## FOREWORD

At the time of the 14th Oil Shale Symposium in 1981, everything was going well for the shale oil program and it was thought that barring unusual circumstances there would be a production of 50,000 to 90,000 barrels per day of shale oil by the mid-1980s. However, the fledgling industry seems to be plagued with "unusual and unforeseen" circumstances and, only six months after the symposium, most of the active projects scheduled for commercial production reduced their activity. In last November, Multi-Minerals Corporation announced it was stopping development operations and laying off most of its employees. This was followed in December by Cathedral Bluffs Oil Shale announcing it was stopping most of its development operations to make a reassessment of the economic feasibility of proceeding. On the Monday after the 15th Oil Shale Symposium in 1982, Exxon abruptly announced it was stopping work on the Colony Project with the subsequent loss of almost 2000 jobs in the Colorado Western Slope area.

In all cases, the reasons given for the stoppages were a soft crude oil market and lower world crude prices, a greater than expected decline in crude oil consumption, escalating costs, and high interest rates. A nonfriendly attitude by the state and federal governments did not help the situation, with movements in the legislatures to increase sharply severance taxes and talk at both the state and local levels to stiffen environmental restrictions.

Many people have been saying the industry will truly get underway when shale oil can be produced competitively with crude oil and does not need government support. This would be true if crude oil and shale oil were on an equal basis. Unfortunately, this is not true. There is significant bias to the petroleum industry with special tax credits permitting expensing of substantial portions of the front-end money required to find and develop new crude oil and a significant depletion allowance on crude oil produced. Instead of putting roadblocks in the way to prevent production, similar support should be given to shale oil rather than constantly increasing the disincentives to development.

Fortunately, plans of the Union Oil Company of California are still active, and, apparently within budget. Construction is scheduled to be completed during the latter part of 1983 with production of about 10,000 barrels per day of syncrude to follow soon afterwards. This operation does have federal support with the guarantee of purchase of 9000 barrels per day of jet and diesel fuel. Hopefully this project will demonstrate the feasibility of commercial production of shale oil at a competitive price.

We all have the feeling "we have been here before." Always circumstances have changed and activity has picked up again. Each time projects have come closer to final production and, barring more "unusual and unforeseen circumstances," perhaps 1983 will mark the beginning of a sustained commercial industry even though it will be a much slower start than hoped.

James H. Gary

Professor of Chemical and Petroleum-Refining Engineering