

Session 1

"The Past and Future of the Antarctic"

Michel Engler

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Author: A graduate of Toulouse (ENSC), Michel Engler has worked for ten years as a specialist in soil mechanics and geotechnical engineering. He joined the French Austral and Antarctic Territories (TAAF) in 1985 and is currently responsible for its Polar Engineering program and Project Manager of Terre Adélie airfield. He is also Director of the French Polar Expeditions.

Abstract: Antarctica is the only continent to be mainly directed towards scientific research, with geophysics, glaciology, geology and biology the principal areas of investigation. Current efforts in scientific research are resulting in important technological advances. Managers of national antarctic programs must now initiate study projects and research in areas of engineering technology and applied sciences, specifically as these relate to antarctic operations and logistics. In the wake of the anticipated new Antarctic treaty, new possibilities will offer private operators increased involvement in the Antarctic frontier. However, the offshore industrial venture in Antarctica is likely to be restricted, making north/south co-operation between science and industry increasingly advantageous.

"Cold Regions Engineering and Research Capabilities in Canada"

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Author: Jack Clark is one of Canada's foremost geotechnical engineers. After many years with R.M. Hardy & Associates and Golder Associates, he became Director of the Centre for Cold Ocean Resources Engineering at Memorial University of Newfoundland in 1984. Dr. Clark has had a long-standing association with both the Natural Sciences and Engineering Research Council (NSERC) and the National Research Council (NRC). A Fellow of the Engineering Institute of Canada (EIC) and of the Canadian Society of Civil Engineers, he received the 1983 Legget Award from the Canadian Geotechnical Society for his achievements in and contributions to geotechnical engineering in Canada. In 1987 he was awarded the Julien Smith Medal by the EIC in recognition of his outstanding achievements in the development of Canada.

Author: Ted Rudback is Executive Director of Transport Canada's Transportation Development Centre (TDC). An electrical engineer, he worked as a consulting engineer doing systems design of radio, television, audio and communications facilities for several years before applying his