A.J. DAVIDOFF LLC

Geologic and Geophysical
Forensic Consulting and Expert Witness Services

ANDREW J. DAVIDOFF, Ph.D., PG

PROFESSIONAL PROFILE

Forensic geologist and geophysicist specializing in technical investigations, expert reports, and testimony for legal and regulatory matters. More than 30 years of international experience in oil and gas exploration, field development, seismic interpretation, and subsurface analysis, with expertise in injection wells, induced seismicity, subsurface trespass, aquifer contamination, landslides, reserves, and development disputes. Managing Partner of A.J. Davidoff LLC and a Texas-licensed Professional Geologist.

PROFESSIONAL EXPERIENCE

2024 to Present — A.J. Davidoff LLC
Managing Partner

Dr. Davidoff specializes in conducting technical investigations and analyses, synthesizing complex data into comprehensive reports, and offering expert testimony crucial for resolving disputes and legal matters within the realms of geology and geophysics. His expertise encompasses both international and domestic deep-water exploration, including the Gulf of America, as well as the generation of potential drilling locations, both offshore and onshore, spanning from arid deserts to lush tropical regions. Furthermore, he brings valuable proficiency in field development planning, integrating geological, geophysical, and reservoir engineering data to devise and execute effective Field Development Plans (FDPs). Proficient in both 2D and 3D seismic interpretation techniques, He possesses broad-ranging experience across various geological and geophysical domains, including surface and subsurface features, seismic activities, river processes, and geothermal resources, among others.

- General Geology
- Oil and Gas Exploration
- Field Development
- Implied Covenants
- Duty to Develop
- Subsurface Trespass
- Injection Wells
- Development Wells
- Reserves and Reserve Audits
- Unitization
- IRS disputes and SEC violations
- Stray Gas / Aquifer Contamination
- Seismology
- Seismic Surveys
- Seismic Interpretation
- Earthquakes
- Earthquakes due to Injection
- Geothermal Resources
- Slope Failures/Landslides
- Riparian/Fluvial Geology
- Erosion
- Global Warming/Climate Change

Not Retained

2025 to Present — ACS Engineering & Safety
Associate
Through my role at ACS Engineering & Safety, I assist in resolving disputes where geologic and geophysical evidence plays a central role. From seismicity linked to injection wells to erosion, slope stability, or field development, I combine subsurface knowledge with advanced interpretation techniques to deliver fact-based insights. My focus is on technical accuracy, effective communication, and supporting clients in high-consequence legal and regulatory matters.

2024 to 2025 — DJS Associates
Associate
As an Associate with DJS Associates, I provide expert witness services in geology and geophysics, contributing to technically rigorous investigations and clear, defensible opinions. My work often involves seismic interpretation, subsurface trespass, aquifer contamination, and landslide analysis: areas where scientific clarity can make or break a legal argument. Whether the issue lies in the rock record or the reservoir, I help legal teams untangle complex subsurface data and present it in terms a jury can understand.

2020 to 2024 — Exigent Group Limited
Associate
During his tenure, Dr. Davidoff provided technical investigations, analyses, and reports to resolve disputes in geology and geophysics. Notable expertise includes deep-water exploration in the Gulf of Mexico, offshore and onshore prospect generation, and field development planning. Dr. Davidoff specializes in integrating geologic, geophysical, and reservoir engineering data for effective plans. Proficient in 2D and 3D seismic interpretation, he possesses a broad knowledge of surface and subsurface geology, river processes, landslides, wastewater-induced seismicity, and geothermal resources.

2022 to 2023 — Geothermal Core, Inc.
Founder/CTO
Dr. Davidoff founded Geothermal Core Inc. in collaboration with Geothermal Development Corporation and Edge196. As Chief Technology Officer, Dr. Davidoff developed strategic vision and technical strategies for implementing affordable industrial and community-scale electricity projects in Texas and the Gulf Coast.

2021 to 2023 — Geothermal Development Corporation
Founder/CTO
At Geothermal Development Corporation, Dr. Davidoff laid the technological foundation and formulated industrial and community-scale electricity generation strategies from low-enthalpy geothermal resources in Texas and the Gulf Coast.

2017 to 2020 — Schlumberger SIS
Consultant/Geophysicist
At Schlumberger SIS, Dr. Davidoff served as a Consultant/Geophysicist, providing expertise to exploration and depth imaging teams. He verified the Full Waveform Inversion (FWI) velocity models by aligning them with tectono-stratigraphic frameworks and well velocity data. Additionally, he interpreted extensive 3D

Not Retained

seismic data covering over 25,000 square kilometers for exploration, velocity model building, and depth migration. He also conducted documentation, workshops, and presentations for Schlumberger and client teams, mentoring and training junior geoscientists in geology and geophysical interpretation. Notable projects included exploration efforts in Kuwait Bay and shallow-water and deep-water imaging projects in the Northern and Southern Gulf of Mexico and the Nile Delta.

2014 to 2016 PetroCeltic/Sonatrach/Isarene Groupement, Ain Tsila Field, Illizi Basin, Algiers,
Consultant/Lead Geophysicist
Dr. Davidoff served as a Consultant/Lead Geophysicist for PetroCeltic in Algeria. In this role, he provided specialized expertise and leadership for developing the Ain Tsila Field, a significant gas reservoir in the Southern Illizi Basin. As part of a joint venture between PetroCeltic, Enel, and Sonatrach, He was responsible for overseeing all geophysical aspects of the project. This included managing a 24-well drilling program to meet the initial gas production requirements.

2013 to 2014 Pertamina Indonesia
Consultant/Advisor
At Pertamina, Dr. Davidoff served as Geophysical Advisor to the Director for Upstream Operations in Indonesia. In this role, he played a pivotal part in the peer review team. His responsibilities involved conducting comprehensive assessments of Pertamina's core fields, which accounted for 80% of their production. He provided valuable recommendations to enhance production levels and success rates, particularly focusing on development strategies and near-field exploration initiatives.

2012 to 2013 PTTEP Thailand
Senior Geophysical Advisor
At PTTEP Thailand, Dr. Davidoff was the Senior Geophysical Advisor, reporting to the Vice President of Geophysics. He played a crucial role in mentoring and training a team of 35 junior and senior geophysicists. His responsibilities included overseeing interpretation projects such as the GSB New Zealand and Block 65 Oman, which involved analyzing vast amounts of 3D and 2D seismic data. Additionally, he advocated for adopting and developing training programs for advanced geophysical techniques, including seismic stratigraphy and seismic geomorphology, attribute analysis, and basic seismic interpretation.

2010 to 2012 Vegas Oil and Gas, Egypt
Geophysics Manager: Petroamir and Petrosafwa JVs
As the Geophysics Manager at Vegas Oil and Gas in Egypt, Dr. Davidoff oversaw all Petroamir and Petrosafwa Joint Ventures (JVs) geophysical activity. In this role, he led a team of 5 geophysicists, ensuring their work met the highest standards of technical excellence. Additionally, he mentored three junior geophysicists and assumed the role of Exploration Manager when needed. His responsibilities included interpreting and integrating geological and geophysical data to facilitate play mapping, source rock distribution, and reservoir characterization. This analysis was crucial for evaluating play/prospect uncertainty, risk, and volume estimations.

Not Retained

2009 to 2010 Vegas Oil and Gas, Egypt
Assistant Exploration Manager and Gas Team Lead: Alam El Shawish JV
As Assistant Exploration Manager and Gas Team Lead for the Alam El Shawish Joint Venture, Dr. Davidoff led a diverse team of geophysicists, geologists, reservoir engineers, and others, guiding them in delineating and developing gas assets. He oversaw various activities, including field development planning, drilling operations, and reserves assessments, ensuring a high level of technical proficiency and seamless integration across disciplines.

2007 to 2008 RWE DEA, Egypt
Consulting Geophysicist, Exploration Department
Dr. Davidoff conducted extensive geological studies covering the West Nile Delta area from onshore to deep water, including regional interpretation and sequence stratigraphy. He generated play and prospect assessments using 3D seismic data spanning 4,500 square kilometers. His responsibilities extended to creating regional play maps for evaluating prospects, constructing Petrel models to estimate reserves, and conducting rock property studies. Additionally, He interpreted AVO (amplitude versus offset) attributes to further enhance the RWE understanding of subsurface structures and properties.

2003 to 2007 Murphy Oil Company, Malaysia
Senior Dev. Geophysicist, Kikeh Field (700 MMBO), Block K, Deep Water, Sabah
Dr. Davidoff's primary focus was on the Kikeh Field in Block K, located in deep waters off the coast of Sabah. He was responsible for the interpretation and depth conversion of 3D seismic data to assess the subsurface structure and characteristics of the Kikeh and Kikeh Kecil Fields. He collaborated closely with an integrated team to delineate the fields, develop comprehensive field models, and plan field development strategies. Additionally, he contributed to SEC reserve audits and presented findings to the Petronas and Murphy boards for approval.

2003 University Brunei Darussalam
Visiting Senior Lecturer, Department of Petroleum Geoscience
During his tenure, Dr. Davidoff provided guidance and supervision to Master of Science students working on their theses. His role involved offering expertise and support to students as they conducted research and developed their academic projects within the field of petroleum geoscience.

2001 to 2002 Kodeco Energy Company, Ltd., Indonesia
Geophysical Consultant
At Kodeco Energy Company, Dr. Davidoff provided consulting and project management services for the Velocity Modeling and Pre-Stack Depth Migration (PSDM) of the West Madura 3D Seismic Survey. His responsibilities included overseeing the process of velocity modeling and pre-stack depth migration, which at that time was considered an advanced technique used to enhance the quality and accuracy of seismic data interpretation.

1999 to 2001 GX Technology Indonesia
Jakarta Center Manager and President of GX Technology Indonesia

Not Retained

As the Jakarta Center Manager and President at GX Technology Indonesia, Dr. Davidoff led a geophysical services company specializing in Pre-Stack Depth Migration (PSDM). He played a pivotal role in the operation's growth, transforming it from a one-person home-based office into a team of 12 professionals. His responsibilities encompassed all operational aspects, including sales, profitability, and maintaining high standards of technical excellence throughout the organization.

1997 to 1999 Landmark Graphics Corporation, Indonesia
Consultant to the Professional Services Organization: Asia Pacific Region
As a Consultant to the Professional Services Organization for the Asia Pacific Region, Dr. Davidoff provided consulting services specializing in various aspects of seismic interpretation and 3D seismic visualization. His responsibilities also included attribute extraction, velocity modeling, and time-to-depth conversion to enhance the understanding of subsurface structures. Additionally, he integrated geological and geophysical data for comprehensive mapping, conducted well-log analyses, estimated reserves, and managed databases to support exploration and production activities for both national and international oil and gas companies.

1996 to 1997 GX Technology
Team Leader and Senior Depth Imaging Geophysicist
At GX Technology, Dr. Davidoff provided technical expertise, training, and mentorship in various aspects of structural and stratigraphic interpretation, including both 2D and 3D seismic data analysis. His responsibilities encompassed building velocity models to convert seismic data from time to depth and conducting pre-stack depth migrations to improve subsurface imaging. Additionally, he specialized in depth-based velocity analysis and performed forward and inverse seismic modeling to enhance the accuracy of subsurface imaging and interpretation.

1993 to 1996 Landmark Graphics Corporation/Geographix, Denver and Houston Offices
Consultant
Dr. Davidoff provided various technical services to support geologic and geophysical exploration efforts. His responsibilities included mapping geologic, geophysical, and cartographic data to visualize subsurface structures and features. Additionally, he integrated geological and geophysical data sets to enhance the understanding of subsurface formations. He conducted detailed analyses of well logs to evaluate reservoir properties and estimate reserves. Furthermore, He managed databases to ensure efficient storage and retrieval of exploration data, facilitating decision-making processes.

1990 to 1993 Texas A&M University
Graduate Research Assistant, Department of Geology, Center for Petroleum Reservoir Geology

- Major studies included:
    - Structure, stratigraphy, and hydrocarbon potential of the Brazos basin
    - Sequence stratigraphy of the Paleogene section, central East Texas
    - Primary migration and trapping of hydrocarbons in the Late Cretaceous Austin Chalk

Not Required

EDUCATION

Ph.D., Geology, Texas A & M University, College Station, TX, 1993
M.S., Geology, University of Houston, Houston, TX, 1989
B.S., Geology, Western Washington University, Bellingham, WA, 1982

PROFESSIONAL LICENSING

State of Texas: Professional Geologist, License Number 15220, 2021

PROFESSIONAL ASSOCIATIONS

American Association of Petroleum Geologists (AAPG) Member since 1988
Society of Exploration Geophysicists (SEG) Member since 2007
Houston Geophysical Society (GSH) Member since 2015
Institute for Energy Law, Advisory Board Member since 2020
Geothermal Rising, Member since 2022
Champion for TXLAOK Regional Interest Group 2023-2026

PROFESSIONAL AWARDS

AAPG A.I. Levorsen Memorial Award for Best Paper (1991)
Gulf Coast Association of Geologic Societies Award for Best Paper (1991)

PATENTS

Davidoff, Andrew J., 2016, Probability Mapping System, US 9, 378, 462 B2

LEGAL AND REGULATORY PUBLICATIONS

Kulander, C. S., and A. J. Davidoff, 2026, Texas surface owners and geophysical surveys conveyancing: Oil, Gas & Energy Resources Law Section Report, v. 50, no. 1, p. 70–91.

Davidoff, A. J., and Procyk, A., 2026, “Managing Produced Water Disposal in the Permian: Geologic Challenges,” in Proceedings of the 2nd Special Institute on the Law of the Permian Basin Oil & Gas Development and Operations, Foundation for Natural Resources and Energy Law, Paper 4A, p. 4A-1–4A-47.

PRESENTATIONS AND C.L.E.S

The Foundation for Natural Resources and Energy Law Conference 2026: *Managing Produced Water Disposal in the Permian – Regulatory, Legal, and Geological Challenges*.

Speakers: Dr. Anderw J Davidoff, John Hicks, Adam Rankin

Not Retained

GEOLOGIC AND GEOPHYSICAL PUBLICATIONS

Davidoff, A.J., and Novianti, I.R. 2001, Fault shadow issues and resolution in model and real data; Proceedings of the 28th Annual Meeting of the Indonesian Petroleum Association

Adhidjaja, J.I., Davidoff, A.J., Novianti, I.R., 2001, PSDM enhances reef interpretation in Jatiluhur Block, West Java; Proceedings of the 28th Annual Meeting of the Indonesian Petroleum Association.

Yancey, T.E., and Davidoff, A.J., 1994, Paleogene sequence stratigraphy of the Brazos River Section, Texas: Gulf Coast Association of Geological Societies Field Guide, Houston, Texas, 104p.

Davidoff, A.J., and Yancey, T.E., 1993, Eustatic cyclicity in the Paleocene and Eocene: Data from the Brazos River Valley, Texas: in Anderson, D.M., and Gordon P. Eaton, eds., Geological Perspectives on Global Change, Tectonophysics, vol. 222, no. 3/4, p.371-395.

Davidoff, A.J., and Yancey, T.E., 1993, Relating sequence stratigraphy to lithostratigraphy in siliciclastic-dominated shelf settings, Paleogene, Central East Texas: Gulf Coast Association of Geologic Societies Transactions, vol. 43, p.97-107

Yancey, T.E., and Davidoff, A.J., and Donaho, T.S., 1993, Depositional gradient analysis in transgressive systems tracts and highstand systems tracts, Mid - Late Eocene of the Brazos River Valley, Texas: Gulf Coast Association of Geologic Societies Transactions, vol. 43, p. 465-472.

Yancey, T.E., and Davidoff, A.J., 1991, Paleogene sequence stratigraphy and lithostratigraphy in the Brazos River Valley, Texas: Gulf Coast Association of Geological Societies Field Guide, Houston, Texas, 112p.

Davidoff, A.J., 1991, Evidence for a deep Mesozoic basin in central east Texas; implications for hydrocarbon exploration: Gulf Coast Association of Geologic Societies Transactions, vol. 41, p. 143-151.

ABSTRACTS

Suman Gautam, Frederico Xavier de Melo, Jessica Hapney, Andrew Davidoff, Michael Gurch, (2020), Stratigraphy Generated Internal Multiple Prediction and Attenuation, Society of Exploration Geophysicist Annual Meeting, Houston, Texas.

Kate McCluskey, Andrew J. Davidoff, Olivier Hermant, Mark McCluskey, Ehab Madkor, 2012, A case study showing how integration of high-end data processing and geological information has led to improved imaging of the North Zeit Bay, Egypt, Istanbul 2012 - International Geophysical Conference and Oil & Gas Exhibition: 1-4.

Davidoff, A.J., 1993, Three basin model for central East Texas; Basement structure and sedimentary fill: American Association of Petroleum Geologists 1993 Annual Convention, Official Program, p.89

Davidoff, A.J., 1992, Deep basement structure and sedimentary fill of central East Texas, tectonic implications: Gulf Coast Section, Society of Economic Paleontologists and

Not Retained

Mineralogists Foundation, Thirteenth annual research conference, program and abstracts, p. 15-16.

Davidoff, A.J. and Yancey, T.E., 1992, Characteristics of transgressive systems tracts: Examples from the Brazos River Valley, eastern Texas: American Association of Petroleum Geologists 1992 Annual Convention, Official Program, p.27, and Texas A&M College of Geoscience and Maritime studies Student Symposium, v.4, p. 16.

Yancey, T.E., and Davidoff, A.J., 1992, Sequence stratigraphic interpretation of the Paleogene section in the Brazos River Valley, Texas: Geological Society of America, South-Central Section, Abstracts with Programs, vol. 4, no. 1, p. 51, (invited).

Davidoff, A.J., 1992, The Brazos basin; A three basin model for eastern Texas: South Texas Geological Society Bulletin, vol. 32, no. 5, p. 9 (extended abstract, invited).

Estrada, C., Davidoff, A.J., and Harder, V., 1991, Seek and you shall find - A structural geology assignment: Geological Society of America, Annual Meeting, Abstracts with Programs, vol. 23, no.5, p. 53, and 1992, Texas A&M College of Geoscience and Maritime studies Student Symposium, v.4, p. 19.

Davidoff, A.J., 1991, Controls on facies distribution of the downdip Jurassic in eastern Texas: American Association of Petroleum Geologists Bulletin, vol. 75, no. 9, p. 1520 and the Gulf Coast Association of Geological Societies Transaction, vol. 41, p. 142.

Davidoff, A.J., 1991, Evidence for a deep Mesozoic basin in central east Texas; Implications for petroleum exploration: American Association of Petroleum Geologists Bulletin, vol. 75, no. 3, p. 561, and American Association of Petroleum Geologists Bulletin, vol. 75, no. 9, p. 1519.

Davidoff, A.J., 1990, Angelina - Caldwell flexure and southern boundary of East Texas basin: Geological Society of America, South-Central Section, Abstracts with Programs, vol. 22, no. 1, p. 5, and Texas A&M University Geoscience Symposium, p. 26.

Davidoff, A.J., 1990, Evidence for a deep Mesozoic basin in central east Texas: Geological Society of America, Annual Meeting, Abstracts with Programs, vol. 22, no. 7, p. 185, and Texas A&M University Geoscience Symposium, p. 27.

CONFERENCE PRESENTATIONS

Davidoff, A. J., 2025, “Teaching Rocks to Speak: The Promise of Large Geologic Models and Generative AI,” presentation at the AAPG/SEG International Meeting for Applied Geoscience & Energy (IMAGE ’25), Houston, Texas, August 26, 2025.

FIELD GUIDES AND FIELD TRIPS

Yancey, T.E., and Davidoff, A.J., Gulf Coast Association of Geological Societies Field Trip, Austin, Texas, October 1994, Paleogene sequence stratigraphy of the Brazos River Section, Texas.

Yancey, T.E., and Davidoff, A.J., Houston Geological Society Field Trip, Houston, Texas, September 1992, Sequence stratigraphy and surface to the subsurface correlation of the Paleogene strata in the Brazos River Valley.

Not Retained

Yancey, T.E., Vail, P.R., and Davidoff, A.J., Geological Society of America South-Central Section Field Trip, Houston, Texas, February 1992, Paleogene sequence stratigraphy of the Brazos River Valley.

Yancey, T.E., and Davidoff, A.J., Gulf Coast Association of Geological Societies Field Trip, Houston, Texas, October 1991, Sequence stratigraphy and depositional environments of the Paleocene and Eocene of the lower Brazos River Valley.

Not Retained