



● COMPANY PROFILE

We read the ground. Every layer of it.

Geoscience consulting for the Kingdom's mining and water sectors: exploration, surveys, drilling, groundwater, testing, environment and training.

ASBAR Geosciences is a Saudi consultancy that turns fieldwork into evidence a decision can rest on.

We serve ministries, national companies and international institutions with geophysical and geological surveys, drilling and well logging, groundwater studies, radiological and NORM work, environmental work and training.

We are a Riyadh-based company of the Technology Experts group, built to give the Kingdom's mining and water sectors a geoscience partner that does its own fieldwork. Our teams plan the programme, run the surveys and the drilling, log the boreholes and take the samples themselves, so the data behind every report is data we collected and stand behind.

ASBAR builds on the geoscience work of the Technology Experts group, where its teams began as a division before becoming a company in its own right within the group.

That field record is long. Our wireline logging programme for the Ministry of Environment, Water and Agriculture is one of its longest-running technical programmes, and our projects reach the phosphate fields of the north, the gold prospects of the Arabian Shield and Saudi Aramco's operations in the Eastern Province.

Our environmental work covers permit applications, impact assessment, audit and rehabilitation planning for mining and industry, and our work supports the goals of Saudi Vision 2030.



Wireline logging at a water well



Monitoring-well installation

What our clients rely on.

Our own field capability

Survey instruments, logging units, drilling supervision and sampling teams, run by the people who interpret the results.

Environmental work, done by field people

Permit applications, impact assessment, audit and rehabilitation plans, prepared by the same team that works the ground.

A long record in the water sector

A long-running well-logging programme for the Ministry, the border monitoring-well programme, and studies of alternative water sources.

The backing of a scientific group

As a Technology Experts company, we work alongside the group's accredited laboratories and radiation-protection specialists, and with established international geoscience institutions.

How a question becomes an answer.

01

Define

Every programme starts with the question the client needs answered: where the water is, what the ground holds, what the site can safely carry. The survey is designed around it.

02

Measure

Our field teams survey, drill, log and sample under documented procedures, so every reading can be traced to where and how it was taken.

03

Analyse

Samples go to accredited laboratories; logs and survey data are processed, modelled and checked against the geology.

04

Report

We report plainly: what was measured, what it means and what it does not yet show, with maps and models the next decision can use.

Vision, mission and values.

VISION

To be the geoscience partner the Kingdom's mining and water sectors turn to first, and a Saudi name trusted in geoscience internationally.

MISSION

To give every client measured evidence about their ground, gathered in the field by our own teams, analysed to international standards and reported plainly, and to deliver it sustainably, with lasting value for our clients, our people and the Kingdom.

Integrity

We report what the ground shows, including what a client may not want to hear.

Rigour

Every reading is traceable, every method documented and every result checked before it reaches a report.

Safety and the environment

No measurement is worth an injury, and no site is left worse than we found it.

Saudi talent

We build Saudi geoscience capability in the field and through our training programmes.

Health, safety and the ground we work on.

Our crews work at remote desert sites, at drilling rigs and around naturally occurring radioactive material. We protect them with trained supervision, the right protective equipment and procedures applied on every site, and we give our people a secure workplace that encourages diversity and inclusion.

We keep the places we work in clean: waste and chemicals are handled to best practice, sites are left safe, and we share health and safety awareness with the communities around our work.

Every practice, one field team.

SERVICE 01

Mineral Exploration

We plan and run exploration programmes: generating targets, mapping the geology, sampling the ground and estimating what it holds, with geology, geochemistry and geophysics interpreted together.

- Target generation and mineral-system modelling
- Remote sensing and geophysics for exploration targeting
- Geological and structural field mapping
- Regolith mapping and ancient-workings reviews
- Geochemical sampling programmes, logging and QA/QC
- Petrographic services
- Resource estimation, technical audits and valuations
- Project planning, permitting and implementation
- Drilling management and on-site staff training

SERVICE 02

Surveys & GIS

Ground geophysical and geomatic surveys, and the GIS that turns them into decisions: acquisition, processing, databases, cartography and 3D/4D models of the terrain.

- Magnetic, electrical and electromagnetic surveys
- Ground-penetrating radar and gravity surveys
- Seismic surveys
- Aerial mapping and lidar acquisition
- Aerial and satellite imagery interpretation
- GIS needs assessment, planning and implementation
- Geodatabase design and development
- GIS data development, maintenance, updating and formatting
- Map creation and cartographic design
- Spatial data management and analysis
- 3D/4D terrain modelling
- Hydraulic and hydrological modelling

SERVICE 03

Drilling & Well Imaging

Exploration, water-well and geotechnical drilling with the full downhole record: cuttings and core described, the borehole logged with geophysical tools and imaged with the optical televiewer.

- Preliminary site assessment
- Rotary, diamond-core and reverse-circulation drilling
- Water-well drilling — air and mud rotary, down-the-hole hammer
- Monitoring-well installation
- Drilling in mine tailings
- Geotechnical and environmental mine-site drilling
- Shallow exploration screening and sampling
- Rock coring and overburden sampling
- Heap-leach sampling and mine-expansion investigations
- Geophysical well logging — natural and spectral gamma, density, caliper
- Optical televiewer imaging
- Video-camera inspection of water wells
- Core logging and borehole data interpretation

SERVICE 04

Groundwater

Hydrogeology for water supply, mining and monitoring: locating aquifers, drilling and testing wells, measuring levels and quality, and modelling how the water moves.

- Groundwater exploration and aquifer assessment
- Geo-electrical surveys (VES and ERT) for aquifer mapping
- Pumping, airlift and slug tests
- Water-level monitoring networks
- Water sampling and quality analysis
- Hydrological and hydraulic studies — catchments and flows
- Flood-risk and drainage-impact assessment
- Design of diversion and retention structures
- Hydrogeological and contaminant-transport modelling

SERVICE 05

Testing & Analysis

Geochemical, geophysical and radiological testing for the mining and water sectors, including the management and volume reduction of NORM waste.

- Sampling of water, soil, rock, sludge and aerosols
- Geochemical analysis — XRF, ICP-MS, isotope geochemistry
- Geochemical modelling, and certified reference materials for QA/QC
- Environmental geochemistry — water-rock interaction and heavy metals
- Well logging for groundwater, contamination, geothermal and hydrocarbon studies
- Water quality — chemical, radiological, bacteriological
- Soil characterisation and contamination testing
- Radiological analysis — radium, uranium, thorium, radon
- Spectral-gamma surveys and dose-rate mapping
- NORM investigation, treatment and volume reduction
- Radiological risk assessment and RESRAD dose modelling



A protected groundwater monitoring well

SERVICE 06

Environment & Rehabilitation

Permit applications, impact assessment and audit, and the plans that return disturbed ground to a stable, safe state.

- Environmental permit applications and renewals
- Environmental impact assessment
- Environmental audits
- Environmental management plans and reporting
- Rehabilitation plans for degraded sites
- Contaminated-soil treatment
- Environmental consulting for mining and industry

SERVICE 07

Training

Courses built by practitioners — field mapping, geophysical processing and inversion, well logging and GIS — delivered in partnership with international geoscience institutions, online or face to face, and tailored to each organisation.

- Basic concepts of geology; geology in the field
- Field investigation — boreholes, surveys and trenches
- Superficial deposits and their interaction with human activity
- Rock alteration
- Geological maps — use, design, limitations and insights
- Engineering geology and geotechnics of the subsurface
- Geology and economics of mineral resources
- Analytical characterisation of rocks and minerals
- Applying geophysical methods
- 2D and 3D electrical resistivity — acquisition, processing, interpretation
- Electromagnetic data — acquisition, processing and interpretation
- 2D and 3D GPR processing
- Gravity and magnetic data — processing and modelling
- Oasis montaj (Geosoft) for geophysical and geological data
- Basics of geophysical well logging and borehole imaging
- Joint inversion of ERT and TEM data sets
- Remote sensing applied to geology and land movement
- Geostatistics for interpolation in geosciences
- Surveying with GNSS; advanced network adjustment and geoid modelling
- Advanced GIS processing and applications
- Geoscientific document management



Drill core laid out in its tray for logging and sampling

A selection of our projects.

PROJECT	CLIENT	LOCATION	DISCIPLINE
Wireline logging of the Ministry's water wells	Ministry of Environment, Water and Agriculture	Across the Kingdom	● Geophysics & Imaging
NORM management services	Saudi Aramco	Dhahran	● Radiological & NORM
Supervision of border monitoring wells	Ministry of Environment, Water and Agriculture	Across the Kingdom	● Groundwater
Alternative and future water sources in areas of low radioactivity	Ministry of Environment, Water and Agriculture	Across the Kingdom	● Groundwater
Supplementary radioactivity study, AlUla	BRGM	AlUla	● Radiological & NORM
Hydrogeological study, southern AlUla	BRGM	AlUla	● Groundwater
Hydrogeological works, Ar Rjum	Ma'aden Gold and Base Metals	Arabian Shield	● Groundwater
Radiological baseline survey, Ar Rjum gold project	Ma'aden Gold and Base Metals	Arabian Shield	● Radiological & NORM
As-Siham ground magnetic survey	Ma'aden Exploration	Arabian Shield	● Geophysics & Imaging
Hydrogeological study, Hawiyah prospect	Gold & Minerals Co.	Arabian Shield	● Groundwater
Mahd open-pit hydrogeology drilling programme	Ma'aden Gold and Base Metals	Mahd Ad Dahab	● Groundwater
NORM volume reduction, Dhahran water utility	Saudi Aramco	Dhahran	● Radiological & NORM

PROJECT	CLIENT	LOCATION	DISCIPLINE
Phosphate 3 supplementary fieldwork, Al Jalamid	SOFRECO	Al Jalamid	● Geophysics & Imaging
Radiological survey, phosphogypsum site	Ma'aden Wa'ad Al Shamal Phosphate Company	Wa'ad Al Shamal	● Radiological & NORM
Radiological survey, Bir Tawilah & Jabal Ghadarah	Ma'aden Gold and Base Metals	Arabian Shield	● Radiological & NORM
Water-well drilling and testing	Arabian Castles for General Contracting	Saudi Arabia	● Groundwater
Groundwater exploration and assessment, Al Majma'ah compound	Arabian Castles for General Contracting	Al Majma'ah	● Groundwater
Operation and maintenance of central laboratories	Ministry of Environment, Water and Agriculture	Riyadh	● Laboratories
Geological studies — two model mining complexes, Al Jouf	Ministry of Industry and Mineral Resources	Al Jouf	● Mining & Geology
Radioactivity in irrigation water and agricultural products	Ministry of Environment, Water and Agriculture	Across the Kingdom	● Radiological & NORM
Waste management in water-treatment plants	Ministry of Environment, Water and Agriculture	Across the Kingdom	● Radiological & NORM
Geotechnical borehole logging for the Riyadh Metro	Riyadh Metro geotechnical contractors	Riyadh	● Geophysics & Imaging
Medical-geology mapping, Al Madinah and Hail	Saudi Geological Survey	Al Madinah and Hail	● Mining & Geology
Training in geophysical log interpretation	UNDP programme at the Ministry of Environment, Water and Agriculture	Riyadh	● Geophysics & Imaging

● PROJECTS

Work across the Kingdom.



● CLIENTS

Chosen by ministries and mine operators.





Tell us about the ground and the question.

Our field team will come back with a scope, a method and a programme.

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