Book Reviews

Subsurface Geologic Methods: A Symposium. L. W. LeRoy and Harry M. Crain. (Eds.) Golden, Colo.: Dept. of Publ., Colorado School of Mines, 1949. Pp. 826. (Illustrated.) $6.00, paper; $7.00 cloth.

The search into the unknown has always intrigued both young and old. Tales of the jungle explorer or of the one to brave the cold polar wastes, have fascinated man since first these stories were told. This search, while necessary to balance the economics of industry, also lends some thrill to the otherwise drab existence of the scientist. Surely everyone knows how easy it is to pump a few gallons of gasoline into the tank of his automobile, by merely pushing a switch; but, only the scientist realizes the tireless search, the days of planning, and the excitement of discovering the petroleum reservoir that will later yield the refined product that will be pumped into his car.

The methods of the search into the unknown beneath the surface of the earth are the subjects discussed in this book. The editors have succeeded in placing before the reader a clearly written volume on the geologist's technique. It is concise, free of too much trade jargon, profusely illustrated with apt diagrams and sharp photographs, and quite comprehensive. That the majority of the 826 pages deal with the geologist's search for petroleum is understandable when we consider that this field of commerce has penetrated deeper, and in regions more widely, than any other field of industry. Cost of drilling and producing has increased so greatly that careful planning is a necessity before the earth is punctured. For years the petroleum industry has set aside large sums for research connected with discovering new reserves. This research is the subject of the present volume.

In the beginning, consideration is given to the type of structure required for satisfactory production, and this is accomplished by correlating various observations to reconstruct sections, coordinate sequences, to interpret earth history, etc. Once the structure is known, the driller has at least a negative norm to guide him.

Laboratory inspections of samples are explained; these include micropaleontology, petrofabrics, and sand grain characteristics, among other tests. Well logging is important, and the explanations include logging of the strata, electrical resistance logging to measure oil content, and logging the muds and cuttings. An explanation of the geophysical methods employed is brief but sufficiently comprehensive for the geologist. Here he will learn how important these tools are to his own work. Seismic, gravitational, electrical, and magnetic methods are dealt with, and some case histories given. Finally, a few applications of subsurface geology and geophysics to other civil engineering problems are briefly explained.

In a sense, the title of this book might be misleading to some. The engineer who is located in the eastern United States and who is interested in highway location and design, or shallow bridge foundations, building foundations, or ground water supplies for municipal use, will find little in this book to help him. Some mining engineers might feel their field is not sufficiently covered from the geologic standpoint. However, those interested in any phase of the petroleum industry will find this book most helpful, and it is a required volume for the shelves of any geology library.

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Les Lipides. (Colloques Internationaux du Centre National de la Recherche Scientifique, Paris, 5 au 12 Janvier 1948, Vol. XI). Paris Ve: Service des publications du C. N. R. S., 1949. Pp. 399. 1000 fr.

This new book contains 26 papers (19 in French and 7 in English) delivered by 24 different scientists (18 French, 1 English, 1 Dutch, 2 Swiss, and 2 Americans) at a symposium on lipids that took place in Paris, January 5–12, 1948. The papers had already been published, constituting Nos. 1, 2, 3 and 4 of volume II of *Archives des Sciences Physiologiques.*

The book is divided into eight parts: digestion and intestinal absorption of lipids, deposition and mobilization of depot fats, transport of lipids in the blood, lipoproteins, metabolism of higher fatty acids, desaturation of higher fatty acids and the essential fatty acids, lipids and blood clotting, phosphoaminolipids and products of their degradation, and oxidation *in vitro* of fats and antioxidants.

Papers presented are of uneven merit, some being excellent and some being obviously the product of a hurried effort. The part on lipoproteins is the best. It includes an excellent review paper by Macheboeuf, which presents a comprehensive picture of that writer's work, from his earliest pioneer experiments up to 1947. An article by Chargaff follows, with an authoritative discussion of cellular lipoproteins. Finally, Frazer discusses his interesting work on artificial lipoproteins. Among other papers, a review on ketone bodies by Barnes and Gurin is outstanding.

As a symposium on lipids, the value of the book is limited. Most of the material it contains is either widely known or has been covered more comprehensively by earlier reviews. Unfortunately, many of the participants are not abreast of developments in recent English and American scientific literature, presumably because of circumstances beyond their control. Two lines of work on lipids which have been especially active in the last decade —namely, lipotropic factors and chemical structure of complex lipids—are not discussed. Indeed, the absence of these two topics, makes the reader feel that the book belongs to a much earlier date than 1949.

The book is most interesting as a cross section of French work and French ideas in the field of lipids. It