



**CORDILLERA**  
GEO-SERVICES

# Cordillera Geo-Services, LLC

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## Company Overview

Cordillera Geo-Services (CGS) is certified as a Texas Historically Underutilized Business (HUB), a Minority-Owned Business Enterprise (MBE), and a Disadvantaged Business Enterprise (DBE) company. At CGS, we understand the issues sustaining our civilization and future generations. We aim to apply geo-scientific and engineering knowledge and expertise to find and use the Earth's natural resources, foresee and avoid natural hazards, and contribute to developing safe infrastructure to improve human lives.

## Our Markets

We offer a wide range of professional geoscience services, such as geological and geophysical, to several markets, including mining, energy, environmental, water, construction, engineering, and cultural resources management.

## What are Geological Services?

Geological services provide geological information for various purposes and types of projects. Geological information can benefit projects involving mineral exploration, petroleum and gas exploration, groundwater exploration, environmental assessments, cultural resources management, and geotechnical and civil engineering design. Hence, geological services can be used in various industries such as engineering and construction, mining, environmental compliance, groundwater exploration, water resources management, design and construction of renewable infrastructure, and oil and gas extraction. Geological information is precious to decision-makers because it provides data that professional geologists have carefully analyzed.

## Typical Geological Services and Applications

- Soil Mapping
- Geologic Surveying
- Geologic Assessment
- Basic Desk Geological Report
- Site-Specific Desk Geological Report
- Geotechnical Site Investigation for Residential and Commercial Land Development
- Geologic Hazard Studies
- Geological Mapping
- Geological Modeling
- Mineral Resources Evaluation
- Geological Mining Studies
- Geoarchaeological Surveying
- Mineral exploration with geophysical methods
- Groundwater exploration
- Bedrock/Karst mapping
- Rippability studies
- Fracture Zone Detection
- Weathered Zone Detection
- Seismic Site Characterization
- Geologic Logging
- Petrographic Rock Analysis
- Borehole Drilling Support Services
- Rock Sampling for Petrographic, Geochemical, Mineral Assaying, and Geochronological Analysis
- Interpretation and Integration of Petrographic, Geochemical, and Geochronological Data
- Geographic Information Systems (GIS) and Georeferencing

## What are Geophysical Services?

Geophysical services are a suite of non-invasive, non-destructive remote sensing methods that explore the Earth's interior (shallow or deep), particularly seismic (reflection, refraction, surface waves), electrical, electromagnetic, magnetic, gravity, and radioactivity methods. Exploration geophysics is of particular commercial interest. Exploration geophysics deals mainly with applications of geophysical techniques to solve geothermal, groundwater, hydrocarbon, and mineral exploration challenges and

targets of engineering, archaeological and environmental interest residing at shallower depths. CGS has the knowledge and expertise to assist you in your projects. CGS offers numerous geophysical testing services to various sectors, including energy, environmental, mining, water, engineering, construction, and cultural resources management.

## Typical Geophysical Targets and Applications

### Geological Problems

- Caves, voids, and sinkhole detection
- Subsidence, cavity, and karst mapping
- Bedrock profiling
- Shallow geological mapping
- Locating fractures, faults, and other shallow subsurface structures
- Archaeological and Forensic problems

### Archaeological Investigations

- Excavation planning
- Unmarked grave locations
- New cemetery plot layouts
- Geoarchaeological surveys
- Geomorphic investigations
- Forensic evidence locating

### Engineering Problems

- Drainage tiles mapping
- Clandestine tunnel detection
- Subsurface Utility Engineering (SUE) applications:
  - Locating water lines
  - Metallic and non-metallic utility mapping
- Construction applications:
  - Location of buried foundations and basements
  - Void detection
  - Locating beams
  - Bridge deck surveys
  - Floor surveys
- Concrete applications:
  - Concrete slab scanning and imaging
  - Measure slab thickness
  - Find rebar, post-tension cables, conduits, and nonmetallic objects
  - Void detection
  - Clearing of boring locations

### Environmental Problems

- Environmental site assessment
- Contaminant plume mapping
- Landfill, waste pits, and trenches delineation
- Water table mapping
- Mapping groundwater pollution
- Locating Underground Storage Tanks (UST) and drums

### Mineral Exploration Problems

- Metallic mineral exploration and mapping
- Sand and Gravel (aggregates) exploration mapping
- Mine heap leach characterization and optimization
- Contaminant plume mapping
- Time-lapse environmental monitoring
- Rock Quality Designation (RQD) mapping with geophysical imaging
- Identification of abandoned mine shafts and underground galleries
- Identification of shallow geotechnical hazards
- Subsurface geological structure detection and mapping
- Overburden mapping
- Groundwater exploration for mining operations

## Contact Person

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### Government certifications:

- HUB
- DBE
- MBE