



# A.J. DAVIDOFF LLC

Geologic and Geophysical Consulting Services for  
The Legal, Renewable, and Oil and Gas Industries

**ANDREW J. DAVIDOFF, Ph.D., PG**

## PROFESSIONAL EXPERIENCE

2024 to  
Present

DJS Associates  
Associate

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 diverse areas such as deep-water exploration, with recent hands-on experience in the Gulf of Mexico, 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
- Unitization
- IRS disputes and SEC violations
- Aquifer Contamination
- Seismology
- Seismic Surveys
- Seismic Interpretation
- Earthquakes
- Earthquakes due to Injection
- Geothermal Resources
- Slopes Failure/Landslides
- Riparian/Fluvial Geology
- Erosion
- Global Warming

2024 to  
Present

A.J. Davidoff LLC  
Managing Partner

A.J. Davidoff LLC delivers tailored solutions to clients in the legal, oil and gas, geothermal, and energy transition sectors by leveraging his deep understanding of geological and geophysical principles. As Managing Partner, Dr. Davidoff focuses on precision and innovation, offering invaluable insights and support across a spectrum of projects, ensuring clients receive the highest quality of service and expertise. His innovative methods and commitment to excellence have piqued the interest of many in the industry, making us a trusted partner for all their geological and geophysical needs.

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 Coore, 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 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 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.

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 interpreting 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

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

## **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

## **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

## **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, (in press), Stratigraphy Generated Internal Multiple Prediction and Attenuation, 2020 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 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 abst., 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.

### **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.

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.