has proved. But this is digressing—the point to be stressed is that the boundaries of the various branches of science have been defined, and some indication of these definitions, artificial and changeable as they may be, should, in the reviewer's opinion, have been included in such an encyclopædia. It is interesting to find NATURE and the *Philosophical Magazine* are classified on p. 249 under *chemical* journals, while the Royal Society heads the list of chemical societies!

The printing is excellent and is in double column with clear headings. The illustrations are clear and helpful and some pleasing coloured plates are included. The book is well produced and, considering its 1,200 pages, is not too bulky for convenient handling. It will form a valuable addition to the libraries of teaching institutions and be of considerable help to those private individuals, who can afford it, requiring a reference book of science. H. R. L.

Gulf Coast Oilfields

Gulf Coast Oil Fields:
a Symposium on the Gulf Coast Cenozoic. Edited by Donald C. Barton and George Sawtelle. Pp. xxii+1070. (Tulsa, Okla.: American Association of Petroleum Geologists; London: Thomas Murby and Co., 1936.) 4 dollars; 18*s*. 6*d*.

AT the Houston convention of the American Association of Petroleum Geologists held in March 1924, an attempt was made to give a comprehensive picture of American salt domes. Papers included descriptions of oilfields, theories as to their origin and a general summary of research carried out to that date. In 1926 these papers were published by the American Association of Petroleum Geologists in the form of a symposium entitled "Geology of Salt Dome Oil Fields".

Since that time a wealth of new information and discoveries concerning Gulf Coast geology has come to light. In fact, developments during the intervening decade have been far more rapid than during the quarter century which preceded publication of the original volume. At the 1933 convention of the Association at Houston a series of papers was presented which reflected the trend of progress at that time, and these have formed the nucleus of a further volume under the above title recently published. Other important papers have been added to make the whole symposium representative of what is in reality a new era of Gulf Coast geology.

The work comprises in all forty-four papers grouped under three headings: general and theoretical papers, stratigraphy, descriptions of oilfields and salt domes. The last group is subdivided into four regions: South Texas, South-east Texas, Southern Louisiana and East Texas. An unusual frontispiece to this book is a mosaic of parts of forty aero-photographs, taken at heights of approximately 12,000 ft., of Barbers Hill Salt Dome, Chambers County, Texas; to facilitate accurate reading of this frontispiece the significance of various elements of the picture are indicated and instruction given in the correct interpretation of this and similar aerial photographs.

D. C. Barton points out in a foreword to the volume that application of geophysical methods of prospecting was largely responsible for the incidence of the new era of Gulf Coast history. Half-way through the period under review the number of known domes had been doubled by torsion balance and seismograph discoveries and an intensive refraction campaign was being conducted. Then after a short lull due to economic depression, to the flood of oil from East Texas and decline in geophysical successes, three important discoveries in Texas and Louisiana confirmed the theory that deep dome structures are more prolific than shallow ones and easier to prospect. The rate of exploration afterwards became the fastest in the history of the Gulf Coast. The area of potentially good production was vastly increased, production zones were deeper and the depth of drilling almost doubled. In 1924 production of crude oil was 30 million barrels. In 1934 it was 94 million barrels and in the first half of 1936, 25½ million barrels were produced from southern Louisiana alone.

It seems almost impossible that this rate of progress should be maintained, but D. C. Barton predicts some interesting developments in the coming decade. Of these perhaps the most spectacular is that wells to a depth of 20,000 ft. or more may be mechanically feasible and not commercially impracticable. Moreover, in his view there will be progressive improvement in geophysical technique, with the possibility of detecting commercial accumulations of oil and gas by direct method and prior to drilling, though probably not at great depth. Increased efficiency in recovery of crude oil from sands, increased production of gasolene, kerosene and diesel oil from a given quantity of crude oil, conversion of natural gas into gasolene by polymerization and increased efficiency in the consumption of petroleum products as motor fuels, will all combine to make the next decade as prosperous as the one that is just past