EVENING MEETING—APRIL 14, 1980

ARTHUR A. MEYERHOFF—Biographical Sketch

Arthur A. Meyerhoff, born, Northampton, Massachusetts, September 9, 1928. BA degree in geology, Yale University, 1947, Phi Beta Kappa, Sigma Xi, and Cum Laude. MS in geology and geophysics, Stanford University, 1950. Ph.D. in botany and geology, Stanford University, 1952. Geologist, northern Rocky Mountains, United States Geological Survey, 1948-1952. Geologist and geophysicist with Standard Oil Company of California organization, South America, Central America, and West Indies, 1952-1965. Senior geologist for Standard Oil Company of California, 1956-1965 Publications Manager, AAPG, 1965-1974. Professor of Geology, Oklahoma State University, 1975-1977. Partner, Meyerhoff and Cox, Inc., Tulsa 1974-present. Fellow of AAAS, GSA, and Geological Society of London. Member of AAPG, SEPM, AGU, AESE, APGS, SIPES, TGS, LGS, OCGS, RMAG, The Indian Geological Association, Sociedad Mexicana Geologica, and many others.

WORLD POLICIES AND PETROLEUM RESOURCES THROUGH 1985 (Abstract)

At least 450 billion bbl of oil and 1,020 Tcf of gas have been produced by the end of 1979. Of the 450 billion bbl of oil, 43 billion or 9.5 percent was produced in 1978-1979 alone; of the gas, 300 Tcf or 29 percent was produced during the same period.

The estimated volume of remaining recoverable (proved plus probable plus potential) oil is 1,830 billion bbl and of gas, 6,950 Tcf. Of these two amounts, between 646 and 735 billion bbl of oil and about 2,550 Tcf of gas were proved and probable on January 1, 1978. Therefore, 1978-1979 production used 7 percent of the remaining proved and probable oil and 12 percent of the remaining proved and probable gas. If potential oil and gas are included, 1978-1979 production used, respectively, 3 percent and 4 percent of the remaining total. Therefore, if one assumes (1) no further growth in the use of oil and gas and (2) that the estimates for the future are correct, there is a remaining supply of oil for 76 years and of gas, 46 years.

However, one should note that 57 percent of the future oil production will be from the Middle East, North Africa, and the USSR; and that 60 percent of future gas production will be from the same areas. The same area (North Africa, Middle East, USSR) contains 69 percent of the *proved plus probable reserves* of the world's oil and 70 percent of the world's gas.

In terms of world politics and current events, these statistics should be most sobering, particularly with regard to the future of the OECD countries (western Europe, Canada, United States, and Japan). For example, these four areas together consume 14.6 billion bbl per year, but produced only 4.3 billion bbl. The utter dependence of the OECD countries on foreign oil increases daily. Therefore, areas of future exploration and development, and the politics of these areas, are critical.

Recent events in Iran and Afghanistan, the recent two attempts to overthrow the Saudi Arabian government, the Soviet domination of Iraq and Syria, Soviet infiltration and predominance in Yemen and Libya, and the attempted Soviet takeover of Algeria should be most sobering. The only important Middle East country not to be affected by Soviet policies is Egypt. Yet Egypt has only a fraction of the oil of its neighbors. Our future interests, in the short term, lie in the North African and Middle Eastern countries and it is there where we should be exerting all efforts in foreign policy. It is also there where terror has begotten terror for a decade, and the response to terror is power and strength—something which all countries except those in the West understand best. However, even OPEC oil is finite, as we have found out about U.S. oil. Therefore, we should be getting on with exploration in this country and searching, together with our Western and Japanese allies, for energy alternatives. Such alternatives exist, and massive efforts to develop them should be underway, but are not. If we can get an enlightened policy in Washington conducive to the development of alternative energy sources—in which geologists, geophysicists, and petroleum engineers should be in the forefront—we should also be able to get an enlightened Washington attitude toward the petroleum industry, which still has between 50 and 150 million bbl of oil and gas equivalent to find in this country in places that are easy of access.