Editor's Introduction

Richard B. McCammon

In recent years, political and economic events have necessitated greater efforts to develop quantitative approaches to many local, national, and international issues in nonrenewable resources. Quantitative resource assessments, in particular, have gained recognition among land managers and policy planners in the public sector and exploration managers and company planners in the private sector. Countries and companies around the world must know how much of a resource they have, how much more can be found, how much it is worth if they succeed, and what could happen if they do not. The answers to these questions involve interrelated technical studies in such fields as geology, economics, statistics, and finance. Quantitative methods are replacing subjective methods in all aspects of the study of nonrenewable resources. To address the needs of all those engaged in this field, the International Association for Mathematical Geology has established a new journal—*Nonrenewable Resources.*

The editors construe the field to include mineral and energy exploration, resource assessment, and the economics of resource supply, recovery, restoration, and conservation. Bringing together significant research on all aspects of the field, the journal will be broad based and cover empirical and theoretical approaches. The editors invite papers that report on the range of nonrenewable resources, including metals, nonmetals, coal, oil, gas, geothermal energy, and uranium, and that, in particular, emphasize multidisciplinary studies focused on land-use policy, domestic and international supply issues, and mineral and energy exploration planning.

A forum on current topics in nonrenewable resources will be featured in each issue. In this first issue, we present the transcript of a panel discussion on energy- and mineral-resource assessments—How are they done? Who are they for? How effective are they? The views of three different groups are presented—scientists who produce assessments, policy analysts who interpret assessments, and end-users, many of whom are senior-level executives and politicians, who decide on resource issues on the basis of assessments.

In future issues, questions explored in the forum will include the following:

- Are we using up our natural resources so fast that soon they will be exhausted?
- How useful have past resource assessments been for formulating public policy or for guiding exploration?
- Is fresh water becoming a nonrenewable resource?
- Should endangered species be considered nonrenewable resources?
- How can geographic information systems (GIS) improve current methods in regional resource assessment?

- Should we assess the world's energy and mineral resources at 10-year intervals, as we do in the census of the world's population?
- How have advances in recycling redefined "nonrenewable"?

These and other questions will be examined by invited resource specialists. The aim of the forum is to highlight information that can be used for constructive debate on the many controversial issues for which there is a lack of general agreement or a lack of sufficient knowledge.

In starting this journal, the editors propose to tap an accelerating field of science that is driven by the attempts of nations and companies around the world to plan their future policies for nonrenewable resources. Our aim is to focus on this and to help those actively involved in the scientific, technical, and managerial aspects of resource analysis at the local, national, and international levels. This aim is consistent with that of the International Association for Mathematical Geology: to promote international cooperation in the application and use of mathematics and statistics in geological research and technology.