



BIOGRAPHICAL SKETCH FOR DR. T. I. MUDDER

Dr. Terry I. Mudder is co-owner with Dr. Karen Hagelstein of Times Limited, an environmental science and engineering consulting firm located in Sheridan, Wyoming (USA). Dr. Mudder was formally a partner, office manager and corporate consultant in the Seattle, Washington office of Steffen, Robertson, and Kirsten, an international mining consulting firm. Prior to consulting, he served as Chief Environmental Engineer and Chief Research Chemist at the Homestake Mine in Lead, South Dakota, where he developed a full-scale process for the microbial degradation of cyanide in process wastewater. The full-scale process which operated for twenty years before closure of the mine was featured in a biotechnology feature article in *National Geographic*.

Dr. Mudder holds a B.S. and M.S. in organic and analytical chemistry, and a Ph.D. in environmental science and engineering from the University of Iowa. He has twenty-five years experience in the investigation of the chemistry, analysis, fate, aquatic toxicity, and disposal of mining and cyanide wastes. He has served as adjunct professor, graduate student and thesis advisor, and guest lecturer at several colleges and universities in Australia, Canada, and the United States in the departments of biology, chemistry, environmental engineering, geology, soil science and reclamation, mineral processing, and metallurgy. Dr. Mudder received the prestigious *Guy March Medal* from his Alma Mata, the South Dakota School of Mines and Technology, as an outstanding alumnus.

He has worked on well over 200 mining and industrial projects on six continents including the countries of Australia, Bulgaria, Canada, Chile, France, Ghana, Greece, Guatemala, Indonesia, Mali, Mexico, New Zealand, Peru, Romania, Russia, South Africa, Turkey, and the United States. Clients have included aboriginal and native peoples, citizen groups, mining companies, non-governmental organizations, and regulatory agencies. He has also served on corporate audit teams assessing mine closure strategies, as well as cyanide and overall environmental management practices. Dr. Mudder has considerable experience in the public forum, including testimony at hearings, lectures to non-governmental organizations, invited and sponsored keynote addresses at workshops and symposia, technical presentations at professional meetings, and as an expert witness in litigation.

He has written over eighty papers and given numerous technical presentations and lectures. He has been involved with many short courses and workshops on cyanide, acid mine drainage, and closure held in Australia, Peru, and the United States. He has co-authored over fifteen manuals, pamphlets, and books, including *The Chemistry and Treatment of Cyanidation Wastes*, *The Cyanide Monograph*, and the new CD entitled the *Cyanide Compendium*, all published by Mining Journal Books.

He has been instrumental in the development and application of many chemical, physical, and biological treatment processes for cyanide and metals, for which he has received both national and international awards, including the prestigious Philip Morgan Medal of the Water Environment Federation. He has also obtained several worldwide patents for these processes as well. These processes include the original biological treatment process developed for Homestake Mining Company, the *Cyanisorb* Process for cyanide recovery from metallurgical circuits, and the *Biopass* System for passive in-situ treatment of spent heap leach pad solutions, waste rock drainage, and tailings impoundment seepage.

He has been the member of many national and international scientific organizations and associated professional committees including the American Chemical Society (ACS), Standard Methods for the Examination of Water and Wastewater, the American Water Works Association, the Water Environment Federation, and the American Society for Testing of Materials. He has been involved as a reviewer of manuscripts submitted for publication in professional journals including *The AIME/SME Mining Journal* and the ACS publication *Environmental Science and Technology*. He is a frequent editorial contributor and *Technical Advisor* for *Mining Environmental Management* and is on the Honorary Editorial Board of the new *Journal of European Mineral Processing and Environmental Protection*. He also co-created and maintains the internationally recognized Internet website for cyanide information located at www.cyantists.com.

Dr. Mudder created and co-sponsored the *Dr. Adrian Smith International Award* given to outstanding individuals for lifetime achievement in the area of environmental stewardship in the mining industry. He has provided expert advice to the International Council on Metals and the Environment (ICME), The Gold and Silver Institutes, and International Cyanide Management Institute. He has been a technical advisor and consultant not only to industry but also to the British Columbia Ministry of Environment, Environment Australia, the Peruvian Environmental Protection Service, the USEPA, the United States Forest Service, various State agencies, the United Nations Environmental Program (UNEP) and the World Bank/IFC mining group on issues related to cyanide and environmental management.

Contact Information:

Terry I. Mudder, Ph. D.
Managing Director
TIMES Limited
1604 Leopard Street
Sheridan, Wyoming 82801 USA
Tel.: +307-674-4844
Fax.: +307-674-4843
E-mail: cynara@aol.com
Website: www.cyantists.com