

ACCEPTANCE OF THE 1958 MINERALOGICAL
SOCIETY OF AMERICA AWARD

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Mr. President, Fellows, and Members of the Mineralogical Society of America and Guests: As a scientist in industry I am especially grateful to the Society for extending this recognition to me, for in doing so you are recognizing the increasingly important contributions being made by mineralogists associated with industrial research organizations. Such contributions are possible because many large companies such as Shell Oil Company have acquired a conscience which is based both on a faith in the ultimate utilitarian value of any basic research and a feeling of responsibility to the country and to mankind.

In 1938 only 66 of the members and fellows of the Mineralogical Society worked in industry. At the present time this number has increased to 322. Only 10 years ago there were few if any x-ray diffraction units in petroleum geology research laboratories, yet today I do not think there are any in the United States without at least one and some have as many as a dozen.

The field of sedimentary geology was stimulated and enjoyed its greatest period of growth after it was accepted by the petroleum industry. Mineralogy and geochemistry, while accepted in principle, have yet to prove they can supply answers for practical application. The petroleum industry is eager and anxious to see this proven. In the 1957 AAPG Research Committee's article entitled "Research Needs in Petroleum Geology," of the 79 research problems listed at least 61 required the study of either or both mineralogy and geochemistry.

However, if we are going to take advantage of this opportunity it is essential that we become geologists, for the more geology we know the more mineralogy and geochemistry we will understand. Unfortunately, particularly in the field of sedimentary geology, the mineralogist-geochemist is often considered to work in a field remote from geology and to be incapable of determining the geologic significance of his own data. This is primarily the fault of the mineralogist-geochemist; too frequently little effort is made to understand the geologic history of the material being studied and only a limited effort is made to develop the geological significance of the data.

We are losing an immense amount of information and many, many badly needed ideas because we do not make enough effort to thoroughly understand the determining background of our data. In many cases the geologists have learned how to use mineralogy and geochemistry more effectively than the mineralogist and geochemist have learned how to

use geology. Perhaps we should call ourselves geomineralogists and thus make a greater effort to put some geology into mineralogy.

My personal feelings are that eventually we will be able to demonstrate that clay minerals and trace elements are more subtle environmental indicators than are fossils; such problems as diagenesis and the origin and migration of oil will be solved by combined clay mineral and geochemical studies; and that clay minerals and trace elements will develop into a major tool for finding stratigraphic traps. I believe we will see the time when most of the oil being found will be found by using mineralogical and geochemical data.

In conclusion, I wish to acknowledge the stimulating training I received at Pennsylvania State University from Drs. T. F. Bates, E. F. Osborn, and J. C. Griffiths, and in particular the inspirational teaching of Dr. P. D. Krynine, who first aroused my interest in the earth sciences. I owe a considerable debt to Dr. W. F. Bradley for the interest and advice he has willingly given me for the past ten years. Shell Oil Company and Shell Development Company have unhesitatingly provided me with a unique opportunity to pursue my field of study. A great many from Shell, but particularly Dr. R. A. Rowland, have provided the impetus and stimulation which have helped make my research such a consuming challenge