



CURRICULUM VITAE

JAMES M. BROOKS

April 2005

PROFESSIONAL EXPERIENCE:

- President & C.O.O, TDI - Brooks International Inc., 1996-Present.
- Director, B&B Laboratories Inc., 1996-Present.
- President, GEO3 Inc., 1998-Present.
- Senior Scientist, Arctic Research Institute, University of Alaska-Fairbanks, UAF, 1996-2000.
- Director, Geochemical and Environmental Research Center, TAMU, 1987-Sept. 1995.
- Director, Geochemical and Environmental Research Group, TAMU, 1984-Sept. 1995.
- Faculty of Toxicology Member, Texas A&M University, TAMU, 1994-Present.
- Senior Research Scientist and Senior Lecturer, Oceanography, TAMU, 1985-1996.
- Associate Research Scientist, Oceanography, Texas A&M University, 1981-1985.
- Lecturer, Oceanography, Texas A&M University, 1979-1996.
- Assistant Research Scientist, Oceanography, Texas A&M University, 1976-1980.
- Graduate Faculty Member, Texas A&M University, 1978-2000.
- Research Associate, Oceanography, Texas A&M University, 1973-1976.
- Research Associate, Ocean Affairs Board of the National Academy of Sciences, 1973.
- Research Associate, Oceanography, Texas A&M University, 1969-1972.

PROFESSIONAL SUMMARY

Dr. Brooks is President of TDI-Brooks International, Inc. a company specializing in offshore research and survey studies for federal/state agencies as well as the oil industry. TDI-Brooks was founded in May 1996 and performs \$7 to \$12 million of projects each year. The company owns and operates two research vessels --- the R/V GEOEXPLORER and R/V JW POWELL. Dr. Brooks was the founder and Director of the Geochemical and Environmental Research Group (GERG) at Texas A&M University from 1975 until September 1995. As Director between 1975 and 1996, he built an organization specializing in high quality analytical, oceanographic and environmental research and services with annual revenues between 1991 and 1995 of around \$10 million/year. In August 1995, he directed a staff of ~130 people, including 28 Ph.D. level senior personnel, ~60 professional MS- and BS-level full-time research associates, research assistants, technicians, graduate research assistants, and ~40 other staff. He has been Project Director on many federal projects for the National Oceanic and Atmospheric Administration (NOAA), the US Environmental Protection Agency (USEPA), Office of Naval Research (ONR), the Minerals Management Service (MMS), the US Fish and Wildlife Service (USFWS), and other state and federal agencies. He has extensive experience in the management of large environmental and oceanographic projects as well as the technical competency in environmental and geochemistry, surface geochemical exploration, oil spill assessment, gas hydrates, chemosynthetic ecosystems, stable isotope geochemistry, and oceanography. He has academic credentials consisting of 200 peer-review publications including numerous publications in prestigious journals such as Science and Nature. He has served on many national committees, conferences and workshops. He has chaired 19 M.S. and Ph.D. committees at Texas A&M University. He has won the Faculty Distinguished Achievement Award for Research awarded annually by the Association of Former Students of Texas A&M University. He holds an appointment in the Faculty of Toxicology at Texas A&M University. He is currently an Advisory Council Member, Southeast Advisory Council for Undersea Research and Education (SEACURE) for NOAA's Undersea Research Center at UNCW (NURC).

Dr. Brooks manages at TDI-Brooks the current 5-year contract for the NOAA National Status and Trends (NS&T) Mussel Watch project, which is the premier, long standing coastal environmental monitoring program in the nation. He is in his 20th year of management of this project. He is also Project Director of a 5-year US Fish and Wildlife



Service (USFWS) contract for trace organic residue analysis and various other EPA and NOAA projects. Dr. Brooks also directs over \$5 million yearly of industry sponsored projects many of which are multidisciplinary.

Dr. Brooks has participated in and/or managed a number of MMS projects over the last twenty (20) years both in the Gulf of Mexico and offshore California. On most of these projects his responsibility included project management and/or the contaminant chemistry work element. He was Project Director for the 1991 Chemosynthetic Ecosystem Study (\$1.4 million/31 months) of oil and gas seep communities in the Gulf of Mexico. This project resulted from many of his early discoveries of gas hydrates, oil seepage and chemosynthetic mussels, clams and tubeworms in the deep water Gulf. He has about forty (40) peer-reviewed publications on chemosynthetic ecosystems and associated seep-related phenomena. He was Chemistry Group Leader for the Gulf of Mexico Offshore Operations Monitoring Experiment (GOOMEX) which was funded at \$4.4 million/31 months (Chemistry Group Leader). On this project he was responsible for the review and integration of the hydrocarbon and trace metal work elements. He was a member of the Scientific Review Board and provided the chemical analysis for the Southern California Platform Study under subcontract to SAIC. He was Project Director of the Mississippi-Alabama Marine Ecosystem Study (\$3.2 million/3 years). He was a Principal Investigator responsible for the field collection, chemistry elements and physical oceanography for the Northern Gulf of Mexico Slope Study under subcontract to LGL Associates. In the late 1970's/early 1980's, he was Co-PI responsible for parts of the hydrocarbon component of the South Texas OCS Study. TDI-Brooks under subcontract to CSA is currently providing the field collection and hydrocarbon chemistry components of the MMS "Deepwater Program: Effects of Oil and Gas Exploration and Development at Selected Continental Slope Sites in the Gulf of Mexico" project. TDI-Brooks' research vessel, the R/V JW POWELL, was used for the field sampling on this project.

Dr. Brooks has been conducting research and oil industry-sponsored service projects in the Gulf of Mexico for the last twenty-five (25) years. As part of his surface geochemical exploration (SGE) studies, which he developed for industry in the early 1980's, he has collected approximately 9,000 cores in the Gulf, mostly in the deep water. These SGE coring studies resulted and contributed to the discoveries of macro oil seepage, chemosynthetic communities, and gas hydrates in the Gulf of Mexico. He was a co-discoverer of oil seep and chemosynthetic communities in the deep water Gulf of Mexico in 1985. He made the first discoveries of thermogenic gas hydrates in the deep water Gulf of Mexico that was published in Science as well as participated in the initial discoveries of other oil-seep related phenomena including oil-stained cores on the continental slope, widespread occurrence of shallow and outcropping gas hydrates, brine seepage, and visible oil seepage to the sea surface. In the late 80's and early 90's he was awarded extensive NOAA National Undersea Research Program (NURP) JOHNSON SEA-LINK, ALVIN, and Navy NR-1 submersible dive time in the Gulf of Mexico. His current SGE coring and satellite seep studies in the southern Gulf for PEMEX resulted in the recent publication in Science on the discovery of tar flows and chemosynthetic communities in the Campeche Knoll region offshore Mexico. He has also made the first chemosynthetic ecosystems discovery of chemosynthetic ecosystems in West Africa (i.e., Nigeria) north of the equator.

SELECTED PROFESSION ACTIVITES/AWARDS:

- Advisory Council Member, SouthEast Advisory Council for Undersea Research and Education (SEACURE) for NOAA's Undersea Research Center at UNCW (NURC), January 2005 to present.
- Invited Member, Consortium of Oceanographic Research and Education (CORE), Economic Development Committee, Partnership for Stakeholders in the Ocean's Report, July 1995.
- Invited Participant, Int'l Arctic Monitoring and Assessment Program Meeting, Tromsø, Norway, March 1993.
- Organizing Committee Member, Second International Ocean Pollution Symposium (2IOPS), 1993.



- U.S. EPA, Science Advisory Board, Ecological Processes and Effects Committee, Marine Monitoring Task Group; member of a review team for draft monitoring guidance document for the National Estuary Program, 1991.
- Estuarine Assessment and Contaminant Problem Identification, Member, EPA-sponsored workshop, Biloxi, MS, 23 - 25 April, 1991.
- Ad Hoc Advisory Committee on the NOAA Undersea Research Program (NURP), 1991.
- Marine Organic Geochemistry Workshop, December 1990, Honolulu, HA, sponsored by NSF and ONR; Invited participant, December 1990.
- Faculty Distinguished Achievement Award for Research - Association of Former Students of Texas A&M University, May 1988.
- Organic Geochemist, Deep Sea Drilling Project, Leg 96, 1983.
- National Science Foundation, Marine Chemistry Proposal Review Panelist, August 1984.
- Executive Committee Member, Third International Ocean Dumping Symposium, Woods Hole, Mass., 1981.

SELECTED CONSULTING INCLUDING:

- California Fish and Game Commission, Office of Oil Spill Prevention & Response (OSPR) through Hagler Bailly Consulting, Inc., Consultant on the Unocal/Guadalupe Natural Resource Damage Assessment, 1996.
- SAIC for MMS Phase III Project entitled "Monitoring Assessment of Long-Term Changes in Biological Communities in the Santa Marina Basin" - Member of Quality Review Board, 1993-1995.
- Lillick & Charles, Consultant on alleged 1991 SAMMI SUPERSTARS oil spill in Los Angeles Harbor, 1992-1996.
- Exxon Company USA, Background technical report on Hydrocarbons in Subtidal Sediments - Temporal and Polar Climates, 1990.
- Technical Resources Inc., Evaluation of the hydrocarbon chemistry aspects of oil spill fisheries interactive models for a MMS contract, 1987.
- Continental Shelf Associates, Summary of existing knowledge of hydrocarbon chemistry and chemosynthetic communities in the Gulf of Mexico for a MMS contract, 1987.
- Exxon Production Research, Oil dispersant review, 1985.
- Saudi Arabian Ministry of Health through Morgan-Newman Associates, Contaminant testing for Arabian Gulf fisheries, 1984.

FORMAL EDUCATION:

- *Abilene Christian University*
Department of Chemistry
Abilene, Texas
B.S., Chemistry, 1969
- *Texas A&M University*
Department of Oceanography
College Station, Texas 77845
M.S., Oceanography, 1970
- *Texas A&M University*
Department of Oceanography
College Station, Texas 77845
Ph.D., Oceanography, 1975

MANAGEMENT STRENGTHS:

- Providing leadership and vision for organizational growth in the environmental and geochemical arenas.



- Managed one of the world's premier environmental and geochemical research organizations with core competencies in high quality environmental analysis, oceanographic field operations often in remote environments, petroleum geochemistry including surface geochemical exploration, marine surveys, and multidisciplinary project management.
- Demonstrated ability to manage as Project Director large multidisciplinary environmental and oceanographic programs for federal and state agencies.
- Extensive experience in the management of field operation in remote regions as well as coastal sampling.
- Demonstrated ability to manage a domestic and international marketing team consisting of industrial and federal project development personnel and scientist.
- Demonstrated ability to manage a diverse trace organic and geochemical analytical laboratory.
- Has a network of academic and industrial scientists from past projects that can be brought together, often on an exclusive basis, to form strong project teams for multidisciplinary projects.

TECHNICAL STRENGTHS:

- Technical specialties in environmental chemistry, surface geochemical exploration, oil spill assessment, gas hydrates, chemosynthetic ecosystems, stable isotope geochemistry, and oceanography.
- Project Management experience for a number of major federal projects including:
 - Five periods (1984-2010) of NOAA's National Status and Trends Mussel Watch Project (\$0.5 to 1.0 million/ years for 20 years);
 - EPA's Environmental Monitoring and Assessment Program (EMAP) – Near Coastal (\$3 million/3 years);
 - MMS's Chemosynthetic Ecosystems Study (\$1.3 million/3 years);
 - ONR's Arctic Nuclear Waste Assessment Project (a number of separate projects - \$2.5 million/3 years);
 - EPA's Arctic Contaminants Research Program (\$700,000/3 years);
 - USFWS's Contract Laboratory Program for Both Trace Organics and Trace Metals (\$8 million over 5 years);
 - MMS's "Gulf of Mexico Benthic Slope Study" (~\$800,000/4 years); and
 - Numerous other NSF, DOE, EPA and other federal agency projects.
- Oil spill response, fingerprinting and NRDA expertise and experience including:
 - Extensive analytical work for both the Trustee's and Exxon Company USA for the EXXON VALDEZ NRDA;
 - Response to numerous oil spills including MEGA BORG, BAHIA PARISO, APEX Barge, Neah Bay, IXTOC-I, etc.; and
 - Oil spill dispersant research for Exxon, MSRC and the Texas General Land Office.
- Development of widely used surface geochemical exploration techniques that have generated nearly \$20 million of revenue over the last 15 years.
- Development of oil, rock and seep petroleum geochemistry correlation studies that have generated over \$2 million of revenue.
- The supervision and production of complex multidisciplinary proposal, technical reports, peer-reviewed articles and synthesis reports.
- Making presentations at national and international meeting for both marketing and scientific purposes.

PUBLICATIONS:

Over 210 peer-reviewed publications including:

Brooks, J.M., Deep methane maxima in the northwestern Caribbean Sea: possible seepage on the Jamaica Ridge, Science, 206: 1069-1071, 1979.



- Brooks, J.M., D.A. Wiesenburg, R.A. Burke, and M.C. Kennicutt II, Gaseous and volatile hydrocarbon inputs from a subsurface oil spill in the Gulf of Mexico, Environmental Science and Technology, 15(8): 951-959, 1981.
- Burke, R.A., J.M. Brooks, and W.M. Sackett, Light hydrocarbons in Red Sea brines and sediments, Geochimica et Cosmochimica Acta, 45(5): 627-634, 1981.
- Brooks, J.M., D.F. Reid, and B.B. Bernard, Methane in the upper water column of the northwestern Gulf of Mexico, Journal of Geophysical Research, 86(11): 11029-11040, 1981.
- Wiesenburg, D.A., J.M. Brooks, and R.A. Burke, Jr., Gaseous hydrocarbons around an active offshore gas and oil field, Environmental Science and Technology, 16(5): 278-282, 1982.
- Brooks, J.M., D.A. Wiesenburg, G. Bodennec, and T.C. Sauer III, Volatile organic wastes at the Puerto Rico dumpsite. In Wastes in the Ocean, Vol. I, edited by I.W. Duedall, B.H. Ketchum, P.K. Park, and D.R. Kester, John Wiley & Sons, pp. 171-200, 1983.
- Brooks, J.M., L.A. Barnard, D.A. Wiesenburg, M.C. Kennicutt II, and K.A. Kvenvolden, Molecular and isotopic compositions of hydrocarbons at Site 533, DSDP Leg 76. In Initial Reports of the Deep Sea Drilling Project, 76, edited by R.E. Sheridan, F.M. Gradstein, et al., U.S. Govt. Printing Office, Washington, pp. 377-389, 1983.
- Wiesenburg, D.A., and J.M. Brooks, Eddy-enhanced dispersion of ocean-dumped organic waste at Deep Water Dumpsite - 106, Canadian Journal of Fisheries and Aquatic Science, 40(2): 248-261, 1983.
- Jeffrey, A.W.A., R.C. Pflaum, J.M. Brooks, and W.M. Sackett, Vertical trends in particulate organic carbon 13C:12C ratios in the upper water column, Deep-Sea Research, 30(9): 971-983, 1983.
- Kennicutt, M.C. II, and J.M. Brooks, Relationship between pelagic tar, fluorescence, and biological markers in the South Atlantic Ocean, Marine Pollution Bulletin, 14(9): 335-342, 1983.
- Brooks, J.M., M.C. Kennicutt II, R.R. Fay, T.J. McDonald, and R.A. Sassen, Thermogenic gas hydrates in the Gulf of Mexico, Science, 225: 409-411, 1984.
- Bidigare, R.R., M.C. Kennicutt II, and J.M. Brooks, Rapid determination of chlorophylls and their degradation products by high-performance liquid chromatography, Limnology and Oceanography, 30, 434-437, 1985.
- Trees, C.C., M.C. Kennicutt II, and J.M. Brooks, Errors associated with the standard fluorometric determinations of chlorophylls and phaeopigments, Marine Chemistry, 16, 1-12, 1985.
- Wiesenburg, D.A., J.M. Brooks, and B.B. Bernard, Biogenic hydrocarbon gases and sulfate reduction in the Orca Basin brine, Geochimica et Cosmochimica Acta, 49(10): 2069-2080, 1985.
- Kennicutt, M. C. II, J. M. Brooks, R. R. Bidigare, R. R. Fay, T. L. Wade, and T. J. McDonald, Vent type taxa in a hydrocarbon seep region on the Louisiana slope, Nature, 317: 351-353, 1985.
- Brooks, J.M., M.C. Kennicutt II, R.R. Bidigare and R.A. Fay, Hydrates, oil seepage and chemosynthetic ecosystems on the Gulf of Mexico slope, EOS, 66(10): 105, 1985.
- Trees, C.C., R.R. Bidigare, and J.M. Brooks, Distribution of chlorophylls and phaeopigments in the northwestern Atlantic Ocean, Journal of Plankton Research, 8(3): 447-458, 1986.



- Bidigare, R.R., T. Frank, C. Zastrow, and J.M. Brooks, The distribution of algal chlorophylls and their degradation products in the Southern Ocean, Deep-Sea Research, **33**: 923-937, 1986.
- Brooks, J.M., M.C. Kennicutt II, and B.D. Carey, Jr., Offshore surface geochemical exploration, Oil and Gas Journal, **84**(42): 66-72, 1986.
- Childress, J.J., C.R. Fisher, J.M. Brooks, M.C. Kennicutt II, R. R. Bidigare, and A. Anderson, A methanotrophic marine molluscan symbiosis (*Bivalvia Mytilidae*): Mussels fueled by gas, Science, **233**: 1306-1308, 1986.
- Brooks, J.M., H.B. Cox, W.R. Bryant, M.C. Kennicutt II, R.G. Mann, and T.J. McDonald, Association of gas hydrates and oil seepage in the Gulf of Mexico, Organic Geochemistry, **10**: 221-234, 1986.
- Kennicutt, M. C. II, J. L. Sericano, T. L. Wade, F. Alcazar, and J. M. Brooks, High molecular weight hydrocarbons in Gulf of Mexico continental slope sediments, Deep-Sea Research, **34**(3A): 403-424, 1987.
- Kennicutt, M.C. II, G.J. Denoux, J.M. Brooks, and W.A. Sandberg, Hydrocarbons in Mississippi fan and intraslope basin sediments, Geochimica et Cosmochimica Acta, **51**: 1457-1466, 1987.
- Lacerda, C.P., M.C. Kennicutt II, and J.M. Brooks, The distribution of dibenzothiophenes in Gulf of Mexico sediments, Applied Geochemistry, **2**(3): 297-304, 1987.
- Brooks, J.M., M.C. Kennicutt, C.R. Fisher, S.A. Macko, K. Cole, J.J. Childress, R.R. Bidigare, and R.D. Vetter, Deep-sea hydrocarbon seep communities: Evidence for energy and nutritional carbon sources, Science, **238**: 1138-1142, 1987.
- Kennicutt, M.C. II, J.M. Brooks, E.A. Atlas, and C.S. Giam, Organic compounds of environmental concern in the Gulf of Mexico: a review, Aquatic Toxicology, **11**(1): 191- 212, 1988.
- Kennicutt, M.C. II and J.M. Brooks, Surface geochemical exploration studies predict API gravity, offshore California, Oil and Gas Journal, **86**(37): 101-106, 1988.
- Wade, T.L., E.L. Atlas, J.M. Brooks, M.C. Kennicutt II, R.G. Fox, J. Sericano, B. Garcia-Romero, and D. DeFrias, NOAA Gulf of Mexico Status and Trends Program: trace organic contaminant distribution in sediments and oysters, Estuaries, **11**: 171-179, 1988.
- Kennicutt, M.C. II, J.M. Brooks, R.R. Bidigare, and G.J. Denoux, Gulf of Mexico hydrocarbon seep communities. I. Regional distribution of hydrocarbon seepage and associated fauna, Deep-Sea Research, **35**: 1639-1651, 1988.
- Wade, T.L., B. Garcia-Romero, and J.M. Brooks, Tributyltin contamination in bivalves from U.S. coastal estuaries, Environmental Science and Technology, **22**: 1488-1493, 1988.
- Kennicutt, M.C. II and J.M. Brooks, Relationship between shallow sediment bitumens and deeper reservoired hydrocarbons: Offshore Santa Maria basin, Applied Geochemistry, **3**(6): 573-582, 1988.
- Brooks, J.M., E.N. Powell, M.C. Kennicutt II, R.S. Carney, I. Rosman, S.J. McDonald, R.R. Bidigare, and T.L. Wade, Gulf of Mexico hydrocarbon seep ecosystem studies. In NOAA Symposium Series for Undersea Research, **6**(2): 119-135, 1988.



- Kennicutt, M.C. II, J.M. Brooks, S. Macko, and R.R. Bidigare, An upper slope "cold" seep community: northern California, *Limnology and Oceanography*, 34(3): 635-640, 1989.
- Wade, T.L., M.C. Kennicutt, and J.M. Brooks, Gulf of Mexico hydrocarbon seep communities: III. Aromatic hydrocarbon concentrations in organisms, sediments and water, *Marine Environmental Research*, 27: 19-30, 1989.
- Alcazar, F., M.C. Kennicutt II and J.M. Brooks, Benthic tars in the Gulf of Mexico: Chemistry and sources, *Organic Geochemistry*, 14(4): 433-440, 1989.
- MacDonald, I., J.S. Baker, G.S. Boland, J.M. Brooks, M.C. Kennicutt II, and R.R. Bidigare, Gulf of Mexico hydrocarbon seep communities: II. Seep organisms and hydrocarbons at Bush Hill, *Marine Biology*, 101: 235-247, 1989.
- Thompson, K.F., M.C. Kennicutt II, and J.M. Brooks, Classification of offshore Gulf of Mexico oils and gas condensates, *American Association of Petroleum Geologists Bulletin*, 74(2): 187-198, 1990.
- Fisher, C.R., M.C. Kennicutt, and J.M. Brooks, Carbon isotopic evidence for carbon limitation in hydrothermal vent Vestimentiferans, *Science*, 247: 193-197, 1990.
- MacDonald, I.R., J.F. Reilly II, N.L. Guinasso, Jr., J.M. Brooks, R.S. Carney, W.A. Bryant, and T.J. Bright, Chemosynthetic mussels at a brine-filled pockmark in the northern Gulf of Mexico, *Science*, 248: 1096-1099, 1990.
- Brooks, J.M., M.C. Kennicutt II, T.L. Wade, A.D. Hart, G.J. Denoux, and T.J. McDonald, Hydrocarbon distributions around a shallow water multiwell platform, *Environmental Science and Technology*, 24(7): 1079-1085, 1990.
- Brooks, J.M., D.A. Wiesenburg, H. Roberts, R.S. Carney, I.R. MacDonald, R.A. Burke, Jr., P. Ahron, and T.J. Bright, Salt, seeps and symbiosis in the Gulf of Mexico: a preliminary report of deep water discoveries using DSV Alvin, *EOS, Transactions Am. Geophysical Union*, 74(45): 1772-1773, 1990.
- Sericano, J.L., T.L. Wade, E.L. Atlas, and J.M. Brooks, Historical perspective on the environmental bioavailability of DDT and its derivatives to Gulf of Mexico oysters, *Environmental Science and Technology*, 24: 1541-1548, 1990.
- Kennicutt, M.C. II, J.M. Brooks, and T.J. McDonald, Origins of hydrocarbons in Bering Sea sediments --- I. Aliphatic hydrocarbons and fluorescence, *Organic Geochemistry*, 17(1): 75-83, 1991.
- Brooks, J.M., M.E. Field, and M.C. Kennicutt II, Observations of gas hydrates offshore northern California, *Marine Geology*, 96: 103-109, 1991.
- Brooks, J.M., M.A. Champ, T.L. Wade, and S.J. McDonald, GEARS: Response strategy for oil and hazardous spills, *Sea Technology*, 25-32, April 1991.
- Wade, T.L., B. Garcia-Romero, and J.M. Brooks, Oysters as biomonitors of butyltins in the Gulf of Mexico, *Marine Environmental Research*, 32: 233-241, 1991.
- Kennicutt, M.C. II, T.J. McDonald, P.A. Comet, G.J. Denoux, and J.M. Brooks, The origins of petroleum in the northern Gulf of Mexico, *Geochemica et Cosmochimica Acta*, 56(3): 1259-1280, 1992.



- Sericano, J.L., T.L. Wade, A.M. El-Husseini, and J.M. Brooks, Environmental significance of the uptake and depuration of planar PCB congeners by the American oyster, *Crassostrea virginica*, Marine Pollution Bulletin, 24: 537-543, 1992.
- Fang, J., P.A. Comet, T.L. Wade, and J.M. Brooks, Gulf of Mexico hydrocarbon seep communities: IX. Sterol biosynthesis of seep mussels and its implications for host-symbiont association, Organic Geochemistry, 18(6): 861-867, 1992.
- Kennicutt, M.C. II, R.A. Burke, I.R. MacDonald, J.M. Brooks, G.J. Denoux, and S.A. Macko, Stable isotope partitioning in seep and vent organisms: chemical and ecological significance, Chemical Geology (Isotope Geoscience Section), 101: 293-310, 1992.
- McDonald, S.J., M.C. Kennicutt, and J.M. Brooks, Evidence for polycyclic aromatic hydrocarbon (PAH) exposure in fish from the Antarctic peninsula, Marine Pollution Bulletin, 25: 313-317, 1992.
- Childress, J.J., R.W. Lee, N.K. Sanders, H. Feldbeck, D.R. Oros, A. Toulmond, D. Desbruyeres, M.C. Kennicutt, and J.M. Brooks, Inorganic carbon uptake in hydrothermal vent tubeworms facilitated by high environmental pCO₂, Nature, 362(6416): 147-149, 1993.
- Krahn, M.M., G.M. Ylitalo, J. Buzitis, S-L Chan, U. Varanasi, T.L. Wade, T.J. Jackson, J.M. Brooks, D.A. Wolff, and C.A. Manen, Comparison of HPLC/Fluorescence screening and GC/MS analysis for aromatic compounds in sediments sampled after the EXXON VALDEZ oil spill, Environmental Science and Technology, 27(4): 699-708, 1993.
- Sassen, R., J.M. Brooks, M.C. Kennicutt, I. MacDonald, and N.L. Guinasso, Jr., How oil seeps, discoveries relate in the deep-water Gulf of Mexico, Oil and Gas Journal, pp. 64--69, April 19th, 1993.
- Sericano, J.L., T.L. Wade, J.M. Brooks, E.L. Atlas, R.R. Fay, and D.L. Wilkinson, National status and trends mussel watch program: chlordane-related compounds in Gulf of Mexico oysters, 1986-1990, Environmental Pollution, 82: 23-32, 1993.
- Garcia-Romero, B., T.L. Wade, G.G. Salata, and J.M. Brooks, Butyltin concentrations in oysters from the Gulf of Mexico during 1989-1991, Environmental Pollution, 81: 103-111, 1993.
- MacDonald, I.R., N.L. Guinasso, S.G. Ackleson, J.F. Amos, R. Duckworth, R. Sassen and J.M. Brooks, Natural oil slicks in the Gulf of Mexico visible from space, Journal of Geophysical Research, 98(9): 16,351-16,364, 1993.
- Kennicutt, M.C. II, J.M. Brooks, and H. Benjamin Cox, The origin and distribution of gas hydrates in Marine Sediments. In Organic Geochemistry, edited by M.H. Engel and S.A. Macko, Plenum Press, New York, Chapter 24, pp. 535-544, 1993.
- Comet, P.A., J.K. Rafalska and J.M. Brooks, Sterane and triterpane patterns as diagnostic tools in the mapping of oils, condensates and source rocks of the Gulf of Mexico region, Organic Geochemistry, 20(8): 1265-1296, 1993.
- Fisher, C.R., J.M. Brooks, J.S. Vodenichar, J.M. Zande, J.J. Childress and R.A. Burke Jr., The co-occurrence of methanotrophic and chemoautotrophic sulfur-oxidizing bacterial symbionts in a deep-sea mussel, Marine Ecology, 14(4): 277-289, 1993.



- 166 hydrothermal vent communities: interferences from stable carbon and nitrogen isotope analysis, Marine Ecology, 103: 45-55, 1994.
- Brooks, J.M., A.L. Anderson, R. Sassen, I.R. MacDonald, M.C. Kennicutt II and N.L. Guinasso, Jr., Hydrate occurrences in shallow subsurface cores from the continental slope sediments, Annals of the New York Academy of Sciences: 715: 381-391, 1994.
- MacDonald, I.R., N.L. Guinasso, Jr., R. Sassen, J.M. Brooks, L. Lee and K.T. Scott, Gas hydrates that breaches the sea floor on the continental slope of the Gulf of Mexico, Geology, 22: 699-702, 1994.
- Sericano, J.L., S.H. Safe, T.L. Wade and J.M. Brooks, Toxicological significance of non-, mono- and di-ortho substituted polychlorinated biphenyls in oysters from Galveston and Tampa Bays, Environmental Toxicology and Chemistry, 13 (11): 1797-1803, 1994.
- Ukpabio, E., P.A. Comet, R. Sassen and J.M. Brooks, Triterenes in a Nigerian oil, Organic Geochemistry, 22 (2): 323-329, 1994.
- Sericano, J.L., S.H. Safe, T.L. Wade and J.M. Brooks, Toxicological significance of non-, mono- and diorthosubstituted polychlorinated biphenyls in oysters from Galveston and Tampa Bays, Environmental Toxicology and Chemistry, 31: 1797-1803, 1994.
- Sassen, R., I.R. MacDonald, A.G. Requejo, N.L. Guinasso Jr., M.C. Kennicutt II, S.T. Sweet and J.M. Brooks, Organic geochemistry of sediments from chemosynthetic communities. Gulf of Mexico slope, Geo-Marine Letters, 14: 110-119, 1994.
- Salata, G.G., T.L. Wade, J.L. Sericano, J.W. Davis and J.M. Brooks, Analysis of Gulf of Mexico bottlenose dolphins for organochlorine pesticides and PCBs, Environmental Pollution, 88: 167-175, 1995.
- Kennicutt, M.C. II, W.W. Schroeder and J.M. Brooks, Temporal and spatial variations in sediment characteristics on the Mississippi-Alabama continental shelf, Continental Shelf Research, 15(1): 1-18, 1995.
- Champ, M.A., J.M. Brooks, V.V. Makeyev, T.L. Wade, M.C. Kennicutt II and M. Baskaran, Preliminary results of studies of industrial and nuclear contaminants in the Ob and Yenisey Rivers and the Kara Sea to assess the environmental and human health risks in the Russian Arctic. In Ocean Pollution in the Arctic North and the Russian Far East: Proceedings from the Ocean Pollution Session of the Conference "Bridges of Science Between North America and the Russia Far East, Vladivostok, Russia, 1 September 1994, edited by E.J. Kirk, American Association for the Advancement of Science, pp. 28-65, 1995.
- Sericano, J.L., T.L. Wade, T.J. Jackson, J.M. Brooks, B.W. Tripp, J.W. Farrington, L.D. Mee, J.W. Readmann, J.P. Villeneuve and E.D. Goldberg, Trace organic contamination in the Americas: an overview of the US National Status and Trends and the International 'Mussel Watch' programmes, Marine Pollution Bulletin, 31 (4-12): 214-225, 1995.
- Baskaran, M., S. Asbill, P.H. Santschi, T.F. Davis, J.M. Brooks, M.A. Champ, V. Makeyev and V. Khlebovich, Distribution of ^{239,240}Pu concentrations in sediments from the Ob and Yenisey Rivers and the Kara Sea, Applied Radiation and Isotopes, 46(11): 1109-1119, 1995.
- Yu, Y., T.L. Wade, J. Fang, J.M. Brooks and S.J. McDonald, Production of PAH metabolites in Antarctic fish (*Notothernia gibberifrons*) dosed with Diesel Fuel Arctic and its implications to environmental monitoring, Archives of Environmental Contamination and Toxicology, 29: 241-246, 1995.



- Requejo, A.G., R. Sassen, M.C. Kennicutt II, I. Kvedchuk, T. McDonald, G. Denoux, P. Comet and J.M. Brooks, Geochemistry of oils from the northern Timan-Pechora Basin, Russia, Organic Geochemistry, **23**(3): 205-222, 1995.
- Sericano, J.L., T.L. Wade and J.M. Brooks, Accumulation and depuration of organic contaminants by the American Oyster (*Crassostrea Virginica*), Science and the Total Environment, **179**: 149-160, 1996.
- Gardinali, P.R., T.L. Wade, L. Chambers and J.M. Brooks, A complete method for the quantitative analysis of planar, mono, and diortho PCBs, polychlorinated dibenzo dioxins and furans and environmental samples, Chemosphere, **32**: 1-11, 1996.
- Chambers, L., T.L. Wade, P. Gardinali and J.M. Brooks, NIST SRM 1945, whale blubber, NIST SRM 1994, organics in mussel tissue and NIST SRM 1941a, organics in marine sediments as certified reference materials for polychlorinated dioxins and furans in marine ecosystems, Chemosphere, **32**: 25-30, 1996.
- Chambers, L., T.L. Wade, P. Gardinali and J.M. Brooks, NIST SRM 1945, whale blubber, NIST SRM 1974, organics in mussel tissue, and NIST SRM 1941a, organics in marine sediment as certified reference materials for polychlorinated dioxins and furans in marine ecosystems, Chemosphere, **32**: 25-30, 1996.
- Hvoslef, S., O.H.J. Christie, R. Sassen, M.C. Kennicutt II, A.G. Requejo, and J.M. Brooks, Test of a new surface geochemistry tool for resource prediction in frontier areas, Marine and Petroleum Geology, **13**: 107-124, 1996.
- Reilly II, J.F., I.R. MacDonald, E.K. Biegert, J.M. Brooks, Geologic controls on the distribution of chemosynthetic communities in the Gulf of Mexico. In Hydrocarbon Migration and Its Near-Surface Expression (Eds. D. Schumacher and M.A. Abrams) AAPG Memoir, **66**: 38-61, 1996.
- Sericano, J.L., T.L. Wade and J.M. Brooks, Accumulation and depuration of organic contaminants by the American Oyster (*Crassostrea Virginica*), Science and the Total Environment, **179**: 149-160, 1996.
- Baskaran, M., S. Asbill, P.H. Santschi, J.M. Brooks, M.A. Champ, D. Adkison, M. Colmer and V. Makeyev, Pu, ¹³⁷Cs and excess ²¹⁰Pb in Russian Arctic Sediments, Earth and Planetary Science Letters, **140**: 243-257, 1996.
- Kennicutt, M.C. II, P.N. Boothe, T.L. Wade, S.T. Safe, R. Rezak, F.J. Kelly, J.M. Brooks, B.J. Presley and D.A. Wiesenburg, Geochemical patterns in sediments near offshore production platforms, Canadian Journal of Fisheries and Aquatic Science, **53**: 2554-2566, 1996.
- Champ, M.A., V.M. Makeyev, J.M. Brooks and T.E. Delaca, (Guest Editors), Special Issue: Contamination in the Arctic, Part I, Marine Pollution Journal, Vol. **35**(7-12), 1997.
- Champ, M.A., V.M. Makeyev, J.M. Brooks, T.E. Delaca, K.M. van der Hores, and M.V. Engle, Assessment of the impact of nuclear wastes in the Russian Arctic, Marine Pollution Journal, **35**(7-12): 203-221, 1998.
- Jackson, T.J., T.L. Wade, J.L. Sericano, J.M. Brooks, J.M. Wong, B. Garcia-Romero and T.J. McDonald, Galveston Bay: Temporal changes in the concentrations of trace organic contaminants in National Status and Trends oysters (1986-1994), Estuaries, **21**(4B): 718-720, 1998.



- Kim, Y., E.N. Powell, T.L. Wade, B.J. Presley and J.M. Brooks, Influence of climate change on interannual variation in contaminant body burden in Gulf of Mexico oysters, Marine Environmental Research, **48**: 459-488, 1999.
- Baskaran, M., S. Asbill, J. Schwantes, P. Santchi, M.A. Champ, J.M. Brooks, D. Adkinson and V. Makeyev, Concentrations of ^{137}Cs , $^{239,240}\text{Pu}$ and ^{210}Pb in sediment samples from the Pechora Sea and biological samples from the Ob, Yenisey Rivers and Kara Sea, Marine Pollution Journal, **40**(10): 830-838, 2000.
- Brooks, J.M., W.R. Bryant, B.B. Bernard and N.R. Cameron, The nature of gas hydrates on the Nigerian continental margin, In: Gas Hydrates, Challenges for the Future (G.D. Holder and P.R. Bishnoi, Eds.), Annals of the New York Academy of Sciences, **192**: 76-94, 2000.
- Champ, M.A., T.E. Delaca, V.M. Makeyev and J.M. Brooks (Guest Editors), Special Issue: Contamination in Aquatic Watersheds of the Russian Arctic, Chemosphere, Vol. **42**(1), 1-102, 2000.
- Champ, M.A., V.M. Makeyev, J.M. Brooks and T.E. Delaca, (Guest Editors), Special Issue: Contamination in the Arctic, Part II, Marine Pollution Journal, Vol. **40**(10), 2000.
- Krishnamurthy, R.V., M. Machavaram, M. Baskaran, J.M. Brooks and M.A. Champ, Organic carbon flow in the Ob, Yenisey Rivers and Kara Sea of the Arctic region, Marine Pollution Journal, **42**(9): 726-732, 2001.
- Kim, Y., E.N. Powell, T.L. Wade, B.J. Presley and J.M. Brooks, The geographic distribution of population health and contaminant body burden in the Gulf of Mexico oyster, Archives of Environmental Contamination and Toxicology, **4**: 30-46, 2001.
- Champ, M.A., L.S. Gomez, V.M. Makeyev, J.M. Brooks, H.D. Palmer, and F. Betz, Ocean storage of nuclear wastes? Experiences from the Russian Arctic, Marine Pollution Journal, **42** (1-6): 1-7, 2001.
- M.A. Champ, L.S. Gomez, V.M. Makeyev, J.M. Brooks, H.D. Palmer, and F. Betz (Guest Editors). Contaminants in the Arctic (Part III). Marine Pollution Bulletin, **43**, (1-6), pp. 1-142, January - June, 2001.
- Cole, G.A., A. Yu, F. Peel, R. Requejo, J. DeVay, J.M. Brooks, B.B. Bernard, J. Zumberge and S. Brown, Constraining source and charge risk in deepwater areas, World Oil, 69-77, October, 2001.
- Sericano, J.L., J.M. Brooks, M.A. Champ, M.C. Kennicutt II and V.V. Makeyev, Trace contaminant concentrations in the Kara Sea and its adjacent rivers, Russia, Marine Pollution Journal, **42**(11): 1017-1030, 2001.
- Nagihara, S., J.M. Brooks, B.B. Bernard, N. Summer, G. Cole and T. Lewis, Application of marine heat flow data: Importance in oil and gas exploration, Oil and Gas Journal, **100.27**, 43-49, 2002.
- MacDonald, I.R., G. Bohrmann, E. Escobar, F. Abegg, P. Blanchon, V. Blinova, W. Bruchmann, M. Drews, A. Eisenhauer, X. Han, K. Heeschen, F. Meier, C. Mortera, T. Naehr, B. Orcutt, B. Bernard, J. Brooks and M. de Farago, Asphalt Volcanism and Chemosynthetic Life in the Campeche Knolls, Gulf of Mexico, Science, **304**, 999-1002, 2004.



Scientific Services On A Global Basis
TDI-Brooks International, Inc.

1902 Pinon, College Station, TX 77845
Ph: (979) 693-3446 Fax: (979) 693-6389
Visit us on the Web at: www.tdi-bi.com

MacDonald, Ian R., Leslie C. Bender, Michael Vardaro, Bernie Bernard, James M. Brooks, Thermal and visual time-series at a seafloor gas hydrate deposit on the Gulf of Mexico slope, Earth & Planetary Sciences Letters, 233, 45-59, 2005.

