

for the most part of pyrrhotite and pentlandite with traces of chalcopyrite and pyrite.

Peridot.—This is a beautiful green transparent form of the mineral chrysolite, which, when cut and polished, forms a semi-precious gem. JOHN D. GALLOWAY (5) describes the occurrence of this variety of the mineral on Timothy mountain, British Columbia.

Petroleum and Natural Gas.—Owing to the increasing demand for gasoline and the prospects of a still greater demand in the future much attention has been given in recent years to the oil possibilities of Canada, particularly of the Cretaceous formations of Alberta, which have not yet been thoroughly prospected.

Among the most important of recent investigations are those made and reported on by S. E. SLIPPER and J. A. ALLAN (1). These show that the Belly River series of sediments extends northwest to beyond North Saskatchewan river, that from North Saskatchewan river southeast at least to the South Saskatchewan the series does not form a broad anticline as was formerly supposed, and that the geological sections from west to east show the formations in regular succession from the Paskapoo down to the Lower Pierre.

D. B. DOWLING in a short paper published in the Transactions of the Royal Society of Canada, volume 12, describes the broad general structure of the Cretaceous sediments of Manitoba, Saskatchewan and Alberta, and directs attention to the areas of greatest promise. In another article (1) he calls attention to a favourable terrace-like structure underlying a belt extending from Saskatchewan by way of Viking northwest to Athabaska river near Athabaska and to Peace river below the town of Peace River.

A section of the Cretaceous sediments exposed along Peace river is described by F. H. McLEARN (1), who also gives notes on the oil prospecting below Peace river. A. E. CAMERON (1) describes the sedimentary formations exposed along Hay river and around the western end of Great Slave lake.

The oil fields of Ontario are being carefully studied for evidences of structure that indicate where further explorations might be carried on with a prospect of success. M. Y. WILLIAMS (1 and 6) describes the Bothwell-Thamesville and Mosa oil fields and gives the results of a number of borings carried into the Trenton formation in Dover township. A consideration of the method of estimating gas reserves and of the exhaustion of gas fields is presented by G. R. MICKLE (3). Analyses of samples of Canadian petroleum and natural gas have been made and the results compiled by EDGAR STANSFIELD and J. H. H. NICOLLS (2).

Phosphate Rock.—A bed of phosphate averaging 12 inches in thickness is found in the Rocky Mountain quartzite in Sundance canyon and at other points near Banff in the Rocky Mountain park. This bed has been traced southward by HUGH S. DESCHMID (2) as far as Tent mountain, south of Crowsnest. Outcrops were observed at the end of Goat range, Spray lakes about 20 miles south of Banff; on Kananaskis range, Highwood pass; on Brulé creek 8 miles above its junction with Elk river; at Crowsnest a quarter of a mile west of the railway station; on Tent mountain 7 miles south of Crowsnest;