

**B.M. Hanson: Exploration Philosophy**

**Abstrak (Abstract)**

*There are still areas of future recoverable oil in North and South America in the 20 - 100 billion-barrel range. Africa, Europe, and the Middle East contain the most exciting petroleum provinces in the world. Asia and the Far East are dominated by West Siberia and China. This vast region has an energy future, but is largely unexplored. Indonesia remains the pearl of South and Southeast Asia and has a tremendous potential for gas. Australia is coming into her own with recent discoveries.*

*Ten percent of the shallow oil fields in the world are less than 500 feet in depth; 19 percent are between 500 and 2,000; and 71 percent are between 2,000 and 5,000. Of the gas fields, nine percent are less than 500 feet in depth; 25 percent are between 500 and 2,000; and 66 percent are between 2,000 and 5,000.*

*The continuous innovations in oil and gas exploration have been escalating since the inception of the anticlinal theory. In the future, by combining geophysics, geology, and organic geochemistry, forecasting efficiency will be increased. The ability to classify a basin will enable the geologist to predict the type of oil and gas fields that can be explored. There are five major basin types that are prevalent in the world.*

*Detailed study of diagenesis in various basins and the depositional mode of sediments will lead to a better understanding of the entrapment of hydrocarbons and help to better predict the aerial extent of oil and gas fields.*

*The Permian Basin of West Texas, which represents 23 percent of the oil and seven percent of the gas in the United States, is a mature basin in which detailed stratigraphic studies must be undertaken to better understand the reservoir for enhanced recovery.*



Mervyn Jones



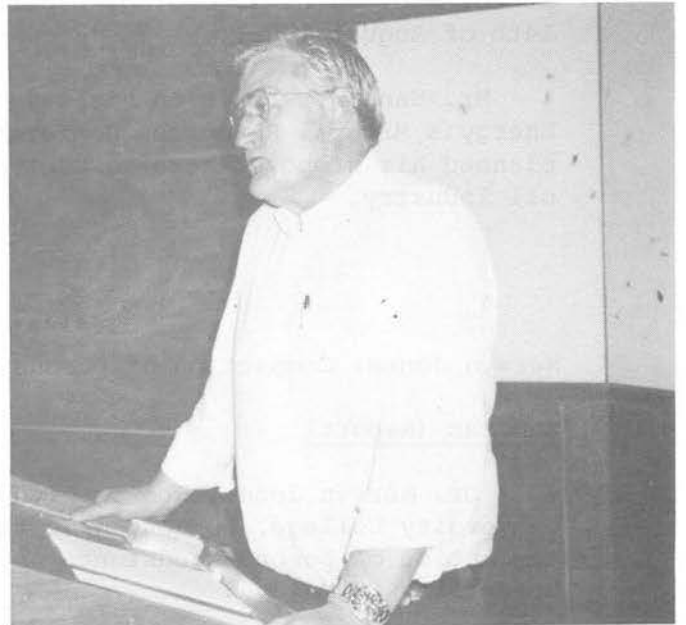
Claudio Vita-Finzi



The large turnout at UKM, Bangi.



E.J. Cobbing



B.M. Hanson

*A very large amount of petroleum throughout the world has already been discovered. There are 723 billion barrels of reserves, which is about 36 times the annual production rate of 20 billion barrels per year. A mode of about 550 billion barrels of oil remains to be recovered. Studying the discovery rate in five-year increments over the past 60 years, it is apparent that the rate is down from the high of the 1950's when some 35 billion barrels of oil per year were found. At the present time, the discovery rate is somewhere between ten and 15 billion barrels per year. Production at about 20 billion barrels per year has now outpaced discovery by a factor of almost two.*

*The world oil demand has dropped seven million barrels of oil per day since 1979 and during the same period, six million barrels of oil per day has been added outside OPEC. In the United States, the decline was arrested. An additional 2.5 million barrels per day of marginal oil is being produced. This in part was brought about by the boom of the early 1980's. With the current low price of crude oil, it appears that the United States will be losing most of this marginal resources by virtue of being non-commercial in the 13-14 dollar price range. The United States produces 30 percent of the world's oil, but has a 40 consumption.*

*The cost of producing a barrel of oil in the various regions of the world varies with the type of production. There are substantial amounts of oil and gas to be found. Economics and politics will govern how soon the additional reserves will be found, but by the use of modern concepts in exploration, the discovery rate will increase.*

*The 1960's and 1970's saw the revolution in seismic technique; the 1980's will be a decade of geochemistry, diagenesis, and structural revolution; and so by the 1990's, geologists should be in a position to delineate perspective areas and have less chances of drilling dry holes.*

#### Laporan (Report)

Mr. B.M. Hanson, President of the American Association of Petroleum Geologists (AAPG), gave the above talk at a large turnout of about 60 at the Lecture Hall, Geology Department, University of Malaya on the 14th of August 1986.

Mr. Hanson, who is on his way to attend the AAPG Circum-Pacific Energy & Mineral Resources Conference in Singapore (18-22 August 1986), planned his stopover here to meet Society members and members of the oil industry.

G.H. Teh

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