

Mitchell John Malone

WORK ADDRESS

Ocean Drilling Program
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EDUCATION

Duke University, Durham, NC

Ph.D. Geology, 1995
M.S. Geology, 1989

University of Texas, Austin, TX

B.A. Geography (minor Geology); with high honors, special honors in
Geography, 1986

PROFESSIONAL EXPERIENCE

Ocean Drilling Program, Texas A&M University, College Station, TX

Associate Research Scientist/Staff Scientist (2001 to present)
Assistant Research Scientist/Staff Scientist (1995 to 2001)

Department of Geology and Geophysics, Texas A&M

Adjunct Professor (1996 to Present)

Duke University, Department of Geology, Durham, NC

Research Assistant (1988-1990, 1992-1995)
Teaching Assistant (1986-1988, 1990-1992)

Amoco Production Company, Houston, TX

Geologist (Summer 1990)

GRANTS

Quaternary paleoenvironmental history recorded in slope to abyssal plain
sediments in the East Antarctic Wilkes Land Margin: NSF-OPP,
PENDING, co-PI: \$117, 717 of \$583,213

The origin of brines, low-chloride fluids, and diagenetic carbonates on
Demerara Rise; USSSP/JOI/NSF, \$24,588, PI

Diagenetic and paleoceanographic variability: using bulk and fine fraction
stable isotopic and elemental composition to unravel diagenetic vs. secular
signals, Shatsky Rise; USSSP/JOI/NSF, \$25,988; 10/01-8/04, PI

Geochemistry of interstitial waters and authigenic carbonates, offshore
Tasmania: implications for diagenesis and paleoceanography;
USSSP/JOI/NSF, \$26,899, 9/00-7/03, PI

Early diagenesis of cool-water carbonates, Great Australian Bight;
USSSP/JOI/NSF, \$24,773, 2/99-11/02, PI

Influence of sea-level variations on the geochemistry of interstitial waters and authigenic carbonates, New Jersey shelf and slope; USSSP/JOI/NSF, \$13,908, 9/97-10/00, PI

Diagenesis of periplatform sediments, southern Sites 1008 and 1009, ODP Leg 166; USSSP/JOI/NSF, \$14,952, 6/96-2/98, PI

Graduate student grants: AAPG, GSA, and Sigma Xi - all 1991, PI

**TEACHING
EXPERIENCE**

Physical Geology, Blinn College, Bryan, TX, Summer 2001; co-taught.
Teaching Assistant, Duke University, NC
Introductory Geology tutor - 1 semester
Historical Geology - 1 semester
Sedimentology and Stratigraphy - 3 semesters
Introductory Geology lab instructor - 3 semesters.

HONORS

Amoco Fellowship, 1987 (Duke University)
Phi Beta Kappa (University of Texas)
National Council for Geographic Education Scholarship, 1985
Outstanding Undergraduate, Dept. of Geography, 1984

**PROFESSIONAL
ACTIVITIES**

Associate Editor, Journal of Sedimentary Research (1999-Present)
Invited Participant, JOI-sponsored workshop "Opportunities in Geochemistry for Post-2003 Drilling, Oct. 12-13, 2000," Tyngsboro, MA.
Co-convener (with P. Swart and J. Gieskes), special session on "Fluid Chemistry and its Implication for Diagenesis and Fluid Flow in Marine Environments," Fall AGU, 1999
ODP-TAMU Liaison to the JOIDES ESSEP (Science Steering and Evaluation Panel-Environment) 1997-2000.
Editorial Review Board, Ocean Drilling Program Legs 166, 174A, 174B, 182, 189, 198

**FIELD
EXPERIENCE**

D/V JOIDES Resolution (2003) Demerara Rise, 2 months Staff Scientist/Inorganic Geochemist, Leg 207)
D/V JOIDES Resolution (2001) Shatsky Rise, 2 months (Staff Scientist/Inorganic Geochemist, Leg 198)
D/V JOIDES Resolution (2000) Tasmanian Gateway, 2 months (Staff Scientist/Inorganic Geochemist, Leg 189)
D/V JOIDES Resolution (1998) Great Australian Bight, 2 months (Staff Scientist/Inorganic Geochemist, Leg 182)
D/V JOIDES Resolution (1997) CORK Hole 395A, 1 month (Staff Scientist/Inorganic Geochemist, Leg 174B)

D/V JOIDES Resolution (1997) New Jersey Shelf, 1 month (Staff Scientist/Inorganic Geochemist, Leg 174A)

D/V JOIDES Resolution (1996) Bahamas Transect, 2 months (Staff Scientist, Leg 166)

Tertiary sediments of California, (1993) 2 weeks

R/V Cape Hatteras, (1992) Pedro Bank, Caribbean Sea

Miocene sediments of the Monterey Formation, California, (1991) 2 weeks

R/V Cape Hatteras, (1988) Nicaraguan Rise, Caribbean Sea (geochemistry, marine geology, geophysics)

PROFESSIONAL AFFILIATIONS SEPМ (Society of Sedimentary Geology), The Geochemical Society Geological Society of America, American Geophysical Union

PEER-REVIEWED PUBLICATIONS

Malone, M.J., Claypool, G., Martin, J.B., and Dickens, G.R., (2002). Variable methane fluxes in shallow marine systems over geologic time – The composition of pore waters and authigenic carbonates on the New Jersey shelf. *Marine Geology*, 189:175-196.

Bralower, T., Premoli Silva, I., **Malone, M.J.**, and the Leg 198 Science Party (2002) New evidence for ancient global warmth in the Cretaceous and Paleogene: an Ocean Drilling Program expedition to Shatsky Rise, northwest Pacific (cover article), *GSA Today*, 12:4-10.

Exon, N.F., Kennett, J.P., **Malone, M.J.**, and the Leg 189 Shipboard Party (2002) Drilling reveals climatic consequences of Tasmanian Gateway opening (cover article). *EOS*, 83, no. 23:253, 258.

Mitterer, R.M., **Malone, M.J.** Goodfriend, G.A., Swart, P.K., Wortmann, U., Logan, G.A., Feary, D.A., and Hine, A.C. (2001) Co-generation of hydrogen sulfide and methane in marine carbonate sediments. *Geophysical Research Letters*, 28:3931-3934.

Malone, M.J., Slowey, N.C., and Henderson, G.M. (2001) Early diagenesis of shallow-water, periplatform carbonate sediments, leeward margin, western Great Bahama Bank (ODP Leg 166). *GSA Bulletin*, 113:881–894.

Exon, N.F., White, T.S., **Malone, M.J.**, Kennett, J.P. and Hill, P.J. (2001) Petroleum potential of deepwater basins around Tasmania: insights from Ocean Drilling Program Leg 189. In: Hill, K.C. and Bernecker, T. (eds): *Proceedings PESA Eastern Australasian Basins Symposium*, Petroleum Exploration Society of Australia, Special Publication, 49-60.

Robert, C.M., Exon, N.F., Kennett, J.P., **Malone, M.J.**, Brinkhuis, H., Chaproniere, G.C. H., Ennyu, A., Fothergill, P., Fuller, M.D., Grauert, M., Hill, P.J., Janecek, T.R., Kelly, D.C., Latimer, J.C., McGonigal, K., Nees, S., Ninnemann, U.S., Nürnberg, D., Pekar, S.F., Pellaton, C.C., Pfuhl, H.A., Röhl, U., Schellenberg, S.A., Shevenell, A.E., Stickley, C.E., Suzuki, N., Touchard, Y., Wei, W., White, T.S. (2001) Paleogene ocean opening south of Tasmania, and paleoceanographic implications: preliminary results of clay mineral analyses (ODP Leg 189). *Comptes-Rendus de l'Academie des Sciences de Paris*, 332:323-329.

- Swart, P.K., Wortmann, U.G., Mitterer, R.M., **Malone, M.J.**, Smart, P.L., Feary, D., and Hine, A.C. (2000). Hydrogen sulfide-rich hydrates and saline fluids in the continental margin of south Australia. *Geology*, 28:1039-1042.
- James, N.P., Feary, D.A., Surlyk, F., Simo, J.A., Betzler, C., Holbourn, A.E., Li, Q., Matsuda, H., Machiyama, H., Brooks, G.R., Andres, M., Hine, A.C., **Malone, M.J.**, and the ODP Leg 182 Scientific Party (2000) Quaternary bryozoan reef-mounds in cool-water, upper slope environments, Great Australian Bight. *Geology*, 28:647-650.
- Hine, A.C, Feary, D.A., **Malone, M.J.**, and the Leg 182 Shipboard Party (1999) Research in Great Australian Bight yields exciting early results (cover article). *EOS*, 80, no. 44, p. 521, 525-526.
- Malone, M.** and Baker, P. (1999) Temperature dependence of the strontium distribution coefficient in calcite: an experimental study from 40° to 200°C and application to natural diagenetic calcites. *Journal of Sedimentary Research*, 69:228-235.
- Major, C. O., Pirmez, C., Goldberg, D., and the **Leg 166 Scientific Party (including Malone)**, (1998) High-resolution core-log integration techniques: examples from the Ocean Drilling Program. In Harvey, P. K., and Lovell, M. A. (eds) *Core-Log Integration*, Geological Society, London, Special Publication 136:285-295.
- Malone, M.** Baker, P. and Burns, S. (1996) Hydrothermal dolomitization and recrystallization of dolomite breccias from the Miocene Monterey Formation, Tepusquet Area, California. *Journal of Sedimentary Research*, 66:976-990.
- Malone, M.** Baker, P. and Burns, S. (1996) Recrystallization of dolomite: an experimental study from 50° to 200° C. *Geochimica et Cosmochimica Acta*, 60:2189-2207.
- Malone, M.** Baker, P. and Burns, S. (1994) Recrystallization of dolomite: evidence from the Monterey Formation (Miocene), California. *Sedimentology*, 41:1223-1239.
- Malone, M.** Baker, P. Burns, S. and Swart, P. (1990) Geochemistry of periplatform carbonate sediments, Ocean Drilling Program Site 716 (Maldives Archipelago, Indian Ocean). In Duncan, R., Backman, J., Peterson, L.C., et al., *Proceedings ODP, Scientific Results 115*: College Station TX (Ocean Drilling Program), p. 647-659.
- Baker, P. **Malone, M.** Burns, S. and Swart, P. (1990) Minor element and stable isotopic composition of the carbonate fine fraction: Site 709, Indian Ocean. In Duncan, R., Backman, J., Peterson, L.C., et al., *Proceedings ODP, Scientific Results 115*: College Station TX (Ocean Drilling Program), p. 661-675.

PUBLICATIONS IN REVIEW

- Malone, M.J.**, Martin, J.B., Schönfeld, J. Ninnemann, U.S., Nürnberg, D., and White, T.S. (submitted) The oxygen isotopic composition and temperature of Southern Ocean bottom waters during the last glacial maximum. *Earth and Planetary Science Letters*, in review.
- Erbacher, J., Mosher, D., **Malone, M.** and Leg 207 Science Party (in review) Drilling uncovers causes and consequences of carbon cycle perturbations during the Cretaceous to Paleogene greenhouse. *EOS*, in review

Schubel, K.A., Veblen, D.R., and **Malone, M.J.** (*submitted*) Microstructures and textures of experimentally dolomitized ooids: Implications for reaction mechanisms of dolomitization. *Journal of Sedimentary Research*, in revision.

Brassell, S.C. and the **ODP Leg 198 Shipboard Scientific Party (including Malone)** (*submitted*) Alkenones in lower Aptian black shales from the Pacific, *Organic Geochemistry*, in review.

Feary, D.A., Hine, A.C., James, N.P., and **Malone, M.J.**, (*submitted*) Exposed secrets of the Great Australian Bight: synthesis of ODP Leg 182 Scientific Results. In Hine, A.C., Feary, D.A., and Malone, M.J., (eds.) *Proceedings ODP, Scientific Results*, 182, in revision.

IN PREPARATION

Slowey, N., **Malone, M.**, and Henderson, G. (in prep) Holocene accumulation of aragonite, high-Mg calcite, and low-Mg calcite on the slope of western Great Bahama Bank: filling a gap in the calcium carbonate budget.

White, T.S. and **Malone, M.J.**, (in prep) Salinity variation in the Eocene Australo-Antarctic Seaway: a record of the waxing and waning and Antarctic ice?

PEER-REVIEWED REPORTS

Exon, N.F., Kennett, J.P., **Malone, M.J.**, and Shipboard Scientific Party (2003) Gateways to glaciation: Antarctic–Australia separation, In K. White and E. Urquhart (Eds.) *ODP Highlights: International Scientific Contributions from the Ocean Drilling Program*, Joint Oceanographic Institutions, Inc. p. 19. A peer reviewed publication available at <http://www.joiscience.org/greatesthits2/Default.html>

Malone, M.J., (2002) *Data report*: Stable isotopic composition and mineralogy of cool-water carbonate sediments: Sites 1127, 1129, and 1131. In Hine, A.C., Feary, D.A., and **Malone, M.J.**, (eds.) *Proceedings ODP, Scientific Results*, 182 [Online]. Available at http://www-odp.tamu.edu/publications/182_SR/012/012.htm

Swart, P.K., James, N.P., Mallinson, D., **Malone, M.J.**, Matsuda, H., and Simo, A., (2002) *Data report*: The carbonate mineralogy of sites drilled during Leg 182. In Hine, A.C., Feary, D.A., and **Malone, M.J.**, (eds.) *Proceedings ODP, Scientific Results*, 182 [Online]. Available at http://www-odp.tamu.edu/publications/182_SR/010/010.htm

Malone, M.J., and Martin, J.B. (2000) *Data report*: Isotopic composition of pore fluids, New Jersey shelf and slope. In Christie-Blick, N., Austin, J.A., Jr., and Malone, M.J. (Eds.), *Proceedings ODP, Scientific Results*, 174A, 1-11 [Online]. Available at http://www-odp.tamu.edu/publications/174A_SR/chap_02/chap_02.htm.

Malone, M.J. (2000) *Data report*: Geochemistry and mineralogy of periplatform carbonate sediments: Sites 1006, 1008, and 1009. In Swart, P., Eberli, G.P., **Malone, M.J.**, and Sarg, R. (Eds.) *Proceedings ODP, Scientific Results*, 166: College Station, TX (Ocean Drilling Program, p. 145-152. (http://www-odp.tamu.edu/publications/166_SR/166TOC.HTM).

EDITED BOOKS

- Exon, N., Kennett, J., **Malone, M.J.**, in prep, *Cenozoic Paleoceanography and Tectonics in the Expanding Tasmanian Seaway*, AGU Geophysical Monograph Series.
- Erbacher, J., Mosher, D., **Malone, M.**, et al (in press) The Demerara Rise: Equatorial Cretaceous and Paleogene paleoceanographic transect, Western Atlantic: *Proceedings of the Ocean Drilling Program, Initial Reports*, 207: College Station, TX.
- Bralower, T.J., Premoli Silva, I., **Malone, M.J.**, et al. (2002) Extreme warmth in the Cretaceous and Paleogene: a depth transect on Shatsky Rise, Central Pacific. *Proceedings of the Ocean Drilling Program, Initial Reports*, 198: College Station, TX. http://www-odp.tamu.edu/publications/198_IR/198ir.htm
- Christie-Blick, N., Austin, J.A., **Malone, M.J.**, (2002) Continuing the New Jersey Mid-Atlantic Sea-Level Transect, *Proceedings of the Ocean Drilling Program, Scientific Results*, 174A: College Station, TX (Ocean Drilling Program). http://www-odp.tamu.edu/publications/174A_SR/174ATOC.HTM
- Exon, N., Kennett, J., **Malone, M.J.**, et al. (2001) The Tasmanian Gateway: Cenozoic Climatic and Oceanographic Development, *Proceedings of the Ocean Drilling Program, Initial Reports*, 189 [CD-ROM]: College Station, TX. http://www-odp.tamu.edu/publications/189_IR/189ir.htm.
- Becker, K., **Malone, M.**, et al. (2001) CORK Hole 395A, *Proceedings of the Ocean Drilling Program, Scientific Reports*, 174B: College Station, TX (Ocean Drilling Program).
- Swart, P.K., Eberli, G.P., **Malone, M.J.**, Sarg, R. (2000) Bahamas Transect, *Proceedings of the Ocean Drilling Program, Scientific Results*, 166: College Station, TX (Ocean Drilling Program), 195 p. http://www-odp.tamu.edu/publications/166_SR/166sr.htm.
- Feary, D., Hine, A., **Malone, M.J.**, et al. (2000) Great Australian Bight, *Proceedings of the Ocean Drilling Program, Initial Reports*, 182 [CD-ROM]: College Station, TX (Ocean Drilling Program). http://www-odp.tamu.edu/publications/182_IR/182ir.htm.
- Austin, J.A., Christie-Blick, N., **Malone, M.J.**, et al. (1998) Continuing the New Jersey Mid-Atlantic Sea-Level Transect, *Proceedings of the Ocean Drilling Program, Initial Reports*, 174A: College Station, TX (Ocean Drilling Program), 324 p. http://www-odp.tamu.edu/publications/174A_IR/INTRO.HTM
- Becker, K., **Malone, M.**, et al. (1998) CORK Hole 395A, *Proceedings of the Ocean Drilling Program, Initial Reports*, 174B: College Station, TX (Ocean Drilling Program), 46 p. http://www-odp.tamu.edu/publications/174B_IR/INTRO.HTM.
- Eberli, G.P., Swart, P.K., **Malone, M.J.**, et al., (1997) Bahamas Transect, *Proceedings of the Ocean Drilling Program, Initial Reports*, 166: College Station, TX (Ocean Drilling Program), 850 p. <http://www-odp.tamu.edu/publications/166IR/INTRO.HTM>

INFORMAL (UNREVIEWED) Publications

- Shipboard Scientific Party** (2003) The Demerara Rise: Equatorial Cretaceous and Paleogene Paleoceanographic Transect, Western Atlantic. *Leg 198 Preliminary Report*

Bralower, T., Premoli Silva, I., **Malone, M.J.**, and the Leg 198 Science Party (2002) ODP Leg 198: New evidence for rapid climate change in the Cretaceous and Paleogene from the Shatsky Rise, northwest Pacific Ocean. *JOIDES Journal*, v. 28, no 2, p. 13-17.

Contributing author (2002) *Encyclopedia of Oceanography and Marine Science*, Fitzroy Dearborn, in press.

Mills, B., and **Malone M.J.**, (2002). *Hydrogen Sulfide Drilling Contingency Plan*, Ocean Drilling Program Technical Note, in press.

Shipboard Scientific Party (2002) Extreme Warmth in the Cretaceous and Paleogene: a Depth Transect on Shatsky Rise, Central Pacific. *Leg 198 Preliminary Report*.

Exon, N.F., Kennett, J.P., **Malone, M.J.**, and Shipboard Scientific Party (2000) The opening of the Tasmanian Gateway drove global Cenozoic paleoclimatic and paleoceanographic changes: results of Leg 189. *JOIDES Journal*, v. 26, no. 2, p. 11-18.

Shipboard Scientific Party (2000) The Tasmanian Gateway between Australia and Antarctica—Paleoclimate and Paleoceanography, *Leg 189 Preliminary Report*.

Feary, D., Hine, A., **Malone, M.J.**, and the Leg 182 Scientific Party (1999) Cool-water 'reefs,' possible hydrogen sulfide/methane clathrates, and brine circulation — preliminary results of Leg 182 drilling in the Great Australian Bight. *JOIDES Journal*, v. 25, no. 2, p. 4-7.

Feary, D., Hine, A.C., **Malone, M.J.** and Leg 182 Scientific Party (1999) Great Australian Bight: Cenozoic Cool-Water Carbonates, *Leg 182 Preliminary Report*.

Austin, J.A., Christie-Blick, N., **Malone, M.**, Mountain, G.S., and Leg 174A Shipboard Party (1998) Miocene to Pleistocene sand-rich sequences and sea-level changes at the New Jersey outer shelf: Results from Leg 174A, *JOIDES Journal*, v. 24, no. 1.

Becker, K., the **Leg 174B Scientific Party**, and Davis, E. (1998) Leg 174B revisits Hole 395A: Logging and long-term monitoring of off-axis hydrothermal processes in young oceanic crust, *JOIDES Journal*, v. 24, no. 1.

Becker, K., **Malone, M.J.** and Leg 174B Scientific Party (1997) CORK Hole 395A, *Leg 174B Preliminary Report*.

Austin, J.A., Christie-Blick, N., **Malone, M.J.**, and Leg 174A Scientific Party (1997) Continuing the New Jersey Mid-Atlantic Sea-Level Transect. *Leg 174A Preliminary Report*.

Eberli, G.P., Swart, P., **Malone, M.J.**, and Leg 166 Scientific Party (1996) The Bahamas transect, *Leg 166 Preliminary Report*.

ABSTRACTS

Malone, M.J., Spivack, A.J., Martin, J.B., (2003) Origin of low chloride pore fluids on a passive continental margin, offshore Tasmania (ODP Leg 189). *GSA Abstracts with Programs*, v. 35.

Erbacher, J., Mosher, D., **Malone, M.**, and the Leg 207 Scientific Party (2003) The Demerara Rise equatorial Cretaceous and Paleogene paleoceanographic transect: initial results from Ocean Drilling Program Leg 207. *EGS - AGU - EUG Joint Assembly*, Nice, France, April 2003.

- Malone, M.J.**, Martin, J.B., Ninnemann, U.S., Nürnberg, D., White, T.S. (2002) The oxygen isotopic composition and temperature of Southern Ocean bottom waters during the last glacial maximum. *EOS, Transactions AGU*.
- Bralower, T., Premoli Silva, I., **Malone, M.J.**, Thomas, D.J., and the Leg 198 Science Party (2002) New Evidence for Abrupt Climate Change in the Cretaceous and Paleogene: Ocean Drilling Program Leg 198 to Shatsky Rise, Northwest Pacific. *EOS, Transactions AGU*.
- Malone, M.J.**, Claypool, G., Martin, J.B., and Dickens, G.R., (2001) Stable isotopic composition of interstitial waters and authigenic carbonates, New Jersey shelf: origin of carbonates and implications for methane flux. *EOS, Transactions AGU*.
- Schubel, K.A., Veblen, D.R., and **Malone, M.J.** (2001) Microstructures and textures of experimentally dolomitized ooids: Implications for reaction mechanisms of dolomitization. *GSA Abstracts with Programs*, v. 33.
- Malone, M.J.**, Swart, P.K., James, N.P. (2000) Rapid marine burial diagenesis of cool-water carbonates, Great Australian Bight, ODP Sites 1127, 1129, and 1131. *GSA Abstracts with Programs*, v. 32.
- Feary, D.A., James, N.P., Swart, P.K., Isern, A.R., Hine, A.C., **Malone, M.J.** (2000) Cool-water carbonate mounds and saline fluid flow on the southern Australian margin - is there a causal relationship? *EOS, Transactions AGU*, v. 81.
- Exon, N, Kennett, J., **Malone, M.**, and Shipboard Scientific Party (2000) Australian-Antarctic separation and Cenozoic climate change: ODP Leg 189 *EOS, Transactions AGU*, v. 81.
- Kennett, J. P., Exon, N., **Malone, M. J.**, and the Shipboard Scientific Party (2000) The Tasmanian Gateway opening during the Eocene/Oligocene transition: ODP Leg 189 *EOS, Transactions AGU*, v. 81.
- Malone, M.**, Mitterer, D., Swart, P.K., Wortmann, U., Feary, D., Hine, A., and Leg 182 Scientific Party (1999). Simultaneous methanogenesis and sulfate reduction in carbonate-rich sediments, Great Australian Bight (ODP Leg 182). *EOS, Transactions AGU*, v. 80.
- Swart, P.K., Wortmann, U., Mitterer, D., **Malone, M.** Feary, D., Hine, A., Martin, J. (1999) The origin of saline brines with unusual Na⁺/Cl⁻ ratios in the continental margin of southern Australia. *EOS, Transactions AGU*, v. 80.
- Feary, D. Isern, A. James, N. Hine, A. **Malone, M.** and ODP Leg 182 Science Party (1999) Seismic morphology and downhole log signatures of cool-water carbonates on the southern Australian margin mimic warm-water carbonates. *EOS, Transactions AGU*, v. 80.
- Swart, P.K., Wortmann, U., Mitterer, D., **Malone, M.** Feary, D., Hine, A., and Shipboard Scientific Party (1999) Saline fluids beneath the south Australian continental margin: origin and implications for diagenesis. *EOS, Transactions AGU*, v. 80.
- Feary, D.A., Hine, A.C., **Malone, M.J.**, Simo, J.A. and the Shipboard Scientific Party (1999) Cool-water carbonates, ODP Leg 182, Great Australian Bight: 11th Bathurst Meeting, University of Cambridge, July 1999.
- Austin, J. A., Jr., N. Christie-Blick, **M. Malone**, and the Leg 174A Shipboard Party (1998) Exploring the timing, amplitudes, and causes of Neogene global sea-level fluctuations: the

Ocean Drilling Program's inaugural expedition to the New Jersey continental shelf (abs): Strata and Sequences on Shelves and Slopes, SEPM-IAS Research Conference, Sicily.

Malone, M., (1997) Early diagenesis of shallow-water, Pleistocene periplatform carbonate sediments, western Great Bahama Bank, ODP Sites 1008 and 1009; *GSA Abstracts with Programs*, v. 29.

Dickens, G., **Malone M.**, Claypool, G., and ODP Leg 174A Scientific Party (1997). Glacial-interglacial oscillations in activity of marine subsurface bacteria: pore-water chemistry of rapidly accumulating sediment on the New Jersey margin. *EOS, Transactions AGU*, v. 77.

Becker, K., **Malone, M.** and the Leg 174B Scientific Party (1997). Leg 174B revisits Hole 395A to investigate hydrogeology of young oceanic crust in the North Atlantic Ocean. *EOS, Transactions AGU*, v. 77.

Eberli, G.P. Swart, P.K. **Malone, M** and Leg 166 Shipboard Party (1996). The record of Neogene sea-level changes on the slopes of western Great Bahama Bank: results from ODP Leg 166. *Geological Society of America, Abstracts with Programs*, v. 28.

Swart, P.K. Eberli, G.P., DeCarlo, E. Kramer, P. Nagihara, S. **Malone, M** and Leg 166 Shipboard Party (1996). Fluid flow in the margin of Great Bahama Bank: evidence from interstitial water chemistry collected during Leg 166. *Geological Society of America, Abstracts with Programs*, v. 28.

Malone, M. Baker, P. and Burns, S. (1995) Recrystallization of dolomite: an experimental study from 50° to 200° C. *Geological Society of America, Abstracts with Programs*, v. 27.

Malone, M. Baker, P. and Burns, S. (1994) Recrystallization of dolomite: evidence from the Monterey Formation (Miocene), California. *SEPM Research Conference: Basinwide Diagenetic Patterns*, Lake Ozark, MO, May 21-25, 1994, p. 46.

Malone, M. Baker, P. and Burns, S. (1994) Hydrothermal dolomitization and recrystallization of fractured dolomite breccias from the Monterey Formation, Colson and Tepusquet Canyons, California. *Geological Society of America, Abstracts with Programs*, v. 26.

Malone, M. Baker, P. Laber, C. and Burns, S. (1993) Burial diagenesis of dolomite from the Miocene Monterey Formation. *AAPG*, v. 77.

Malone, M. Baker, P. and Burns, S. (1993) Recrystallization of dolomite from the Miocene Monterey Formation, California. *GSA Abstracts with Programs*, v. 25.

Baker, P.A. and **Malone, M.J.** (1991) Geochemistry of periplatform carbonate sediments. *Dolomieu Conference on Carbonate Platforms and Dolomitization*, The Dolomites, Italy 16-21 Sept. 1991, p. 10.

Malone, M. Baker, P. Burns, S. and Swart, P. (1989) Diagenesis of periplatform carbonate sediments, Ocean Drilling Program Site 716: Maldives Archipelago, Indian Ocean. *Geological Society of America, Abstracts with Programs*, v. 21.

LABORATORY SKILLS

Major and trace element analysis of carbonate rocks and sediments using atomic absorption spectrophotometry (AAS) (in standard flame mode and with a graphite furnace) and direct current (DCP) and inductively coupled (ICP) plasma emission spectrometry; quantitative

phases analysis and crystallographic analysis of powder XRD patterns by Rietveld structure refinements; chemical analysis of waters using AAS, DCP, ICP, ion chromatography, and colorimetric wet chemical techniques; and to a lesser extent: petrographic analysis of carbonate rocks and sediments, including cathode luminescence and fluid inclusion microthermometry; strontium isotope analysis using thermal ionization mass spectrometry; carbon and oxygen isotope analysis of carbonate minerals.

EDUCATIONAL OUTREACH

- 2002 Gave presentation "How does geology and studying ancient environments affect our everyday lives" at Cypress Grove Intermediate School, College Station, TX.
- 2001 Presented "Volcanoes" at Career Day, Southwood Valley Elementary School, College Station, TX.
- 2001 Gave presentation on "What is Geology" and led a local field trip for 1st grade class at St. Thomas Early Learning Center, College Station, TX.
- 2000 Presented a general geology talk to 4th grade science class, Southwood Valley Elementary School, College Station, TX.
- 1999 Gave presentation "How do geologists study sediments and rocks in the oceans" which included hands-on coring activities at Career Day, Southwood Valley Elementary School, College Station, TX.
- 1998 Presented "Volcanoes" at Career Day, Southwood Valley Elementary School, College Station, TX.

INVITED SEMINARS

- 2002 Penn State University
University of Texas at Arlington
Texas A&M University, Department of Oceanography
- 2001 University of Florida
Texas A&M University, Department of Geology and Geophysics
- 2000 Texas A&M University, Department of Oceanography
- 1999 University of Texas at Dallas
- 1995 Texas A&M University, Department. Geology and Geophysics
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