

***STATEMENT
OF
QUALIFICATIONS***

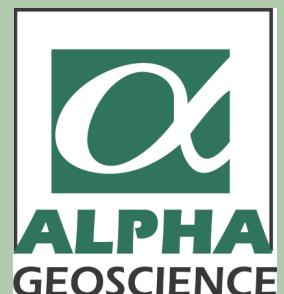
ALPHA GEOSCIENCE

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ALPHA GEOSCIENCE

History and Background

Alpha Geoscience is a consulting firm with its principal office located in Clifton Park, NY. Alpha was founded in 1991 and specializes in geologic, hydrogeologic and environmental consulting. Alpha's philosophy is to provide high quality, individualized service at a competitive price.

The professional staff at Alpha has extensive expertise in the geological, hydrogeological and chemical sciences. Our professionals apply their considerable experience to understand client's needs and to craft a solution tailored to meet those needs. Alpha's client base includes industry, government, commercial, and private clients.



SERVICE AREAS

- Mining Services
- Water Resources
- Energy Industry
- Water Treatment
- Environmental Projects
- Expert Testimony and Opinion
- Geotechnical and Engineering Geology

CAPABILITIES

- Geology and Hydrogeology
- Regulatory Knowledge and Negotiations
- Project Planning and Strategy
- Project Management and Coordination
- Field Data Collection and Oversight
- Data Analysis and Interpretation
- GIS and Data Management
- Laboratory Data Validation

ENERGY SERVICES

Alpha Geoscience provides geological, hydrogeological, and environmental services to the oil and gas industry.

Product Storage and Transportation

- Site selection & development
- Hydrogeologic analysis of cavern integrity
- Product leakage detection and evaluation

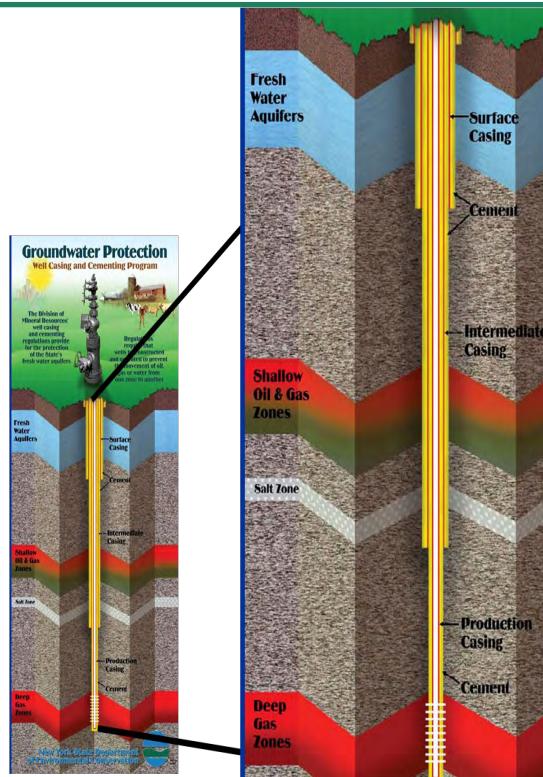
Resource Potential Evaluations

- Geologic analysis
- Identification of stratigraphic formations

Hydrogeologic Investigations

- Assessment of base-line (pre-drilling) conditions
- Monitoring of post-drilling conditions
- Water source evaluation and development

Expert Opinions & Testimony



Environmental Impact Assessments

- Surface water
- Ground water
- Wetlands
- Cultural resources

Property & Environmental Damage Claims

- Forensic evaluations
- Sinkhole evaluation
- Stray gas evaluations
- Ground water contamination investigations
- Change of conditions

Permit Support

- Pre and post-condition evaluations
- Tailings and waste disposal support
- Surface and ground water mitigation strategies

MINING SERVICES

Alpha Geoscience provides services to the mining industry for conventional surface and subsurface mining and for solution mining.

Mineral Resource Investigations

Salt ♦ Aggregates ♦ Industrial Minerals ♦ Precious Metals ♦ Coal

- Production potential evaluations
- Environmental impact studies
- Mining hazard analysis
- Shaft analysis



Hydrogeologic Investigations

- Geological and hydrogeologic investigations of potential cavern sites
- Assessment of existing and post-mining ground water and surface water conditions
- Development of process water sources
- Cavern integrity testing and analysis

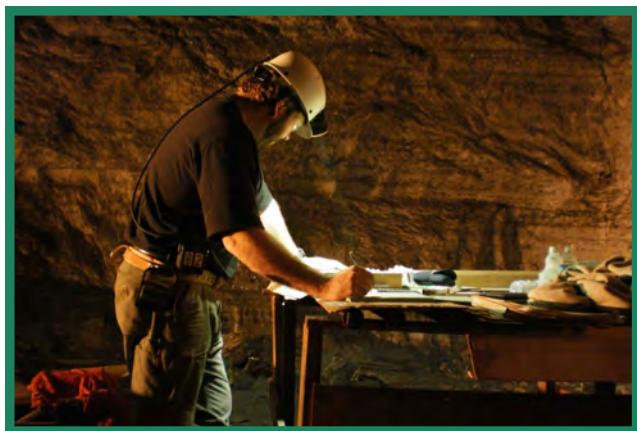
Property and Environmental Impact Claims

- Forensic evaluations
- Sinkhole evaluations
- Stray gas evaluations
- Ground water contamination assessments



Water Inflow and Mine Flooding

- Forensic investigations
- Mitigation and control of mine inflow
- Aquifer and water supply impact evaluations
- Sinkhole evaluation, mitigation and control



Permitting and Regulatory Support

- Aggregate mines
- Underground mines
- Gas storage operations

Expert Opinions & Testimony



WATER RESOURCES

Alpha Geoscience provides services ranging from initial scoping of client needs through investigation, development, rehabilitation and gaining regulatory approval.

Ground Water Supply and Development

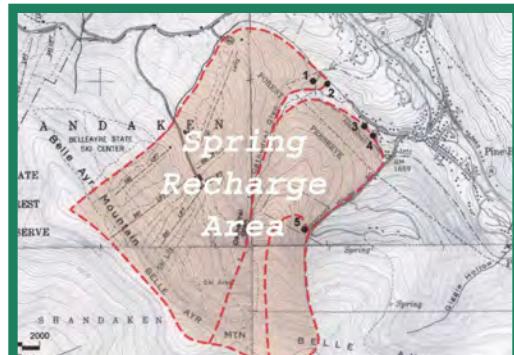
- Well field planning and well site selection
- Drilling services management
- Test well and production well evaluations
- Geophysical investigations
- Water quality testing and evaluation
- Surface water influence (GWUDI)

Aquifer Studies

- Aquifer identification
- Aquifer evaluations for unconsolidated soil and bedrock
- Fracture trace analysis
- Recharge area investigation
- Water budget analysis
- Safe yield analysis

Surface Water Supply Evaluations

- Watershed delineations
- Stream flow gauging
- Water quality testing and evaluation



Spring Water Evaluation and Development

- Spring yield and quality monitoring
- Recharge area delineations
- Spring water protection studies



WATER RESOURCES

Well Performance and Redevelopment

- Well and well field capacity evaluations
- Well field monitoring programs
- Well fouling evaluations
- Selection of redevelopment methods

Protection Studies and Protection Plans

- Wellhead protection plans
- Source water assessment
- Delineation of aquifer protection zones

Ground Water and Surface Water Resource Contamination

- Hydrocarbon, hazardous waste, and salt contaminant source and extent investigations
- Contaminant migration evaluations
- Remediation of ground water contamination
- Water resource and property damage claims

Permit Support

- Preparation of permit applications
- Regulatory reporting



Expert Opinions & Testimony

- Environmental and property damage claims
- Water resource losses claims
- Change of conditions
- Water quality



ENVIRONMENTAL SERVICES

Alpha Geoscience is experienced in site investigation, monitoring, and remediation.

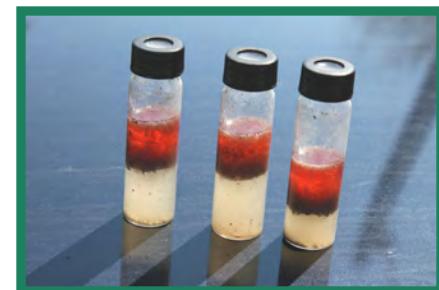
Site Investigations and Remediation

- Investigate soil, rock, ground water, and surface water impacts
- Petroleum spill investigation and remediation
- Petroleum storage tank removal
- Hazardous waste site investigation
- Brownfield assessment and remediation
- Soil vapor intrusion evaluation



Environmental Site Assessments

- Phase I ESA
- Phase II Subsurface Investigations



Hydrogeologic Studies

- Wetlands evaluations
- Baseline water quality studies
- Landfill siting and planning

Environmental Chemistry and Data Validation



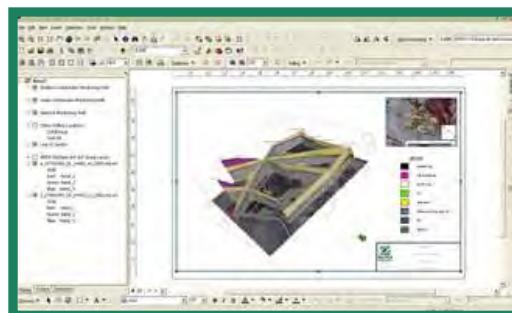
Computer Modeling

- Regional & local hydrogeologic models
- Contaminant fate & transport
- Ground water mounding analysis
- GIS and 3D visualization

Property & Environmental Damage Claims

Expert Opinion & Testimony

Cultural Resource Studies



GEOTECHNICAL SERVICES

Alpha Geoscience provides geotechnical and engineering geology services in the following areas.

- **Dam and Dike Stability and Failure Evaluations**
- **Soil and Bedrock Investigations**
- **Expert Opinion and Testimony**
- **Slopes and Soil**



WATER TREATMENT SERVICES

Alpha Geoscience employees provide operational services for brine treatment plants built by the SWS LLC team.

- **Operators of Treatment Systems for Brine, Flowback from Hydrofracturing, and Production Water from Oil and Gas Wells**



EXPERT OPINION AND TESTIMONY

Alpha Geoscience offers the following expert opinion and testimony services.

- **Environmental and Property Damage Claims**
- **Environmental Impacts to Water Resources from Proposed Projects, Developments, and Construction**
- **Mine Flooding and Ground Water Inflow Issues**
- **Environmental Impact Statement (EIS) Support**
- **Land Subsidence and Sinkholes**
- **Mineral and Water Resource Losses and Damages**
- **Geologic and Hydrogeologic Issues**
- **Forensic Evaluations to Address Causation and Timing**
- **Petroleum Spills**
- **Issues Related to Hazardous Waste Contamination**



Service Areas

The following is a list of services offered by Alpha Geoscience and the areas of expertise of key senior personnel.

	Sam Gowan	Steven Trader	Michael Palleschi	Kevin Phelan	Jean Neubeck	John Nadeau	Scott Hulseapple	Ed Crawford	Jackie O'Neal	Don Anné	Matt Dupee	Trevor Gowan	Josh Gowan	Maureen Piel
Water Quality/Aquifer Analysis	X	X	X	X	X	X	X				X	X	X	X
Natural Gas Support Services	X	X		X	X	X	X				X			
Surface Water Analysis	X	X	X	X	X	X	X		X		X	X	X	X
Environmental Site Assessments (Phase I's)				X	X	X	X						X	
Siting/Feasibility Studies	X	X	X	X	X									X
Environmental Impact Statements	X	X		X	X									X
Landfills/Solid Waste			X	X	X	X	X				X	X		X
Hazardous Waste	X		X	X	X			X						
Remedial Investigation/Remediation	X	X	X	X	X	X	X				X	X	X	X
Petroleum Investigation & Remediation	X	X	X	X	X	X	X				X	X	X	X
Mining Hydrology/Permit Support	X	X	X	X			X				X	X	X	X
Mineral Exploration, Evaluations and Development	X	X									X			
Engineering Geology	X			X										
Expert Testimony/Opinion	X	X	X	X	X	X								
Forensic Site Analysis & Investigation	X	X	X	X	X	X								
Permitting/Regulatory Compliance	X	X	X	X	X	X	X				X	X	X	X
Geological /Hydrogeologic Field Investigations	X	X	X	X	X	X	X				X	X	X	X
Air Photograph Analysis	X	X	X					X			X			
Computer Modeling & Simulation			X				X	X						
GIS—Geographic Information Systems							X	X			X		X	
Water Treatment Services	X						X		X	X				
Chemistry and Data Validation				X	X					X	X			X
Water Treatment Plant Construction and Operations	X						X		X	X				
Ground Water Mounding Analysis	X	X					X	X			X			
Soil Vapor Intrusion			X	X	X		X						X	

Contacts

The following is a list of contacts for each of the services listed on the previous pages. We invite you to contact any of these individuals at the respective phone number, or by email.

Contact Information

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