





**Services**

### Exploration Services (Industrial Rocks):

Study of minerals and industrial rocks such as silica sand, limestone, marble, basalt, granite, gypsum, clay, etc. Masharef provides desk study (review of historical data, topographic survey, remote sensing study, drilling (diamond and core drilling), sample cutting and sectioning, geochemical and geotechnical analysis, 3D block modeling, reserve calculation, resource estimation, mining plan scenario preparation, geotechnical study, environmental impact assessment, social impacts, feasibility study, mine closure and rehabilitation) and technical reports.

### Evaluation of mineral resources potential

Masharef uses advanced exploration techniques, including remote sensing, geophysics, geological mapping, and geochemical surveys, to identify and evaluate the potential of mineral deposits.

### Exploration target identification and selection

We leverage our expertise and experience to prioritize and select promising exploration targets, optimize exploration efforts, and increase the probability of success.

### 3D geological modeling and resource estimation

We use the latest software and methodologies to create accurate 3D geological models and estimate mineral resources and reserves according to international standards.

### Exploration Services (Base Metals):

Field data collection, geological mapping (regional and detailed), rock sample collection, geochemical analysis, surface drilling plan, petrographic study, collection, integration and processing of aerial geological and geophysical data and their interpretation in GIS or multi-layer file along the lateral lines for comprehensive interpretation, and thus writing the geological report.

### Hydrogeological and Geotechnical Studies

Preparation of hydrogeological and geotechnical studies, Environmental Impact Assessment (EIA), Social Impact Assessment, Mineral Testing, Risk Assessment, Financial Study of the Project and Full Feasibility Study.

### Quality Control and Assurance

Masharef applies strong Quality Control and Assurance (QC & QA) practices and procedures for sampling, handling, analysis and data management to ensure data accuracy, reliability and compliance with mining laws and industry standards.

### Drilling services

We use different techniques (vertical and inclined) to identify and evaluate mineral deposits. Among these services, Masharef offers drilling rigs, trenching, along with different drilling methods such as RAB, DD, RC, AC, and water drilling.

### Geophysics Services

- Exploratory geophysical surveys for minerals using magnetic surveys and VLF ground method and using drones, induced polarization (IP), self-potential (SP), electrical resistivity imaging (ERT), and electromagnetic method (VTEM)
- Application of geophysical and geological surveys and techniques in groundwater exploration, geotechnical site studies, archaeological prospection, environmental studies and geothermal energy.



# 01

## Evaluation of mineral resources potential

Masharef uses advanced exploration techniques, including remote sensing, geophysics, geological mapping, and geochemical surveys, to identify and evaluate the potential of mineral deposits.



# 02

## Exploration target identification and selection

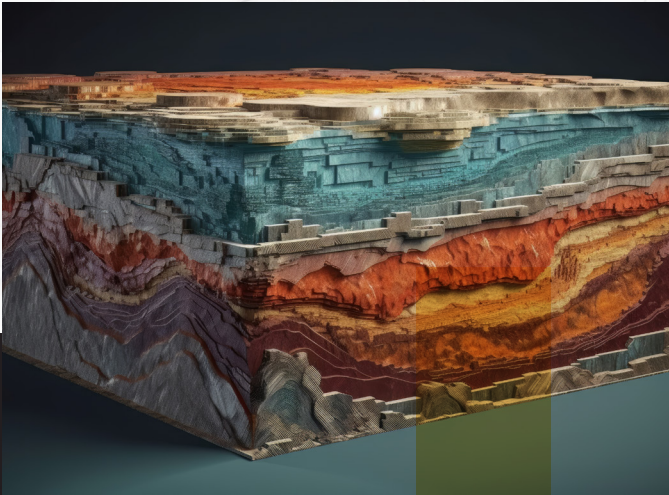
We leverage our expertise and experience to prioritize and select promising exploration targets, optimize exploration efforts, and increase the probability of success.



# 03

## 3D geological modeling and resource estimation

We use the latest software and methodologies to create accurate 3D geological models and estimate mineral resources and reserves according to international standards.



# 04

## Drilling services

We use different techniques (vertical and inclined) to identify and evaluate mineral deposits. Among these services, Masharef offers drilling rigs, trenching, along with different drilling methods such as RAB, DD, RC, AC, and water drilling.



# 05

## Hydrogeological and Geotechnical Studies

Preparation of hydrogeological and geotechnical studies, Environmental Impact Assessment (EIA), Social Impact Assessment, Mineral Testing, Risk Assessment, Financial Study of the Project and Full Feasibility Study.



# 06

## Quality Control and Assurance

Masharef applies strong Quality Control and Assurance (QC & QA) practices and procedures for sampling, handling, analysis and data management to ensure data accuracy, reliability and compliance with mining laws and industry standards.



# 07

## Exploration Services (Base Metals)

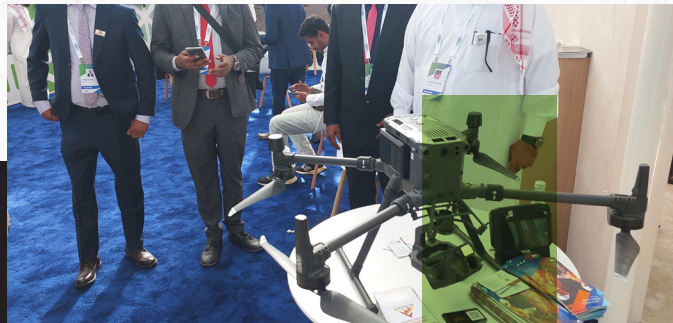
Field data collection, geological mapping (regional and detailed), rock sample collection, geochemical analysis, surface drilling plan, petrographic study, collection, integration and processing of aerial geological and geophysical data and their interpretation in GIS or multi-layer file along the lateral lines for comprehensive interpretation, and thus writing the geological report.



# 08

## Geophysics Services

- Exploratory geophysical surveys for minerals using magnetic surveys and VLF ground method and using drones, induced polarization (IP), self-potential (SP), electrical resistivity imaging (ERT), and electromagnetic method (vTEM)
- Application of geophysical and geological surveys and techniques in groundwater exploration, geotechnical site studies, archaeological prospection, environmental studies and geothermal energy.



# 09

## Exploration Services (Industrial Rocks)

Study of minerals and industrial rocks such as silica sand, limestone, marble, basalt, granite, gypsum, clay, etc. Masharef provides desk study (review of historical data, topographic survey, remote sensing study, drilling (diamond and core drilling), sample cutting and sectioning, geochemical and geotechnical analysis, 3D block modeling, reserve calculation, resource estimation, mining plan scenario preparation, geotechnical study, environmental impact assessment, social impacts, feasibility study, mine closure and rehabilitation) and technical reports.



## Our projects

Our portfolio reflects strong expertise across a diverse range of mineral resources and ore types, partnering with leading companies in various sectors. In the field of precious metals, we cooperate with Rwaked, Abreez and Rakizah for gold exploration and production, demonstrating our competence in dealing with valuable mineral resources.

Our partnerships in the field of silica sand mining include a wide range of industry leaders such as Mining Companies for Industry, Precious Rocks, Arabian Massa, Desert Sands and Zahid for Industry, confirming our extensive experience in extracting and processing silica-based materials.



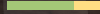
We are also at the forefront of artificial stone mining companies, through cooperation in basalt and pozzolan through Sand International Company and Hamsa Al-Masif. In addition, we have partnered with the Southern Cement Company across multiple sites to produce gypsum and anhydrite, in addition to iron mining. Our involvement also extends to limestone, claystone, quartzite and marble projects, working alongside companies such as Umm Al Qura, National Industries, Hamad Aldrees and Arabian Cement Company across various strategic locations.

This comprehensive engagement with industry leaders across various types of ores and minerals demonstrates our commitment to providing high quality services and expertise in mining, resource estimation and material processing.





# Masharef Team



Masharef Company includes a team of highly qualified professionals with extensive experience in various fields, including geology, mining engineering, geophysics, geochemistry, remote sensing, mineral resource estimation, project management, feasibility studies, geotechnical studies, data management and GIS specialists.



## **Yahia M. Al-Shangiti,**

is a highly accomplished mining engineer with over 32 years of industry experience. He holds a Bachelor of Science in Mining Engineering from King Abdulaziz University (February 1992) and a Master of Science in Mineral Industry & Environment Management from the University of Leeds, UK (November 1995). He is an active member of the American Management Association since 1992 and the Society for Mining, Metallurgy & Exploration (SME) since 1990. He is also a certified consultant with the Saudi Council of Engineers (Consultant – Mining Engineering, Member No. 162770). Al-Shangiti's career has seen him progress from a trainee to the role of company president, amassing extensive expertise in mine development, feasibility studies, and operational oversight. His leadership has been instrumental in driving successful and profitable gold mining ventures, while formulating strategic plans to position his company as a key player in the gold and precious metals sector.



## **Ayman Seraj Badirah,**

holds a Bachelor of Science in Engineering Geology from King Abdulaziz University (1998–1997) and a Diploma in Mine Technology from Missouri University, USA. With over 25 years of experience, he has successfully managed six gold and base metal mines, encompassing both underground and open-pit operations. Among his notable achievements is the production of 400,000 ounces of gold in 2018. He is currently leading efforts to achieve the strategic goal of producing 1 million ounces of gold, along with substantial copper and zinc output, by 2025.



## **Khaled Saad Alwagdani,**

is Masharef Consultant of Drilling service, with a wide range of experience in Core Drilling, RC, Rotary Air Blast (RAB) Drilling, Percussion Drilling, Auger Drilling, Sonic Drilling and geotechnical drilling. He is a current CEO of United Exploration Company, and the past CEO of Rwaked Company for Contracting, His background with over 23 years in the Saudi Geological Survey, Khaled Alwagdani has held various supervisory and technical roles, including notable leadership positions in engineering geology and desert studies. His experience includes establishing the Engineering Geology Lab and the Department of Desert Studies, in addition to consulting for these departments. He has also contributed to multiple national projects, such as engineering geological mapping for key regions (Makkah, Yanbu, Jubail) and studies on desertification, soil properties, and flood risk prevention. In his earlier career, he worked for the Saudi Bin Laden Group's Marble and Granite Company. His additional roles include leading scientific expeditions to the Empty Quarter and contributing to the Scoria Ores Evaluation Project, showcasing a rich and varied expertise in geological surveying and resource management.



## **Prof. Dr. Mohammed Khalil Mohammed Khalil,**

holds a PhD in Geology from Durham University, UK, and Asyut University, Egypt, with over 23 years of expertise in geological research, and the exploration of mineral resources, petroleum, and groundwater. He served as a professor at King Abdulaziz University, specializing in both hard and soft rocks, from October 2008 to June 2023. He has also worked as a Principal Consultant and Senior Geologist at Arabian Goldfields Mining Company in Jeddah, Saudi Arabia, from 2022 to 2024. Currently, he is a Principal Geologist at Masharef Advanced Company, Saudi Arabia. Dr. Khalil has authored and translated numerous books and scientific references in various geological fields. His expertise lies in managing exploration programs for ores in hard and sedimentary rocks, and evaluating mineral resource projects, including

gold, base metals, iron, manganese, bauxite, silica sand, limestone, marble, rock salt, clay, and mineral aggregates. He has supervised many master's and doctoral research projects at King Abdulaziz University. Dr. Khalil is a member of esteemed professional organizations such as the Egyptian Geological Society, the American Association of Petroleum Geologists (AAPG), the Saudi Geological Society, and the Dhahran Society of Earth Sciences. He is proficient in using a wide array of 3D modeling software, including ArcGIS, PETREL, SMT, LANDMARK, GEOPHRAME, Cyclog, Wellcad, and others, along with standard Office programs.



## **Dr. Mohamed Abdelwahab,**

is an accomplished geophysicist with over 25 years of experience in mineral exploration and geophysical methods. He holds a Postdoctoral Research Degree from the Department of Earth Sciences, Durham University, UK (2010), and another from the Institute of Geodesy & Geophysics, Chinese Academy of Sciences (2009). Dr. Ali earned his Ph.D. in Geophysics from the Technical University of Berlin, Germany, and Al Neelain University, Sudan (2007), a Master of Science in Geology/Geophysics from Yarmouk University, Jordan (2000), and a Bachelor of Science in Geology (Honours) from the University of Khartoum, Sudan (1994). Dr. Mohamed Abdelwahab specializes in advanced geophysical exploration techniques, including drone-based surveys and ground geophysics, particularly magnetic, induced polarization (IP), and very low frequency (VLF) electromagnetic methods. His expertise lies in integrating geophysical data for a wide range of exploration projects, making him a valuable asset in the field of geophysics and mineral exploration.



## **Khalid Zare Al-Ahmadi,**

is a seasoned geologist and geotechnical specialist with 25 years of experience in exploration and mining. He holds a Bachelor's Degree in Geology with a focus on Engineering Geology (1997). Throughout his career, Khalid has pursued advanced training, including courses in Aggregate, Environmental, and Economy (Helsinki, August 2002), Geotechnical Testing Analysis with GEOLAB software (Milan, October 2003), Value Engineering (Jeddah, May 2004), and Rock Mechanics (Aachen, December 2008). He has also completed specialized training in GIS, Remote Sensing, and Surpac 6.3.2. for Bulgha Mine (December 2011). Khalid is known for his expertise in drilling programs, geotechnical data analysis, and project management. He consistently delivers projects under budget and ahead of schedule, making significant contributions to successful exploration and mining operations.



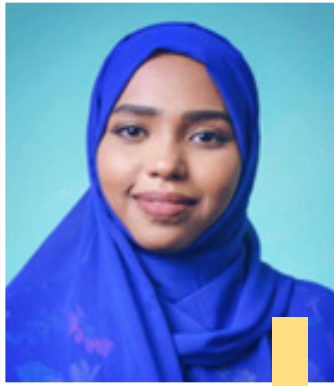
## **Omer Khalil,**

brings over 13 years of experience in gold exploration within the Arabian Nubian Shield. He holds a Bachelor of Science (Honors) Degree in Geology and Mining from the College of Natural Resource and Environmental Studies, Juba University. Omer specializes in resource estimation, 3D modeling, and data integration. He has successfully led exploration programs, managed extensive drilling operations, and ensured compliance with JORC standards throughout his career.



## **Abdelmageed Salih,**

is a consultant geologist and project manager with extensive expertise in exploration and resource evaluation. He holds an Honors Bachelor's Degree in Economic Geology & Mining from Red Sea University. Abdelmageed has successfully led numerous resource estimation projects for industrial metals and porphyritic copper, overseeing exploration initiatives from greenfield to brownfield stages. With a strategic vision for geology and exploration, he ensures technical excellence in resource reporting and feasibility studies.



## **Hagir Salah,**

is a geologist with a Bachelor's degree in Geology from Omdurman Islamic University. She has a solid foundation in project management, economic feasibility, resource estimation, and mineral reserves. Her technical expertise is enhanced by advanced training in Surpac, drilling techniques, and GIS/remote sensing systems. Proficient in geological data analysis and related software, she also possesses additional skills in photography and web development. Her experience is built on hands-on applications in geosciences, mining techniques, and data analysis.



## **Mohamed Musa Ibrahim Musa,**

is a Field Geologist and Geotechnical Specialist who holds a bachelor's degree in engineering geology from Red Sea University. He has a varied background in geological consultancy, geotechnical engineering, and materials testing. His professional experience includes roles at the At Sea Port Corporation, Constructional & Environmental Labs Co. Ltd, MAO-Manub Mining Company, and Soil Horizons Laboratory in Riyadh, KSA. His areas of expertise encompass geological mapping, drilling supervision, soil and rock logging, QC/QA processes, and materials engineering, with a strong proficiency in exploration and geotechnical analysis.



## **Ahmed Nasr,**

is an exploration geologist with five years of experience in the exploration of precious metals and industrial minerals. He has managed technical fieldwork related to exploration and post-drilling activities, including supervising drilling operations and measuring, studying, and describing samples, as well as preparing essential reports. On the administrative side, he is skilled in navigating relevant national platforms, including mining and the national geological database. Previously, he worked with the information archiving team at the Ministry of Industry and Mineral Resources and contributed to a project leveraging artificial intelligence for geological services in collaboration with the Geological Survey Authority and other organizations.



## **Abdoon Elfatih,**

is a senior exploration geologist with over 7 years of experience in precious and base metals exploration. He is currently pursuing a Master's degree in Economic Geology at the University of Khartoum, Sudan, and holds a Bachelor's degree in Geology from Omdurman Islamic University. Abdoon specializes in geological mapping, sampling, and core logging, with a strong focus on meticulous data analysis and resource evaluation to drive company objectives.

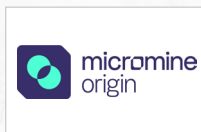
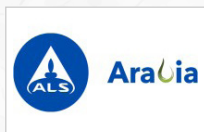
## Partners



## Clients



## Contractors





---

☎ 00966541100363    ✉ info@masharef.org    🌐 www.masharef.org

Kingdom of Saudi Arabia - Jeddah - Al-Muhammadiyah  
District - Prince Sultan Street - Building No. 6065 (S1)