The Secure Canadian Energy Supply Program
The Federal Government's Approach to Energy Geoscience Research

Dr. Martin G. Fowler*
Program Manager
The Secure Canadian Energy Supply Program
Geological Survey of Canada

As a contribution to the Federal Government's priority of ensuring that Canadians have access to secure and reliable supplies of energy, the Earth Science Sector, through the Geological Survey of Canada, initiated its Secure Canadian Energy Supply Program in April, 2005. The program is intended to help reduce the risks for exploration and development in Canada, while protecting the environment, by providing new geoscience. Thus it is hoped it will maintain and attract new investment in Canada=s energy resources. his program was developed after extensive consultations with Provinces and Territories, Industry, other government departments and Academia.

To achieve its outcomes, the ultimate major outputs of the program will be basin resource assessments of both conventional and unconventional energy resources (including uranium) with an emphasis on frontier basins and conceptual plays in mature basins. These resource assessments will include framework geoscience, environmental and hazard considerations associated with the development of the basins resources. New geoscience research is being done in support of the assessments. This includes regional compilations of geology and geophysics, petroleum systems analysis and the identification of geological hazards and environmental affects that could affect development.

Possible issues of groundwater quality and quantity, and competing use in energy development projects are also being assessed. The program includes activities in the Mackenzie Valley that will assist in the environment assessment of the Mackenzie Valley Pipeline such as permafrost monitoring, and evaluation of landslide mapping.

While this is a federal government program, there have also been significant contributions to some activities by a number of provinces and territories. Industry has also been very supportive. Historically, the GSC worked with industry on topics of joint interest with some degree of freedom. Now, it is constrained to doing joint research that will assist in achieving the previously identified outputs of the projects with the ESS program structure. However, this has not been a significant barrier for the Secure Canadian Energy Supply Program, as the areas being assessed are also of interest to industry which is keen to facilitate or enhance the completion of the programs=s geoscience research. This is especially in disciplines such as petroleum geochemistry, thermal maturity, biostratigraphy, and regional tecton-stratigraphic framework where the GSC has expertise not widely available to industry. The GSC obviously does not have all the expertise it

needs to accomplish everything it desires to do in the program. Thus these partnerships with provinces and territorial surveys, industry, as well as academia, are vitally important in enabling the program to access additional skill sets and knowledge.

At present there are projects in the following areas: East Coast offshore, Gulf of St. Lawrence, Arctic Islands, Mackenzie Corridor, Beaufort-Mackenzie Delta, Western Canada Sedimentary Basin with a concentration of conceptual plays in the southern foothills and the Williston Basin. There are also thematic projects that address; a) the environmental assessment of the Mackenzie Valley Pipeline project, b) Unconventional gases (coalbed methane, shale gas, tight gas), c) Groundwater and Energy, including assessing quantity and quality of groundwater available to industry in areas of intensive energy development as well as assessing geothermal potential, and d) an assessment of the Canada=s Uranium resources. There are also activities supporting the petroleum assessment of the Bowser and Nechako basins in the interior of British Columbia. More details of the aims and objectives of these projects will be provided in the presentation, as well as summarizing their progress to date.

Biography

Martin Fowler received his Ph.D. in Organic Geochemistry from the University of Newcastle-upon-Tyne in 1984. Since 1986, he has been at the Geological Survey of Canada where he has worked on a variety of oil and gas, mineral and environmental studies in all parts of Canada and in many other parts of the world. Between 1994 and 2002, he was also manager of the National Laboratory of Organic Geochemistry. From 2002 to 2005, he was leader of the Energy Resources - Status of Knowledge project that included helping to justify and plan a ten year program for geoscience research between the GSC and the Provincial and Territorial geological surveys in Canada.

In 2005, he became Program Manager for the Department of Natural Resources, Earth Science Sector, Secure Canadian Energy Supply Program that coordinates federal government geoscience which will help maintain Canada’s supplies of oil, gas, uranium and other geo-energy sources. Martin has been an adjunct professor at the University of Calgary since 1993. Besides university teaching, he has given numerous short courses on petroleum and environmental geochemistry to industry and other groups.

He has been an Associate Editor for the journals Organic Geochemistry and Bulletin of Canadian Petroleum Geology. He is the author or co-author of 84 peer-reviewed scientific papers, and numerous government publications, and project reports.