

Curriculum Vitae

DANIEL E. SCHWARTZ, Ph.D.

NEW BUSINESS DEVELOPMENT

CONVENTIONAL AND UNCONVENTIONAL OIL AND GAS

EXPLORATION, DEVELOPMENT & PRODUCTION

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EMPLOYMENT HISTORY

2016 – Present Black Fox Resources, LLC

Managing Partner

- Black Fox Resources, LLC is a newly created partnership of financial, operational and geoscience / engineering experts focused on building an oil and gas investment vehicle in California. Initial funding of the venture: \$150MM to \$350MM.
- Via Daniel E. Schwartz, LLC, assemble and manage multidiscipline team of industry geoscience and engineering experts responsible for evaluating, risking, and creating plans for growth.

2014 – 2016 Aera Energy LLC Bakersfield

Manager of Strategic Business Development, New Ventures, Innovation

- Manage multidiscipline teams responsible for inorganic growth to meet Aera's aspirations via acquisitions and joint ventures. Multiple bids (\$300MM to \$1.5B) submitted to acquire assets.
- Developing strategies and programs, evaluating acquisition targets, recommend and guide potential acquisitions through Aera and Owner approval processes.
- Developing exploration new venture leads via basin analysis, seismic interpretation, and well and analog field evaluations.
- Managing development and implementation of innovation applications to improve recovery and reduce costs.

2009 – 2014 Aera Energy LLC Bakersfield (Shell secondment)

Manager of Exploration, Appraisal, and Piloting: Unconventional Resources

- Team drilled one deep basin exploration well to evaluate Monterey and test Kreyenhagen Formation in-situ oil potential in the San Joaquin Valley (\$15MM to drill and evaluate, within budget).

- Drilled six appraisal wells to evaluate productivity of migrated hydrocarbons in the Antelope Shale of the Monterey Formation in South Belridge Oil Field. Met \$50MM budget to drill, evaluate, complete, test, and put on production.

Geotechnical Director: Exploitation, Exploration and Land Department.

- Initiated and managed Unconventional Resource Exploration Team. Developed and proposed twelve drill ready Monterey and Kreyenhagen Formation San Joaquin Basin prospects. Four wells were ultimately drilled and evaluated. Three were brought on production with program investment exceeding \$100MM.
- Performed an integrated subsurface study to prove the extent of potentially economic hydrocarbon volumes within Miocene diatomaceous mudstones in Midway Sunset Oil Field.
- Discipline Advisor and technical consultant.

2005 – 2009 Shell International Exploration & Production Inc.: Houston

Discipline, Resourcing, and Technical Support Manager

- Directed six Regional Discipline Chiefs providing technical assurance, discipline leadership, and technical advice to management for Shell's global deep water portfolio (Gulf of Mexico, Brazil, Malaysia, Nigeria) and onshore Americas Exploration, Appraisal and Development Planning activities.
- Managed Integrated Reservoir Modeling, Petroleum Engineering for Exploration and New Venture projects, and Development Planning teams. Performed subsurface technical work for projects in the Gulf of Mexico, Nigeria, Brazil, and Malaysia. Led Development Planning efforts for Canadian unconventional and carbon sequestration, as well as Nigeria and Gulf of Mexico deepwater opportunities.

Chief Petroleum Engineer & Regional Exploration Consultant

- Developed and implemented strategic and tactical plans to manage evaluation and assurance of Global asset portfolio (Gulf of Mexico, Nigeria, Brazil, Malaysia, and Canada).
- Managed career development and subsurface project assurance for +900 Shell technical professional and contractor staff in three global locations (Houston, TX; Aberdeen, Scotland; Rijswijk, The Netherlands) via 20 discipline chiefs and subject matter experts.

2003 – 2005 Shell EP Americas: Houston

Chief Geologist

- Technical assurance and reserve audit for all Shell Oil assets in the Americas.
- Managed 50 production geologists dispersed in the US (New Orleans, Houston, Denver), and Venezuela. Developed geoscience discipline improvement plans.
- Focal Point for resourcing all Shell Oil subsurface technical staff (~490 individuals), ensuring deployments to meet development, surveillance, and re-development project requirements.

- Implemented Petrel reservoir modeling software and mapping standards fulfilling reserve audit and project documentation requirements.

1999 – 2003 Shell International E & P and Shell Deepwater Services: Houston

Exploration Manager for offshore Morocco:

- Lead team to explore the 9000sq km Rimella blocks (Exploration Permits) offshore Morocco.
- Managed \$2 MM annual budget with overall program budget \$70MM (seismic, wells).
- Coordinated evaluation of 2D seismic data, the acquisition, processing, and evaluation of 3D seismic, and planning for drilling of three exploration wells in 2001 to 2004.

Team Leader, Basin Evaluation and Stratigraphic Techniques Team

- Coordinated and lead activities of 15 geoscience, biostratigraphy, and basin modeling staff in multiple locations evaluating exploration wells, oil/rock samples and building basin models that led to exploration acreage acquisition in the Gulf of Mexico and Brazil.
- Lead technical assurance reviews for Brazil, Trinidad, Nigeria, Angola, and Gulf of Mexico.

1998 – 1999 Shell Capital Inc.: Houston

Director: International & US Producer Finance

- Developed mezzanine financing transactions supporting third parties in the development of their oil and gas properties.
- Shell funding transitioned to Investment Bank (\$500MM program).
- Developed risk assessment program to ensure coverage for reservoir, country, currency, and evacuation risk.

1996 – 1998 Shell EP International Ventures Inc.: Houston

Head of Business Positioning Team: Acquisitions & Deal Structuring

- Led trans-Atlantic team of eight technical and financial specialists providing advice and structuring for international opportunities. The team supported or originated 79 projects with NPV exceeding \$10B, including the Sakhalin II deal.

1992 - 1996 Shell U.K. Exploration & Production: Aberdeen, Scotland

Manager Production Geology and Geophysics

- Managed 70 staff in three UK locations. Provided capability development, technical assurance, and project advice.
- Working with Esso, evaluated six new field development projects including Schooner, Ketch, Gannet, Guillemot, and east flank Brent.

1985 - 1992

Shell Western E&P, California: Bakersfield

Division Petroleum Engineer: Led Offshore Santa Maria Basin Appraisal and Development team.

Division Geological Engineer: All drilling and development activities for Onshore & Offshore, Coastal and Sacramento basins.

Ventura Field Lead Petroleum Engineer: multi-disciplined team charged with re-design of water flood program. Increased recovery from C-block east water flood by 2%.

1978 - 1985

Shell Development Company: Bellaire Research Center, Houston

Supervisor Geological Engineering Research

- Managed research staff (capability development, research programs, budgets, planning)
- Developed and implemented Monterey Formation task force to support Belridge Oil Co acquisition and additional resource assessments, including offshore Santa Maria Basin.
- Developed and implemented Gulf of Mexico deepwater depositional system task force to support Pleistocene discoveries.

Research Geologist / Engineer

- Wasson Formation dolomite reservoir characterization for CO₂ flood.
- Athabasca Tar Sand reservoir characterization for steam flood.
- Monterey Formation evaluation in support of \$3.65B Belridge Oil Co acquisition.

EDUCATION

Professional

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| 2013 | Decision Analysis Workshop, University of Texas, Austin |
| 2010 | Evaluating Unconventional Resources, Rose and Associates |
| 2006 & 2012 | Advanced Safety Auditing |
| 2002 | Shell Training
Managing HSE |
| 1998 – 1999 | Euromoney
Finance, business development, and risk assessment |
| 1996 | Fletcher School of Business at Tufts University
Negotiating Across Cultures |
| 1995 | Shell Training Center - Houston
Deal Making Seminar
“Co-opetition” & game theory workshop |
| 1994 | Shell Training Centre – London |

Managing Change Workshop
1992 – 1996 **Shell UK E&P**
Management Conference
Business Restructuring Team
1978 - 1992 **Shell Training - Houston**
Technical training in Geology, Petrophysics, and Economics
Supervisory training in management and industrial relations

University

1974 - 1978 **University of Texas at Dallas:** PhD in Geology
Dissertation: Sedimentology of the braided-to-meandering transition zone of the Red River in Texas and Oklahoma
1972 - 1974 **University of California at Berkeley:** Bachelor's Degree in Geology
1970 - 1972 **Oregon State University,** Corvallis Oregon: Geology major

AFFILIATIONS

American Association of Petroleum Geologists

- General Chairman: Annual PS A.A.P.G. - S.E.P.M. Convention, Bakersfield, California, 1991
- Pacific Section President 2013 – 2014; Pacific Section Past President 2014 - 2015
- PS-AAPG Scholarship Committee 2012 - 2016
- AAPG Technical Advisory Committee and Education Committee 2012 – 2016
- Imperial Barrel Award judge and team consultant 2012 - 2016
- Winner of Pacific Section AAPG A.I. Levenson best paper award, 2016
- Elected Vice President of Sections for AAPG 2016 - 2018

University of Texas at Dallas

- Endowed the Daniel E. Schwartz Opportunity Fund for Geoscience Students
- Recipient of the College of Natural Science and Mathematics Alumni of the Year Award 2015

Vintage Automobile Racing Association and Sports Car Racing Association of the Monterey Peninsula

- E Production Class Champion 2011, 2012, 2013, 2015, 2016
- Participant in the Rolex Monterey Motorsports Reunion 2014, 2016

PUBLICATIONS

Bouroullec, Renaud, D. R. Pyles, D. E. Schwartz, D. C. Jennette, F. Bonnaffe, 2007. Impact of Local Accommodation on the Architecture and Stacking Patterns of Three Capistrano Formation Slope Channel Outcrops: San Clemente, Dana Point Harbor and Point Fermin, California. (abs.) AAPG National Convention, Long Beach.

Fischer, P.J. and D.E. Schwartz, 1989. The Yorba Linda (Fernando), Doheny and San Clemente (Capistrano) channels and the Capistrano submarine fan: in L.C. Collins, (ed.), Geological Excursions in the Greater Los Angeles Area, N.A.G.T. Far West Section, Spring Conference, C.S.U. Northridge, pp. 62-75.

Hinman, N.W. and D.E. Schwartz, 1990. Lithology and diagenetic sequences of the Monterey Formation, Molino Field, Offshore Santa Barbara, California: in M.A. Keller and M.K. McGowen (eds.), Miocene and Oligocene petroleum reservoirs of the Santa Maria and Santa Barbara - Ventura Basins, California, A Core Workshop, S.E.P.M. core workshop No. 14, San Francisco, pp. 271-336.

Hinman, N.W. and D.E. Schwartz, 2012. Lithology and diagenetic sequences of the Monterey Formation, Molino Field, Offshore Santa Barbara, California: in J. R. Schwalbach and R. Behl (eds.), Monterey Formation Seminar and Core Workshop, 2012 AAPG Annual Convention and Exhibition, Long Beach, California, pp. 108-150.

Pyles, D.; D. Jennette; A. Fleming; M. Sullivan; D. Schwartz; and J. Stammer, 2013. Outcrop Analogs of Confined Channel Systems, Weakly Confined Channel Systems, and Distributive Channel-lobe Systems, Southern California (abs), AAPG Search and Discovery Article #90162, Pacific Section AAPG, SPE and SEPM Joint Technical Conference, Monterey California, April 19-25, 2013.

Rigsby, C.A. and D.E. Schwartz, 1990. Litho-stratigraphic and depositional environments of the Vaqueros Formation, Capitan Field, California: in M.A. Keller and M.K. McGowen (eds.), Miocene and Oligocene petroleum reservoirs of the Santa Maria and Santa Barbara - Ventura Basins, California, A Core Workshop, S.E.P.M. core workshop No. 14, San Francisco, pp. 88-138.

Schwartz, D.E., 1976. Sedimentology of the braided-to-meandering transition zone of the Red River in Texas and Oklahoma: (abs.), G.S.A., v. 8, p. 1092.

_____, 1977. Flow patterns and bar morphology in a braided-to-meandering transition zone--The Red River, Texas and Oklahoma: A.A.P.G. Bull., v. 61, p. 827.

_____, 1978. Hydrology and current orientation analysis of a braided-to-meandering transition zone: The Red River in Oklahoma and Texas, USA: in A.D. Miall, (ed.) Fluvial Sedimentology; C.S.P.G., Memoir 5, pp. 231-255.

_____, 1978. Sedimentary facies, structures, and grain-size distribution: The Red River in Oklahoma and Texas: in J.E. Boudreaux (ed.), Transactions G.C.A.G.S., G.C.S., and S.E.P.M., New Orleans, v. 28, pp. 473-492.

_____, 1980. Scanning Electron Microscope - Cold Stage: Viewing fluid saturated reservoir rock: S.P.E. 9248, 55th Annual Fall Technical Conference, Dallas.

_____, 1983. Depositional environments and diagenesis of the upper Monterey Formation at Chico-Martinez Creek and South Belridge oil field, California: (abs.), A.A.P.G. - S.E.P.M. Pacific Section 58th Annual Meeting, Sacramento.

_____, 1986. Characterizing lithology, petrophysical properties, and hydrocarbons in the Belridge Diatomite, South Belridge field, Kern County, California: (abs.), A.C.S. 192nd Annual Meeting, Special Symposium on Petroleum Geochemistry of the Monterey Formation, Anaheim, California.

_____, 1988. Characterizing lithology, petrophysical properties, and depositional setting of the Belridge Diatomite, South Belridge field, Kern County, California: in, S.A. Graham, (ed.), Studies of the Geology of the San Joaquin Basin, S.E.P.M. Pacific Section Book 60, pp. 281-301.

_____, 1990. Mixing of biogenic siliceous and terrigenous clastic sediments: South Belridge Field and Beta Field, California: (abs.), A.A.P.G. Annual Meeting, San Francisco.

_____, 2003. Channelized Deep Marine Reservoirs in the Deepwater - Modeling and Recovery. (abs.) Pacific Section AAPG – SEPM Convention, Long Beach.

_____, 2015. Recent Characterization of the Monterey Formation, San Joaquin Basin, California: (abs) Pacific Section AAPG – SEPM Convention, Oxnard.

_____, 2015. Geological Field Guide, Los Angeles Basin and Southern California: SPWLA annual convention Long Beach, California.

_____, 2007, D. C. Christensen, D. Hansen, B. Jolley, J. B. Keller, P. Patel. Reservoir Characterization of Amalgamated and Non-Amalgamated Turbidites, Ventura Field, California: Core Workshop.

_____, and I.P. Colburn, 1987. Late Tertiary to Recent chronology of the Los Angeles Basin, Southern California: in, P.J. Fischer, (ed.), Geology of the Palos Verdes Peninsula and San Pedro Bay, A.A.P.G. - S.E.P.M. Pacific Section volume and guidebook 55, pp. 5-16.

_____, and J.R. Schwalbach, 2012. Evaluation of Monterey Formation core from two wells in the offshore Santa Maria Basin of California, OCS P-0397-2 and OCS P-0409-4: in, J.R. Schwalbach, Richard Behl, (eds.), Monterey Formation Seminar and Core Workshop, 2012 AAPG Annual Convention and Exhibition, Long Beach, California, pp. 151-184.

_____, W. E. Hottman, and S.O. Sears, 1981, Geology and diagenesis of the Belridge Diatomite and Brown Shale, San Joaquin Valley, California: (abs.), A.A.P.G. Bull., v. 65, p. 988-989.