Northwestern Ontario is a vast area underlain by the Canadian Shield that has experienced mining activity for the past century and a half. The area, particularly the more northerly portions, is relatively unexplored by modern methods and has enormous mineral potential. The obvious sustainability concern is environmental sustainability; however, economic and social factors are also matters of concern.

Mining suffers from a poor public reputation. This can be attributed in part to “the sins of the fathers (and grandfathers)”. It is possible to point out mining districts such as the Coeur d’Alene district of Idaho or the Sudbury district of Ontario where mining activities dating from the Nineteenth Century have left a legacy of environmental damage. How ever, we are hopefully in a more enlightened time in which mining operations are conducted in such a way as to preserve the environment.

Sustainability may also be considered in relation to the social effects of mining. The creation of one-industry town, particularly those that are geographically isolated, can result in social problems such as the provision of medical and educational services. /closure of a mine that supports the economy of a town may at worst leave residents without an economic basis of support and result in a complete loss in business and residential property values. Thus, the ultimate result is a ghost town. Sustainability requires foresight, either avoiding the creation of one-industry towns or planning for the survival of the town after mine closure.

Another social aspect of sustainability is the accommodation of resident populations, particularly indigenous peoples who have legal rights in various forms. Sustainability requires that these populations be part of the mining process at the outset.

Economic aspects of sustainability must also be considered. Mineral resources in general are scarce, and they are not randomly distributed. These resources are vital to the economic health of some regions, and the need for resources in a modern society is ever present. Land use must consider the mineral potential of an area before large tracts of land are closed to mining.

In consideration of the foregoing discussion, and with prospects of future mining developments in northwestern Ontario, Lakehead University is creating a Centre of Excellence in Mineral Exploration and Sustainable Mining Development. This centre will be located within the Department of Geology and will be headed by a Canada Research Chair. The participants will come from a variety of disciplines including biology, chemistry, anthropology, engineering and business as well as geology. We hope that this multidisciplinary approach will work to resolve problems of sustainable development.