



## **BERNIE B. BERNARD**

**Vice President, Chief Technology Officer TDI-Brooks International Inc.**  
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### **EDUCATION**

Ph.D. Oceanography, Texas A&M University, 1978

B.S. Chemistry/Physics, Abilene Christian University, 1974

### **PROFESSIONAL EXPERIENCE**

Vice President, TDI-Brooks International, Inc., 1998 - Present

General Manager (managing partner) of B&B Laboratories, providing analytical services to the environmental and geochemical markets, June 1996 - Present.

Consulting Scientist under contracts for instrument design and testing, January 1996 - Present.

Deputy Director, Geochemical & Environmental Research Group, Texas A&M University, May 1993 - October 1995.

Research Scientist, Geochemical & Environmental Research Group, Texas A&M University, May 1993 - January 1996.

Contract Design Consultant, O.I. Corporation, April 1993 - June 1995.

Vice President, Director of Technology, O.I. Corporation, January 1986 - April 1993.

Vice President, Chief Chemist, O.I. Corporation, August 1980 - December 1985.

Assistant Professor, Geochemistry, University of Oklahoma, August 1978 - July 1980.

Chemist and Consultant, O.I. Corporation, September 1977 – July 1980.

Research Associate, Texas A&M University, Chemical Oceanography, September 1977 - May 1978.

Research Assistant, Texas A&M University, Chemical Oceanography, September 1975 - August 1976.

Research Technician, Abilene Christian University, Chemistry, September 1970 – August 1974.



## **FIELD EXPERIENCE**

Party Chief, Geotechnical CPT, Anadarko Petroleum Corporation, Indian Ocean, OSV Rylan-T, 11 November – 22 November 2012.

Party Chief, Geotechnical CPT, Exxon Mobil Development Company, Gulf of Mexico, R/V Brooks McCall, 11 June – 20 June 2012.

Party Chief, Geotechnical CPT, Shell Global Solutions US Inc., Gulf of Mexico, R/V Brooks McCall, 05 April – 14 May 2012.

Party Chief, Geotechnical CPT, Exxon Mobil Development Company, Gulf of Mexico, R/V Brooks McCall, 27 February – 11 March 2012.

Party Chief, Geotechnical CPT, BP America Production Company, Gulf of Mexico, R/V Brooks McCall, 04 November – 03 December 2011.

Party Chief, Geotechnical CPT, Chevron Pipe Line Company, Gulf of Mexico, R/V Brooks McCall, 25 July – 22 August 2011.

Party Chief, Geotechnical CPT, ExxonMobil Exploration Inc., Gulf of Mexico, R/V Brooks McCall, June 27 – 15 July 2011.

Party Chief, Geotechnical CPT, Chevron, Liberia, R/V JW Powell, 21 February – 02 March 2011.

Party Chief, Geotechnical CPT, BP America Production Company, Gulf of Mexico, R/V Brooks McCall, 06 November – 21 November 2010.

Party Chief, Geotechnical CPT, LLOG Exploration Company, Gulf of Mexico, R/V Brooks McCall, 17 September – 25 September 2010.

Party Chief, Geotechnical CPT, Chevron Corporation, Gulf of Mexico, R/V Brooks McCall, 16 March - 20 March 2010.

Party Chief, Geotechnical JPC, BP America Production Company, Gulf of Mexico, R/V Brooks McCall, 09 February - 27 February 2010.

Party Chief, Exploration Heatflow, Brazil, 26 January - 06 February 2009.

Party Chief, Geotechnical JPC, Chevron North America Production Company, Gulf of Mexico, R/V Brooks McCall, 11 December - 23 December 2008.

Party Chief, Geotechnical JPC, BP America Production Company, Gulf of Mexico, R/V Brooks McCall, 28 November - 10 December 2008.



Party Chief, Geotechnical JPC, Ghana, R/V JW Powell, 24 August - 03 September 2008.

Party Chief, Geotechnical JPC, Shell Nigeria Exploration & Production Company Ltd., Atlantic Ocean, R/V JW Powell, 15 December 2007 - 03 January 2008.

Party Chief, Geotechnical JPC, BP America Production Company, Gulf of Mexico, R/V Brooks McCall, 04 September - 12 October 2007.

Navigator, Environmental ROV, Department of Interior Minerals Management Service, Gulf of Mexico, R/V Ron Brown, 04 June - 19 June 2007.

Party Chief, Geotechnical JPC, Bluewater Industries Inc., Gulf of Mexico, R/V Brooks McCall, 13 May - 14 May 2007.

Party Chief, Geotechnical JPC, Angola, R/V JW Powell, 08 March - 20 March 2007.

## **PROFESSIONAL TRAINING & CERTIFICATIONS**

Installation and Operation of the Kongsberg Simrad HPR400P USBL system (2003, 2004, 2005).

The Fundamentals of Subsea Positioning, (12 - 22 June 2005), Ian Florence, Instructor.

STCW (fire fighting, first aid & CPR, Sea Survival and Ship responsibilities (2001)

Health, Safety and Environmental procedures for TDI-Brooks & B&B Laboratories, (1998).

Hewlett Packard Company, Process of Management Course for Managers, Certificate of Completion, 1992

Stanford University, Graduate School of Business, Executive Program for Smaller Companies, Certificate of Completion, 1992

Sport Diver Certificate, PADI (renewed Nov 2004), original certification by NASDS (1967)

## **PUBLICATIONS**

2008 Characterization of Near Surface Sediment, Offshore Technology Conference, May 2008, H. E. Low and M. F. Randolph, C. J. Rutherford, B. B. Bernard and J. M. Brooks.

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

2005 Estudio Regional de Manifestaciones Superficiales de Aceite y Gas en el Sur del Golfo de Mexico, su Origen e Implicaciones Exploratorias, Asociacion Mexicana de Geologos Petroleros, A.



C., Volumen LII, Numero 1, pp. 20-41, Holguin-Quinones, James M. Brooks, Juan R. Roman-Ramos, Bernie B. Bernard, Joel Lara-Rodriguez, John E. Zumberge, Luis Medrano-Morales, Joshua Rosenfeld, Maria de Farago Botella, Rodrigo Maldonado-Villalon y Gustavo Martinez-Pontvianne.

2004 Asphalt Volcanism and Chemosynthetic Life in the Campeche Knolls, Gulf of Mexico, *Science*, 304, 999-1002, 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.

2002 Application of marine heat flow data important in oil and gas exploration, *Oil and Gas Journal*, July 2002, S. Nagihara, J.M. Brooks, B.B. Bernard, G.A. Cole, N. Summer, T. Lewis.

2001 Constraining source and charge risk in deepwater areas, *World Oil*, October 2001, G.A. Cole, A. Yu, F. Peel, R. Requejo, J. DeVay, J.M. Brooks, B.B. Bernard, J.E. Zumberge, S. Brown.

2000 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, with J.M. Brooks, W.R. Bryant, and N.R. Cameron.

1985 Biogenic hydrocarbon gases and sulfate reduction in the Orca Basin brine, *Geochimica et Cosmochimica Acta*, with D.A. Wiesenburg and J.M. Brooks.

1981 Methane in the upper water column of the northwestern Gulf of Mexico, *Journal of Geophysical Research*, 86(11), 11029-11040, with J.M. Brooks and D.F. Reid.

1980 Sources of biogenic methane in the Gulf of Mexico, in *Marine Environmental Pollution*, 1, Hydrocarbons, edited by R.A. Geyer, Elsevier Scientific Publishing Co., Amsterdam, pp. 107-192.

1980 Environmental aspects of ocean dumping in the western Gulf of Mexico, *J. Water Pollution Control Federation*, 52, 329-350, with others.

1980 Facile synthesis of  $^{57}\text{Fe}(\text{CO})_5$ , *Synth. React. Inorg. Metal-Org. Chem.*, 10, 1-7, with L. Daniels, R. Hance, and B. Hutchinson. 1979 Methane in marine sediments, *Deep-Sea Research*, 26, 429-443. 1979 Characterization of gases in marine waters and sediments, in *Geochemical Exploration*, 1978, edited by J.R. Watterson and

T.K. Theobald, Association of Exploration Geochemists, Rexdale, Ontario, pp. 337-346, with J.M. Brooks and W.M. Sackett.

1979 Chemical aspects of a brine pool at East Flower Garden Bank, northwest Gulf of Mexico, *Limnology and Oceanography*, 24, 735-745, with J.M. Brooks, T.R. Bright, and C.R. Schwab.



1979 Natural gas seepage on the South Texas Shelf, in Proceedings of the Eleventh Annual Offshore Technology Conference, OTC 3911, pp. 471-478, with J.M. Brooks, W.M. Sackett, and J. Schwarz.

1979 A carbon inventory for Orca Basin brines and sediments, Earth Planet Sci. Lett., 44, 73-81, with W.M. Sackett and J.M. Brooks.

1978 Carbon isotopic variations in total carbon dioxide and methane of nearshore sediments, in Stable Isotopes in the Earth Sciences, edited by D.W. Robinson, Science Information Division, DSIR, Wellington, N.Z., pp. 39-48, with T. Whelan and J.M. Brooks.

1978 Environmental aspects of a well blowout in the Gulf of Mexico, Environmental Science and Technology, 12, 695-703, with J.M. Brooks, T.C. Sauer, and H. Abdel-Rehiem.

1978 Light hydrocarbons in marine sediments, Technical Report 78-5-T, Texas A&M Press, 144p.

1977 Input of low-molecular-weight hydrocarbons from petroleum operations into the Gulf of Mexico, in Fate and effects of Petroleum Hydrocarbons in Marine Ecosystems and Organisms, Proceedings of a Symposium (November 1976), Seattle, edited by

D.A. Wolfe, pp. 373-384, with J.M. Brooks and W.M. Sackett.

1977 A geochemical model for characterization of hydrocarbon gas sources in marine sediments, in Proceedings of the Ninth Annual Offshore Technology Conference, OTC 2934 (May 1977) Houston, pp. 435-438, with J.M. Brooks and W.M. Sackett.

1977 Light hydrocarbons in recent continental shelf and slope sediments, Journal of Geophysical Research, 83, 4053-4061, with J.M. Brooks and W.M. Sackett.

1976 Natural gas seepage in the Gulf of Mexico, Earth Planet. Sci. Lett., 31, 48-54, with J.M. Brooks and W.M. Sackett.

1975 Metal-isotope measurement of iron pentacarbonyl, J. Chem. Phys., 63, 3694-3696, with B. Hutchinson, R. L. Hance and M. Hoffbauer.

## **REPORTS**

2003 Nigeria Sao Tome Joint Development Zone Consortium Program, Surface Heat Flow Interpretive Report, Technical Report 031066, TDI-Brooks International, Inc., College Station, Texas, USA, September 2003.

2003 Nigeria Sao Tome Joint Development Zone Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 03-1067, TDI-Brooks International, Inc., College Station, Texas, USA, July 2003.

2003 Trinidad Consortium Program, Surface Heat Flow Interpretive Report, Technical Report 03-



1087, TDI-Brooks International, Inc., College Station, Texas, USA , September 2003.

2003 Trinidad Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 03-1088, TDI-Brooks International, Inc., College Station, Texas, USA , December 2003.

2002 Newfoundland Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 02-951, TDI-Brooks International, Inc., College Station, Texas, USA , September 2002.

2001 Guinea-Bissau Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 01-844, TDI-Brooks International, Inc., College Station, Texas, USA , December 2001.

2000 Angola Consortium Heat Flow Program, Surface Heat Flow Interpretive Report, Technical Report 00-510, TDI-Brooks International, Inc., College Station, Texas, USA , July 2000.

2000 Angola Ultra Deep Consortium - Central Area, Interpretive Surface Geochemical Exploration Report, Technical Report 00495, TDI-Brooks International, Inc., College Station, Texas, USA , September 2000.

2000 Angola Ultra Deep Consortium - Northern Area, Interpretive Surface Geochemical Exploration Report, Technical Report 00488, TDI-Brooks International, Inc., College Station, Texas, USA , September 2000.

2000 Central/Eastern Gulf of Mexico Consortium Program, Surface Heat Flow Interpretive Report, Technical Report 01-696, TDI-Brooks International, Inc., College Station, Texas, USA , February 2001.

2000 Central/Eastern Gulf of Mexico Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 01-698, TDI-Brooks International, Inc., College Station, Texas, USA , May 2001.

2000 Nigeria Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 00-446, TDI-Brooks International, Inc., College Station, Texas, USA , March 2000.

2000 Nile Delta Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 00-593, TDI-Brooks International, Inc., College Station, Texas, USA , January 2001.

2000 Nova Scotia Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 00-587, TDI-Brooks International, Inc., College Station, Texas, USA , January 2001.

1999 Central Gulf of Mexico Consortium Program, Interpretive Surface Geochemical Exploration



Report, Technical Report 99-289, TDI-Brooks International, Inc., College Station, Texas, USA , February 1999.

1999 Central Gulf of Mexico Heat Flow Program Phase 1, Surface Heat Flow Interpretive Report, Technical Report 99-303, TDI-Brooks International, Inc., College Station, Texas, USA , April 1999.

1999 Central Gulf of Mexico Heat Flow Program Phase 2, Surface Heat Flow Interpretive Report, Technical Report 99-324, TDI-Brooks International, Inc., College Station, Texas, USA , June 1999.

1999 Western Gulf of Mexico Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 99-338, TDI-Brooks International, Inc., College Station, Texas, USA , August 1999.

1999 Western Gulf of Mexico Heat Flow Program, Surface Heat Flow Interpretive Report, Technical Report 00-411, TDI-Brooks International, Inc., College Station, Texas, USA , January 2000.

1998 Gabon Ultra Deep Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 98-206, TDI-Brooks International, Inc., College Station, Texas, USA , September 1998.

1998 Nigeria Ultra Deep Consortium Program, Surface Heat Flow Interpretive Report, Technical Report 98-208, TDI-Brooks International, Inc., College Station, Texas, USA , September 1998.

1998 Nigeria Ultra Deep Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 98-237, TDI-Brooks International, Inc., College Station, Texas, USA , December 1998.

1997 Angola Ultra Deep Water Consortium Program, Surface Heat Flow Interpretive Report, Technical Report 98-100, TDI-Brooks International, Inc., College Station, Texas, USA , January 1998.

1997 Angola Ultra Deep Water Consortium Program, Interpretive Surface Geochemical Exploration Report, Technical Report 98-155, TDI-Brooks International, Inc., College Station, Texas, USA , April 1998

## **AWARDS**

*Patents Developed:*

### **TOTAL ORGANIC CARBON ANALYZER**

Date of Issue: October 28, 1986

Patent Number: 4,619,902



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**WATER MANAGEMENT DEVICE FOR GAS CHROMATOGRAPHY SAMPLE  
CONCENTRATION**

Date of Issue: October 5, 1993  
Patent Number: 5,250,093

**SAMPLE CONCENTRATOR FILTER**

Date of Issue: November 16, 1993  
Patent Number: 5,261,937

**WATER MANAGEMENT DEVICE FOR GAS CHROMATOGRAPHY SAMPLE  
CONCENTRATION**

Date of Issue: October 25, 1994  
Patent Number: 5,358,557

**MANAGEMENT DEVICE FOR GAS CHROMATOGRAPHY SAMPLE  
CONCENTRATION**

Date of Issue: November 28, 1995  
Patent Number: 5,470,380

**METHOD AND APPARATUS FOR LINEARIZATION OF NON-DISPERSIVE INFRARED  
DETECTOR RESPONSE**

Date of Issue: June 18, 1996  
Patent Number: 5,528,039

**WATER MANAGEMENT DEVICE FOR GAS CHROMATOGRAPHY SAMPLE  
CONCENTRATION**

Date of Issue: December 10, 1996  
Patent Number: 5,582,633

**WATER MANAGEMENT DEVICE FOR GAS CHROMATOGRAPHY SAMPLE  
CONCENTRATION**

Date of Issue: September 29, 1998  
Patent Number: 5,814,128