

Dr. David L. Mitchell, Ph.D.

Curriculum Vitae

Personal Information

Dr. David L. Mitchell, Ph.D.
Consulting Forensic Geoscientist/Meteorologist
Member – American Meteorological Society
Associate Member – American Bar Association
Certified Professional Geoscientist, *AAPG Certification #26*
Licensed Geoscientist – *Texas Board of Professional Geoscientists License #1330*
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Summary of Qualifications

Dr. David L. Mitchell is an authority on the numerical modeling of geophysical and atmospheric data with a **Doctorate in Meteorology** from Purdue University. Dr. Mitchell has over 28 years of technical modeling experience in industry and consulting. Dr. Mitchell is a **Court Qualified Expert in Air Modeling and Forensic Meteorology**. His business experience includes various research, project management and technical consulting positions with Conoco, Getty Oil Company, Texaco, Tenneco, British Petroleum, Leviathan Gas Pipeline LLP and IBM Corporation. Dr. Mitchell has extensive knowledge of **Forensic Meteorology** and has published his research results on the modeling of atmospheric stability and convection. Dr. Mitchell is an expert in the field of **Air Pollution Meteorology and Groundwater Pollution Modeling** with over 28 years of experience with projects and litigation cases requiring the mathematical modeling of wave propagation in porous elastic media, geophysical and geological 2D and 3D reservoir modeling, atmospheric fluid dynamics and air dispersion modeling. Dr. Mitchell is a Licensed Geophysicist in the State of Texas, Certified by the Texas State Board of Geoscientists and is an expert in the areas of **Geophysical Modeling and Geological Modeling** for the characterization of reservoirs and the migration of fluids. He is an expert in the field of reservoir characterization and modeling with extensive knowledge of groundwater modeling techniques and the transport of contaminants within aquifer systems. He has extensive litigation experience with the **Forensic Geosciences** and has provided forensic litigation support for criminal and civil investigations and insurance cases involving accidents, release of toxic pollutants, personal injury and property damage. Dr. Mitchell is a member of the **American Association of Petroleum Geologists**, the **American Meteorological Society**, the **Air and Waste Management Association**, and the **National Association of Environmental Professionals**. Dr. Mitchell is also an **Associate Member of the American Bar Association** with affiliation with the Litigation Division and is a **Certified Geophysicist** and a **Licensed Professional Geoscientist**.

Degrees

Ph.D., Atmospheric Science and Meteorology, Purdue University 1976

M.S., Physics, Purdue University 1974

B.S., Physics and Mathematics (Dean's Distinguished List), Baylor University 1972

Dissertation

A Theoretical Investigation of Atmospheric Convective Modes as a Function of Rayleigh Number, Prandtl Number and Eddy Anisotropy; 1977, Meteor. Soc. Japan, Vol. 55, No. 4, 341 – 363.

Certification and Honors

Certified Professional Geoscientist, Licensed Geoscientist – Texas Board of Professional Geoscientists

Associate of the Scientific Research Society of North America

Sigma Pi Sigma, National Physics Honors Society

Distinguished Expert, National Forensic Center

Professional Experience And Expertise

Forensic Meteorology Services for the Legal Profession

Industrial Air Pollution Expert Witness

Toxic Tort Strategy for Plaintiff or Defense/Environmental Air Pollution

Insurance Industry Services including Meteorological Re-Construction of Weather Events

Expert Witness Testimony/Litigation Consulting/Air Pollution Meteorology

Air Quality Computer Modeling/Air Dispersion Analysis/Hazardous Plume Releases

Meteorological Data Acquisition, Processing and Analysis (Domestic and International)

Aviation Meteorology/Visibility Studies/Wind Analysis

Observational Field Programs/Air Sampling/Air Quality

Atmospheric Dynamics and Severe Storm Analysis

Climate Studies/Weather Patterns/Flood History

Historical Rainfall Analysis/Flood Events

Short Range and Long Range Weather Forecasting

Visibility Accidents/Smoke/Ground Level Fog

Force Majeure Cases/Acts of God and Unusual Weather Phenomena

Historical Climate and Weather Analysis/Hurricane and Tropical Storm Occurrences

Class Action Toxic Tort Cases

Forensic Geology and Geophysical Services for the Legal Profession

Industrial Groundwater Pollution Expert Witness
Toxic Tort Strategy for Plaintiff or Defense/Environmental Surface and Groundwater Pollution
Insurance Industry Services including the Mapping of Surface and Groundwater Contamination
Expert Witness Testimony/Litigation Consulting/Forensic Hydrology
Groundwater Computer Modeling/Aquifer Systems Analysis/Hazardous Spill Releases
Geological and Geophysical Data Acquisition, Processing and Analysis (Domestic and International)
Geological and Geophysical Mapping of Reservoirs
Observational Field Programs/Reflection and Refraction Seismology
Forensic Seismology/Passive and Non Intrusive Seismic Investigations
Forensic Analysis of Oil and Gas Operations and Operator Performance
Independent Analysis of Oil and Gas Reserves
Expert Analysis of Oil and Gas Properties
Marine and Land Seismic Operations (Domestic and International)
Value Analysis of Proprietary Geophysical and Geological Data
2D and 3D Reflection Seismology Modeling and Analysis
Fluid Dynamics and Reservoir Analysis
Toxic Fluid Migration
Class Action, Toxic Tort and Force Majeure Cases

Business Experience

1976 – 1978	Conoco, Inc., Research Scientist.
1978 – 1984	Getty Oil Company/Texaco, Research Department Manager
1984 – 1988	Tenneco Oil Company, Senior Specialist.
1988 – 1992	British Petroleum, Senior Staff Specialist.
1992 – Present	GEO Associates/MET Associates, Managing Director and Consulting Forensic Geoscientist/Meteorologist.

Litigation Support Experience

Dr. Mitchell has provided technical support and expert testimony on issues of scientific data and mathematical modeling to the Petroleum Industry, the Insurance Industry and the Legal Profession in the area of Forensic Geosciences. Forensic Meteorology litigation cases include providing expert witness support and testimony for Meteorological Data Analysis, Air Pollution Analysis and Modeling and Weather Event Re-Construction cases both Domestic and International. Forensic Geosciences litigation cases include groundwater modeling and analysis including reservoir characterization for the migration of fluids. Litigation support services and expert witness testimony for civil and criminal investigations and insurance industry cases (both plaintiff and defendant) involve Groundwater Pollution and Data Analysis, Forensic Geology and Geophysics, Hydrology Modeling, and Forensic Meteorology including Air Quality, Air Dispersion Modeling, Weather Event Re-Construction and Force Majeure cases.

Litigation Case examples include:

- 1) Multiple cases involving Forensic Geophysical Analysis including geophysical and geological analysis and 2 Dimensional and 3 Dimensional subsurface mapping modeling.
- 2) Multiple cases involving Air Dispersion Modeling of Chemical Pollutants/Particulate Matter and Weather Wind Profile analysis in defense of petrochemical facilities being sued by surrounding neighborhoods due to Accidental Chemical Releases.
- 3) Weather Pattern Re-Construction and analysis of Historical Rainfall data in an urban setting in defense of commercial building owner being sued due to Flooding occurrences resulting in property damage.
- 4) Re-Construction of Weather Conditions and Wind data related to the occurrence of Dense Ground Fog and Reduced Visibility conditions resulting in a major, Multi-Vehicle Freeway accident and personal injury.
- 5) Historical Wind Data analysis and Air Quality Modeling in support of a Class Action Toxic Tort suit brought by a rural subdivision downwind of a polluting industrial complex.
- 6) Numerous Forensic Meteorology cases involving *Force Majeure* and the Re-Construction of Weather Conditions occurring at the time of an Accident, Injury or Criminal Action.
- 7) Modeling and Analysis for multiple cases involving Leaking Railway Cars and Industrial Tanks creating Hazardous Spills and Releases of Hazardous Pollutants into the Atmosphere.
- 8) Numerous cases requiring Air Dispersion Modeling Analysis and Forensic Meteorology Investigation to determine concentration levels of Smoke and Particulate Matter (PM10, PM2.5) during industrial operations and accidents.
- 9) Forensic Geosciences litigation cases include groundwater modeling and reservoir characterization for the migration of fluids.

Litigation Case List and References Provided Upon Request

Professional Affiliations

American Meteorological Society
American Association of Petroleum Geologists
National Association of Environmental Professionals
Air and Waste Management Association
Society of Exploration Geophysicists
Scientific Research Society of North America
National Physics Honor Society
American Bar Association, Associate Member Litigation Division

GEO Associates

Fee Schedule and Retainer Agreement

- **Billable Time**

Billable time will be considered any time related to a case or assignment beyond an initial telephone consultation. **Time will be billed at \$200 per hour.** Billable time includes but is not limited to gathering data, reviewing data or documents, writing reports, expert testimony, waiting time prior to and during testimony, preparation for testimony, reviewing and correcting deposition transcripts, travel time (portal to portal), telephone and in-person consultations, and on-site investigations.

- **Billable Expenses**

Any out-of-pocket expenses may be considered billable. These include, but are not limited to, photocopying charges, telephone calls, travel (travel by car is calculated by the IRS mileage allowance), charges for data and materials, and shipping charges.

- **Retainer**

Work will commence after receipt of a replenishable retainer, with a **minimum initial deposit of \$3500** for all Forensic Geosciences cases including groundwater pollution modeling and air dispersion modeling cases. This retainer will be credited against the final bill. All work and testimony must be paid for in advance. If expert testimony is requested, a retainer of \$1000 must be received at least 5 business days in advance of the scheduled testimony. If travel by air is required, the retainer amount shall be \$2000 and must be received at least 5 business days in advance. You will be billed against the retainer. **GEO Associates** will refund, or invoice additionally, depending on the time and cost expended.

- **Cancellations and Late Charges**

Cancellation of courtroom or deposition testimony with less than 24 hours notice shall result in billing of 1 hour plus any costs that were incurred. All invoices are due upon presentation. Past due invoices over 30 days will incur a 5.0% additional charge per month.

- **Estimates & New Assignments**

Estimates for time and expenses are gladly provided upon request. Requests for work to be done should be submitted in writing and mailed with the initial retainer and a signed copy of this fee schedule. Checks should be made payable to **Dr. David L. Mitchell, GEO Associates, P.O. Box 70, Dayton, Texas, 77535-0070.** (Tax ID 465-80-0091)

The fees and conditions stipulated here are subject to change. A summary of services provided by **GEO Associates** may be found at www.geoassociates.net, or by contacting **Dr. David L. Mitchell, Consulting Forensic Geoscientist** at mitchelldl@geoassociates.net.

I have read and agree to abide by the above fee schedule for work done by **GEO Associates** on the case of:

Print Name: _____

Company/Firm: _____

Signature & Date: _____