

Curriculum Vitae

MICHAEL L. SWEET

Research Scientist

The University of Texas at Austin

RESEARCH INTERESTS: Sedimentology, sequence stratigraphy, marine geology, reservoir connectivity and source-to-sink sediment routing.

EDUCATION:

University of Wisconsin – Madison – B.S. degree in Geology 1980.

University of Illinois – Urbana - M. S. degree in Geology, 1983, Thesis: *Paleo-environmental analysis of the Bonpas Limestone and associated rocks, southeastern Illinois*. Advisor: Dr. R. L. Langenheim.

The University of Texas at Austin, Ph.D. in Geology, 1989, University of Texas Fellowship, Dissertation title: *Eolian dune airflow dynamics: Implications for dune spacing, morphology and migration*. Advisor: Dr. Gary Kocurek.

PROFESSIONAL EXPERIENCE:

Co-Director/Research Scientist, Gulf Basin Depositional Synthesis Project, Institute for Geophysics, The University of Texas – Austin, 2019 to Present.

ExxonMobil Exploration Co. (Houston, Texas) Stratigraphy Advisor to the Caribbean/ Northern South America Exploration Team, 2017 – Retired May 2019.

ExxonMobil Research Co. (Houston, Texas). Senior Geoscience Advisor Clastic Stratigraphy, 2013 - 2017

ExxonMobil Production Co. (Houston, Texas). Geoscience Technical Team Lead for Angola Production, 2010 – 2013.

ExxonMobil Research Co. (Houston, Texas). Senior Research Associate, 2001 –2010.

Knowledge Reservoir, Inc. (Houston, Texas). Consultant, 1999 – 2001.

BP Exploration (Houston, Texas). Sedimentologist - Deep-water Gulf of Mexico Exploration, 1996 to 1999.

BP Exploration (Aberdeen, Scotland). Sedimentologist Southern North Sea Group, 1993 to 1996.

BP Exploration (Houston, Texas). Sedimentologist - Houston Technology Group, 1989 to 1993.

Getty Oil Company (Oklahoma City, Oklahoma). Exploration Geologist, 1982 to 1984.

University of Illinois (Urbana, Illinois). Field Camp Instructor, Sheridan, Wyoming, Summer 1984.

FIRST-AUTHORED PUBLICATIONS (from most recent)

Sweet, M.L. Snedden, J. W., Purkey, M. and Weber, R., 2021, Tiber Deep (Keathley Canyon 102): New Insights into Late Cretaceous Deep-Water Plays in the Northern Gulf of Mexico, Part 1: Lithofacies and Reservoir Quality Trends: Gulf Coast Association of Geological Societies, Transactions, v. 71.

Sweet, M. L., Gaillot, G. T., Rittenour, T. M., Love, K. and Blum, M. D., 2021, How fast do submarine fans grow? Insights from the Quaternary Golo fans, offshore Corsica: *Geology*. v. 49. <https://doi.org/10.1130/G48911.1>

Sweet, M. L., Gaillot, G. T., Jouet, G., Rittenour, T. M., Toucanne, S., Marsset, T., and Blum, M. D., 2020, Sediment routing from shelf to basin floor in the Quaternary Golo System of Eastern Corsica, western Mediterranean Sea: *Geol. Soc. of America Bulletin*, v. 132, p. 1217-234. <https://doi.org/10.1130/B35181.1>

Sweet, M. L. and Blum, M. D., 2016, Connection between fluvial to shallow marine environments and submarine canyons; Implications for sediment transfer to deep water: *Journal of Sedimentary Research*, v. 86, p. 1147 - 1162. <https://doi.org/10.2110/jsr.2016.64>

Sweet, M.L., and Blum, M.D., 2011. Paleocene - Eocene Wilcox submarine canyons and thick deepwater sands of the Gulf of Mexico: very large systems in a Greenhouse World, not a Messinian-like crisis: *Gulf Coast Association of Geological Societies, Transactions*, v. 61, 443–450.

Sweet, M. L. and Sumpter, L. T., 2007, Genesis field, Gulf of Mexico: Recognizing reservoir compartments on geologic and production time scales in deep-water reservoirs: *AAPG Bulletin* v. 91, p. 1707 – 1729.

Sweet, M. L., Beaubouef, R. T., Beuhler, J., Grove, M., Kloska, M., and Mitchell, S., 2007, Distal-basin-floor-fan deposits of the Middle Eocene Tyee Formation, Oregon USA, *in*, Atlas of Deep-water outcrops, Nilsen, T. H., Shew, R. D., Steffens, G.S., and Studlick, J.R.J. (eds.), *AAPG Studies in Geology* 56, p. 414 – 418.

Sweet, M. L., Champion, K. M., and Beaubouef, R. T., 2007, Deep-water-slope to basin-floor-deposits of the Middle Eocene Tyee Formation, Oregon, *in*, Atlas of Deep-water outcrops,

- Nilsen, T. H., Shew, R. D., Steffens, G.S., and Studlick, J.R.J. (eds.), AAPG Studies in Geology 56.
- Sweet, M. L., 2002, Contrasting Styles of Eolian, Fluvial and Lacustrine Sequence Development: UK Southern North Sea, in J. M. Armentrout and N. C. Rosen (eds.) Sequence stratigraphic models for exploration and production: Evolving methodology, emerging models and application histories. Gulf Coast Section of SEPM 22nd Annual Research Conference, pp. 425 - 440.
- Sweet, M. L., 1999, Interaction between aeolian, fluvial and playa environments in the Permian Rotliegend Group, UK Southern North Sea: *Sedimentology*, v. 46, p. 171 - 188.
- Sweet, M. L. (1997) South Ravenspurn Gas Field, Offshore United Kingdom: Sequence Stratigraphy and Heterogeneity Modeling in a Low Permeability Continental Reservoir, in Keith W. Shanley and Bob F. Perkins (eds.), *Shallow marine and nonmarine reservoirs: sequence stratigraphy, reservoir architecture and production characteristics*. Gulf Coast Section of SEPM 18th Annual Research Conference, pp. 345 - 354.
- Sweet, M. L. (1997) Rotliegend core from the 48/6-34 well, Hyde Field, Southern Gas Basin, in C. D. Oakman, J. H. Martin and P. W. M. Corbett (eds.), *Cores from the Northwest European Hydrocarbon Province: An illustration of geological applications from exploration and development*. The Geological Society, London Publication, p. 73 – 78.
- Sweet, M. L., Blewden, C. J., Carter, A. M., Mill, C. A. (1996) Modeling heterogeneity in a low permeability gas reservoir using geostatistical techniques - Hyde Field, Southern North Sea: *AAPG Bulletin*, v. 80, p. 1719-1735.
- Sweet, M. L. (1992) Lee-face airflow, surface processes and stratification types: Their significance for refining the use of eolian cross-strata as paleocurrent indicators: *Geological Society of America Bulletin*, v. 104, p. 1528-1538.
- Sweet, M. L., Kocurek, Gary and Havholm, K. G. (1991) A field guide to the Algodones dune field, SE California; in Michael J. Walawender and Barry B Hanan, eds., *Guidebook for the 1991 Geological Society of America Annual Meeting*, p. 171-185.
- Sweet, M. L. and Kocurek, Gary (1990) An empirical model of aeolian dune lee-face airflow: *Sedimentology*, v. 37, p. 1023-1038.

Sweet, M. L., Nielson, Jamie, Havholm, Karen, and Farrelly, John (1988) Algodones dune field of SE California: Case history of a migrating modern dune field: *Sedimentology*, v. 35, p. 939-95.

CO-AUTHORED PAPERS (from most recent)

Gaillot, G.T., Sweet, M.L., and Santra, M., 2021, Deep-water deposits of the Eocene Tyee Formation, Oregon, in Booth, A.M., and Grunder, A.L., eds., *From Terranes to Terrains: Geologic Field Guides on the Construction and Destruction of the Pacific Northwest: Geological Society of America Field Guide 62*, p. 19–48, [https://doi.org/10.1130/2021.0062\(02\)](https://doi.org/10.1130/2021.0062(02)).

Chenglin G., Steel, R. J., Wang, Y., Sweet, M. L., Xian, B., Xu, Q., Zhang, B., 2019, Shelf-edge delta overreach at the shelf break can guarantee the delivery of terrestrial sediments to deep water at all sea-level stands: *AAPG Bulletin*, v. 103, p. 65 – 90. <https://doi.org/10.1306/0511181617117230>

Pellegrini, C., Asioli, A., Bohacs, K. M., Drexler, T.M., Feldman, H. R., Sweet, M.L., Maselli, V., Rovere, M., Gamberi, F., Valle, G. D., Trincardi, F., 2018, The Late Pleistocene Po River lowstand wedge in the Adriatic Sea: Controls on architecture variability and sediment partitioning: *Marine and Petroleum Geology*, v. 96, p. 16 – 50. <https://doi.org/10.1016/j.marpetgeo.2018.03.002>

Santra, M., Steel, R.J., Olariu, C., and Sweet, M.L., 2013, Stages of sedimentary prism development on a convergent margin – Eocene Tyee forarc basin, Coast Range, Oregon, USA: *Global Planetary Change*, v. 103, p. 207 – 231. <https://doi.org/10.1016/j.gloplacha.2012.11.006>

Feldman, H., Adereti, O., Ahmed, H., Ajibola, O., Alalade, B., Lopez, C., Sweet, M., Tsakma, J., Unomah, G., and Farre, J., 2013, Predicting large-scale reservoir architecture: Application of data from shelf edge reservoirs in the eastern Niger Delta; *Nigerian Association of Petroleum Explorationists, Bulletin*, v. 25, p. 52 – 60.

Vrolijk, P., James, B., Myers, R., Maynard, J., Sumpter, L. and Sweet, M., 2005, Reservoir connectivity analysis – defining reservoir connections and plumbing: *SPE 93557 SPE Middle East Oil and Gas Show and Conference*, 23 p.

- Vrolijk, P., Myers, R., Sweet, M. L., Shipton, Z. P., Dockerill J. P., Evens, J. P., Heath, J., and Williams, A.P., 2005, Anatomy of reservoir-scale normal faults in central Utah: Stratigraphic controls and implications for fault zone evolution and fluid flow, in Pederson, J. and Dehler, C. M. eds., Interior Western United States: Geological Society of America Field Guide 6, p. 261–282.
- Weimer, P., Sweet, M., Sullivan, M., Kendrick, J., Pyles, J. and Donovan, A. (eds.) (2002) Deep-Water Core Workshop, Northern Gulf of Mexico. Gulf Coast Section of the SEPM. 92 p.
- Doyle, J. D. and Sweet, M. L. (1995) Three-dimensional distribution of lithofacies, bounding surfaces, porosity and permeability in a fluvial sandstone - the Gypsy Sandstone of northern Oklahoma: AAPG Bulletin, v. 79, p. 70 -96.
- Englet, K. T. and Sweet, M. L. (1993) Image analysis characterization of small-scale heterogeneities in fluvial reservoirs: a case study from the Gypsy Sandstone of Central Oklahoma: Transactions of the SPWLA 34th Annual Logging Symposium, v. 1, paper ee page 1-17.
- Langlais, V., J. D. Doyle, M. L. Sweet, and G. W. Geehan, 1992, An Additional Geological Input to the Sequential Indicator Simulation (S.I.S): the Vertical Organization of Lithofacies: in R. Eschard and B. Doligez eds., Proceedings of the VIIIth IFP Research Conference on Exploration and Production. Scarborough, April 12-17, 1992, p. 111-123.
- Kocurek, G., Townsley, M., Yeh, E., Havholm, K. and Sweet, M.L. (1992) Dune and dune-field development stages on Padre Island: Effects of lee airflow and sand-saturation levels and implications for interdune deposition: Journal of Sedimentary Petrology, v. 62, p. 622-635.

ORAL AND POSTER PRESENTATIONS

- Sweet, M. L., Snedden, J.W. Purkey, M., and Weber, R., 2021, Tiber Deep (Keathley Canyon 102): New Insights into Late Cretaceous Deep-Water Plays in the Northern Gulf of Mexico, Part 1: Lithofacies and Reservoir Quality Trends: GeoGulf 2021.
- Sweet, M.L. and Gaillot, G. T., 2019, Sediment Routing From Shelf to Basin Floor in the Quaternary Golo System of Eastern Corsica; AAPG Annual Meeting San Antonio.
- Sweet, M. L. and Blum, M.D., 2015, The nature of connections between coastal systems and submarine canyons – implications for sediment transit to deep water; AAPG Annual Meeting Denver.

- Sweet, M.L., 2010, New insights into the sequence stratigraphy of deepwater deposits gleaned from the study of Quaternary deepwater systems; AAPG Annual Meeting New Orleans.
- Santra, M., Steel, R., and Sweet, M. L., 2010, Basin-fill geometry of Eocene Tyee Basin - from fluvial deposits to extensive sand-rich basin floor fans; AAPG Annual Meeting New Orleans.
- Labaune, C., Sweet, M. L., Bez, M., Marsset, T., Droz, L., Calvès, G., 2010, Quaternary deepwater deposits of the Golo Basin/Corsica Trough: East Corsica; AAPG Annual Meeting New Orleans.
- Scarselli, S., Vrolijk, P., Myers, R., Sweet, M. L., Nollet, S., and Cleveland, D., 2010, Stratigraphic controls on fault zone complexity and evolution: The Little Grand Wash Fault, Utah; AAPG Annual Meeting New Orleans.
- Lecolais, G., Sweet, M. L., Bez, M., Abreu, V. Marsset, T., Jouet, G., Droz, L., Calves, G., Charrier, S., Thereau, E., Marches, E., 2010, The Golo System of eastern Corsica: A Quaternary Source-to sink system; AAPG Annual Meeting New Orleans.
- Sweet, M. L., Vrolijk, P., Sumpter, L. T., Snedden, J. W., Meyers, R., James, B., Meurer, E., and Mosola, A., 1997, Determining reservoir connectivity in producing fields – examples from eastern Canada and the Gulf of Mexico (extended Abstract); 3rd EAGE North Africa/Mediterranean Petroleum and Geoscience Conference and Exhibition.
- Sweet M. L., Roth S. L., Snedden, J. W. and Farrell, M.E., 2006, Seismic models of outcrops in the Brushy Canyon Formation of west Texas: Implications for reservoir connectivity detection: Geological Society of American Annual Meeting, Philadelphia.
- Sweet, M. L., Farrell, M. E. and A. E., Schwartzbard, 2003, Sequence Stratigraphic controls on reservoir productivity: Ursa Field, Gulf of Mexico; AAPG Annual Meeting Salt Lake City.
- Sweet, M. L. (1997) Contrasting Styles of Facies Architecture in Mixed Eolian/Fluvial Deposits - Hoton and South Ravenspurn Fields, UK Southern North Sea. AAPG Annual Convention Program, p. A114
- Sweet, M. L., Carter, A. M. and Blewden, C. J. (1995) Modeling heterogeneity in a low permeability gas reservoir using geostatistical techniques - Hyde Field, Southern North Sea: The Geological Society, London

- Sweet, M. L., Carter, A. M. and Blewden, C. J. (1995) The Use of Detailed Reservoir Modeling in the Development of a Low Permeability Aeolian Reservoir: Hyde Field, Southern North Sea: AAPG Annual Meeting Houston
- Dudley, G., Jolley, E. G., and Sweet, M. L. (1994) Sequence stratigraphy in a mixed aeolian/lacustrine/fluvial depositional system - two examples from the Rotliegend Group (Permian), Southern North Sea, in, S. D. Johnson (ed.) High resolution sequence stratigraphy: Innovations and applications, Abstract volume: Liverpool, Department of Earth Science University of Liverpool, p. 122 - 125.
- Sweet, M. L. (1993) Paleowind directions from eolian cross-strata -- maybe we do need a weatherman to know which way theis wind is blowing: SEPM 1993 Meeting: Stratigraphic record of global change (State College, PA) Abstracts with program p. 63
- Sweet, M. L. and Doyle, J. D. (1993) Reservoir heterogeneity in the fluvial Gypsy Sandstone of Oklahoma; in R. Eschard and B. Doligez (eds.) Subsurface reservoir characterization from outcrop observations, Editions Technip, Paris, p. 189.
- Davies, R. B., Inman, K. F., Sweet M. L. and Ravn, B. (1992) High resolution sequence stratigraphy of the Early Cretaceous Syn-Rift succession, North Slope, Alaska: AAPG Annual Meeting Calgary.
- Sweet, M. L. (1991) Enhancing the interpretation of paleowind direction from eolian deposits: Insights from the study of modern dunes: Geological Society of America Annual Meeting (San Diego) Abstracts with programs, p. A288.
- O'Meara, D. J., Haynes, B., Doyle, J. D., Sweet, M. L. and Langlais, V. (1991) Modeling reservoir heterogeneity in a fluvial sandstone: The Gypsy Sandstone of Oklahoma: Society of Petroleum Engineers 66th Annual Technical Conference Proceedings, p. 835-837.
- Doyle, J. D., Sweet, Michael L. and Thomas, Kimberly K. (1991) Three-dimensional fluvial architecture of the Gypsy Sandstone (Pennsylvanian) Central Oklahoma: AAPG Bulletin, v. 75, p. 564.
- O'Meara, D. J., B. Haynes, J. D. Doyle, M.L. Sweet, and V. Langlais, 1991, Modeling Reservoir Heterogeneity in a Fluvial Sandstone: the Gypsy Sandstone of Oklahoma. SPE 22742.
- Sweet, M. L. (1989) Eolian sedimentary processes of a complex-crescentic dune: Implication for the interpretation of eolian strata: Geological Society of America Annual Meeting (St. Louis) Abstracts with programs, p. A97.

Sweet, M. L. and Kocurek, Gary (1989) Empirical model of eolian dune lee-face flow dynamics: 28th International Geological Congress (Washington), v. 3, p. 205-206.

Sweet, M. L. and Kocurek, Gary (1988) Aerodynamic controls on eolian dune spacing: Geologic Society of America Annual Meeting (Denver).

Sweet, M. L., Nielson, Jamie, Havholm, Karen and Farrelly, John (1987) Migration and deposits of the Algodones dunes, SE California: Geologic Society of America Annual Meeting (Phoenix).

Sweet, M. L. and Kocurek, Gary (1987) Preliminary observations of airflow over a compound-crescentic dune: Algodones dune field California: SEPM Mid-Year Meeting (Austin), p. 82.

PATENTS

Meurer, M. E., Vrolijk, P. J., Sweet, M. L., Snedden, J. W., and Sumpter, L. T., 2014, Dynamic Reservoir Connectivity Analysis: US Patent No. 8,437,997 B2

AWARDS AND PROFESSIONAL SOCIETY RESPONSIBILITIES

Technical Program Co-Chair GeoGulf 2021.

Gulf Coast SEPM Vice-President 2019-2020.

AAPG Distinguished Service Award 2018.

AAPG Bulletin Elected Editor 2013-2016.

AAPG Bulletin Senior Associate Editor and Associate Editor 2004 to 2013.

ExxonMobil Excellence in Instruction Awards 2003, 2008, 2009, 2013, 2015, 2016 and 2017.

Field Trip Co-Chair for the AAPG Annual Meeting in 2011.

AAPG Publication Committee Vice Chair from 2009 – 2011.

ExxonMobil Field Safety Award 2009.

Co-Organizer of Deep-Water Core Workshop, North Gulf of Mexico for the 2002 AAPG Annual Meeting in Houston.

Technical program committee for the year 2000 Gulf Coast Section-SEPM Annual Research Conference - Deep-water Reservoirs of the World

References available upon request

