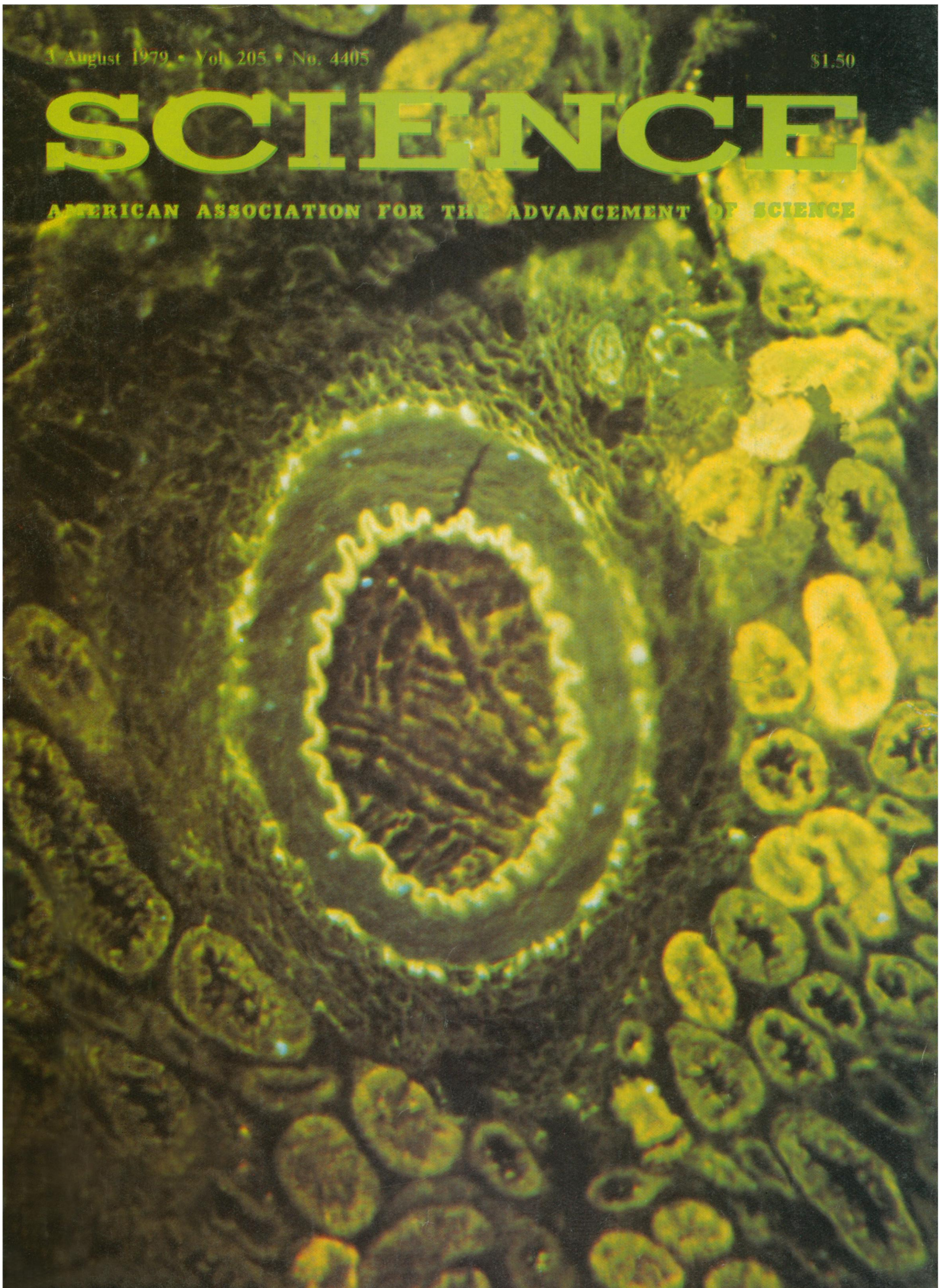


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SCIENCE

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



1979 AAAS/ Westinghouse Science Writing Awards

RULES

1) The aim of this competition is to encourage and recognize outstanding writing on the sciences and their engineering and technological application in newspapers and general circulation magazines. The following categories are not eligible: articles on the field of medicine, articles published originally in AAAS publications, articles by employees of the AAAS or Westinghouse Electric Corporation.

2) Each entrant in a newspaper award competition and each entrant in the magazine award competition may submit three entries.

3) An entry for a newspaper competition may be any of the following: a single story; a series of articles; or a group of three unrelated stories, articles, editorials, or columns published during the contest year. A magazine entry may be a single story or series published during the contest year.

4) A completed entry blank must be submitted together with six copies of each entry in the form of tear sheets, clippings, reprints, or syndicate copy (not over 8½" x 11"), showing name and date of the publication. ENTRIES MUST NOT BE ELABORATE.

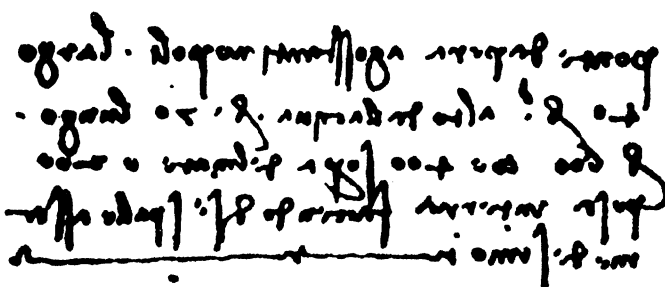
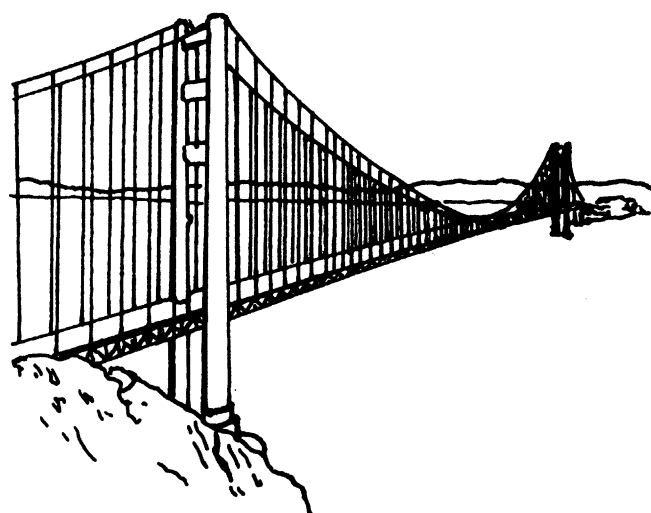
5) Each entry must have been published in a newspaper or general circulation magazine within the United States during the contest year — 1 October 1978 through 30 September 1979. (In the case of a series, more than half of the articles comprising it must have been published during the contest year.) Date on the issue in which an article appeared will be considered as the date of publication. All entries must be postmarked on or before midnight, 15 October 1979.

6) Persons other than the author may submit entries in accordance with these rules. Entries will not be returned.

7) Winners of the 1978 awards are not eligible for the 1979 awards. Persons winning three times are no longer eligible.

8) The Judging Committee, whose decisions are final, will choose the winners. There are three awards of \$1000: for the winning entry in the over-100,000 daily circulation newspapers competition, for the winning entry in the under 100,000 circulation newspapers competition; and for the winning entry in the general circulation magazine competition. For award purposes, newspaper circulation will be sworn ABC daily circulation as of 30 September 1979. The Judging Committee may cite other entries for honorable mention.

9) The awards will be presented at the dinner meeting of the National Association of Science Writers, during the 1980 meeting of the American Association for the Advancement of Science in January, 1980. Travel and hotel expenses of the award winners will be paid. Entrants agree that, if they win, they will be present to receive their awards, unless prevented by circumstances beyond their control.

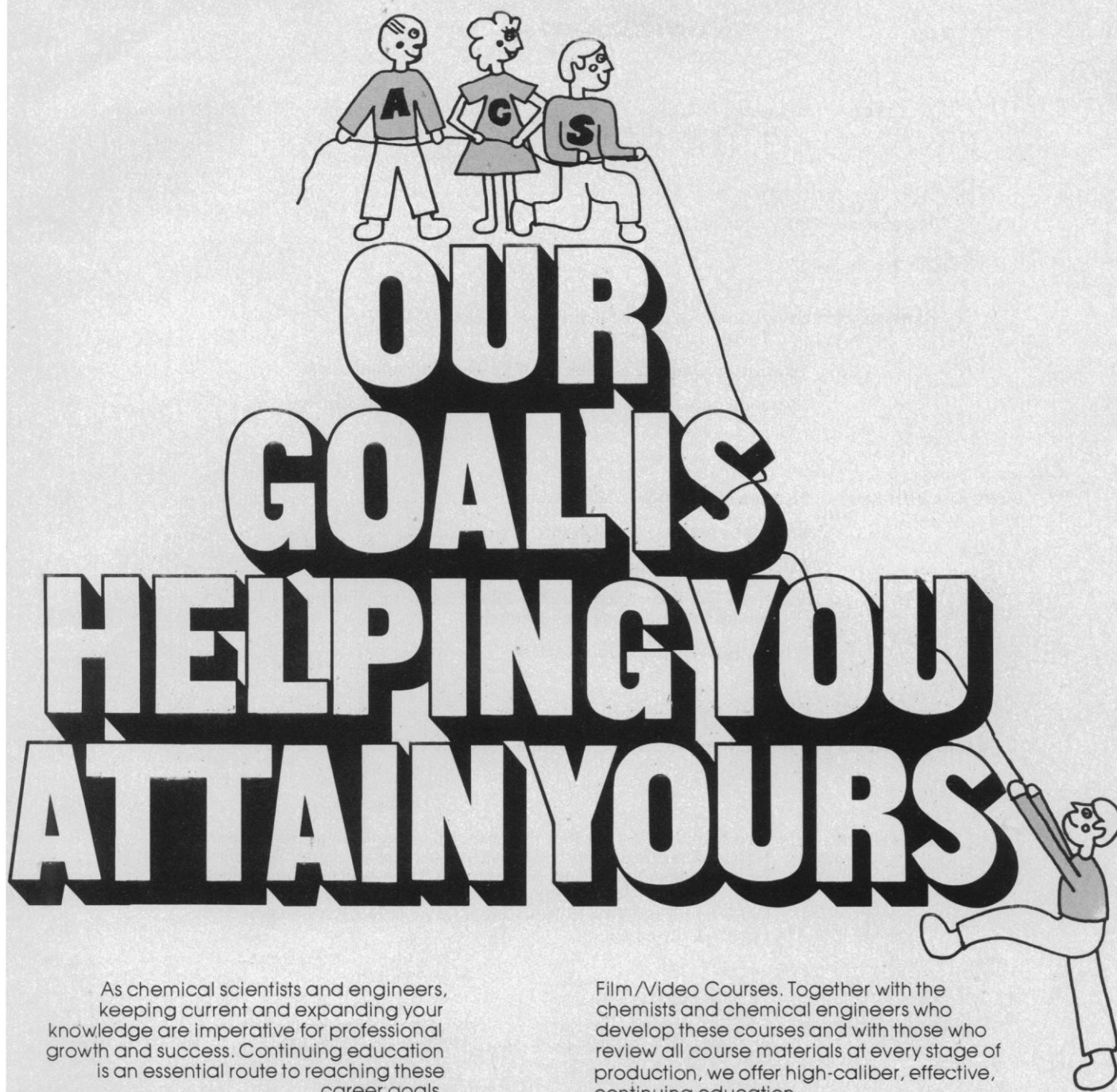


Top: The Golden Gate, tallest bridge in the world. Bottom: an excerpt by Leonardo da Vinci describing a proposed bridge which would have been the world's largest at the time.

Grayce A. Finger

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COVER

Photomicrograph of formaldehyde-induced catecholamine fluorescence of canine renal arcuate artery in cross section (about $\times 350$). The punctate fluorescence in the periadventitia is derived from predominantly norepinephrine-containing neuronal elements, while the elastic layer of the artery as well as the renal tubules exhibit autofluorescence. In contrast, the catecholamine fluorescence associated with the glomerular vascular poles is shown to be primarily derived from dopamine. See page 497. [Robert J. Dinerstein, University of Chicago, Chicago, Illinois]

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.

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International Oil Prices

The sharp rise in the cost of imported oil that has occurred this year caught the Administration unprepared. Escalating prices for products on the Rotterdam spot market* flashed early warning signals of the trouble ahead, but they went unheeded. Movement upward began in mid-1978, but in the budget for 1980 submitted to Congress last January, the Office of Management and Budget proposed a cut in energy research and development for synthetic fuels.

The Rotterdam spot market is only a small component of a complex distribution system. But this component is a sensitive fever thermometer—an indicator of trends of future prices. Currently, this market signals further substantial increases in the cost of oil.

For many years prior to the late 1960's, the major international oil companies were in firm control of the production, distribution, and pricing of oil. The seven sisters—Exxon, Texaco, Mobil, Standard of California, Gulf, British Petroleum, and Royal Dutch—held concessions covering the major sources of non-U.S. oil, including the Middle East. Most of the oil was sold on the basis of long-term contracts. For years, the posted price of Saudi crude remained fixed at \$1.73 a barrel.

But all that has changed. As a result of expropriations, the major international oil companies no longer control the supply or price of crude oil, and long-term contracts are a thing of the past. Most oil and its products are still handled on the basis of contracts, but prices are subject to arbitrary surcharges by the Organization of Petroleum Exporting Countries (OPEC).

A small fraction (5 to 10 percent) of the total oil and its products are traded on a spot basis. When a surplus of oil is present, prices may fall below those typical of contracts. But when supplies are short, eager buyers may cause spot prices to move up sharply. This spring, they rose to more than double contract prices. This performance assured OPEC that it could easily obtain much higher prices for all of its oil.

The Rotterdam spot market is not like the New York Stock Exchange or the London Metal Exchange. It has no formal structure or headquarters. It is unregulated. It is the summation of private deals—some made in Rotterdam, but many made around the world. However, Rotterdam is a key center of the oil trade. It is the busiest port in the world. With its superb port facilities and huge storage and refinery capacities, it serves as a major distribution center for much of Western Europe, including West Germany.

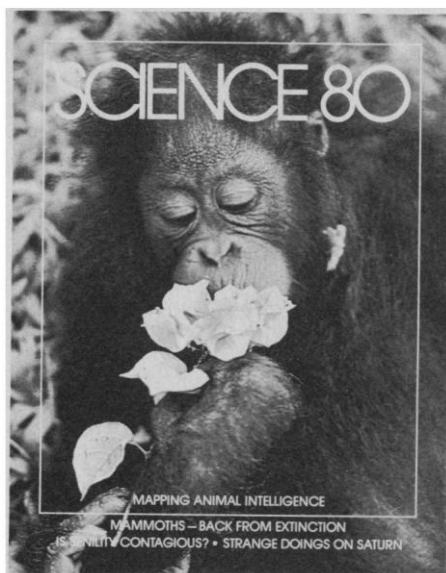
Left to their own inclinations, participants in the spot market would reveal little of their activities. But reporting services have arisen. The leader among them is Platt's Oilgram service, an affiliate of McGraw-Hill. A network of employees gather data that are published 5 days a week.

The embargo of 1973-74 brought a quadrupling of oil prices and a subsequent recession that diminished demand for oil. For nearly 4 years, spot prices were depressed. But by 1978, free-world oil consumption had increased, chiefly because of increased U.S. imports. In mid-1978, well before the Iranian revolution, supplies were tight and prices on the spot market were moving up. Subsequently, a drop of 4 percent in world crude oil production led to a doubling of spot prices and the later OPEC increases of this June. Spot prices are currently about 50 percent above contract prices. In this volatile market, rapid movement down or up could occur. A persistent drop brought on by a worldwide recession would signal a period of stable contract prices, but if the present disparity continues, perhaps exacerbated by turmoils in the Middle East, contract prices would be likely to rise toward the level the spot market has revealed that buyers are willing to pay.

—PHILIP H. ABELSON

*A useful series about the Rotterdam spot market by Joe Roeber appeared in the *Petroleum Economist*, February, March, and April 1979. The Energy Information Administration Clearing House of the U.S. Department of Energy now issues a *Weekly Petroleum Status Report* that includes data about the Rotterdam spot market.

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