

the results seem to show that predictions regarding the occurrence of oil and gas can be safely made where the carbon ratios are of the proper magnitude, but for predicting the character of the oil the carbon ratio theory is not so reliable for Cretaceous oil as apparently it is for Pennsylvanian oil.

Of interest also to petroleum geologists is a report by Ralph L. Rutherford on the geology along the Bow river between Cochrane and Kananaskis, Alberta. This was published by the Scientific and Industrial Research Council of Alberta.

**Pyrite.**—A body of cupriferous pyrite of considerable size is found thirty miles up Ecstall river on the west coast of British Columbia. It occurs in a roof pendant of schist in the Coast Range batholith. It carries a small amount of copper, zinc and lead, but the concentration of none of these is sufficient to render the body of economic importance under present day conditions. It is described by H. J. C. MacDonald in the *Engineering and Mining Journal*. A summary by W. H. Collins and Wyatt Malcolm of the available information concerning the known deposits of pyrite in Canada has been published in the monograph on the pyrite resources of the world issued in connection with the 14th International Geological Congress held in Spain in 1926.

**Silver.**—Reports by A. G. Burrows<sup>2</sup> and Geo. B. Langford<sup>3</sup> on the Gowganda silver area and the Shiningtree area, Ontario, respectively, have been published. Silver-bearing veins have been discovered in the Shiningtree area, in the Keweenaw diabase near its contact with overlying formations. In the Gowganda area nearly all the silver deposits are found in the diabase, but a few veins occur in the overlying greenstone and conglomerate near the igneous contact.

A study by W. B. Jewell<sup>4</sup> of certain mineral deposits of the Hyder district, Alaska, is of interest because of their resemblance to those of the Salmon River district, British Columbia. They are chiefly fissure veins. Deposits also occur in roof rocks as disseminations and as partial replacements of brecciated country rock in shear zones. Hypogene minerals make up the vast bulk of the ore and consist of pyrite, galena, sphalerite, chalcopyrite, tetrahedrite, pyrrhotite, arsenopyrite, freibergite, scheelite, gold, chalmersite and molybdenite. Supergene ore minerals are sparse or absent.

In a paper presented to the Royal Society of Canada, J. M. Bell and H. B. O'Heir stress the importance of faulting and fracturing in determining the location of mineral deposits in the mining camps of Cobalt, South Lorrain and Porcupine.

**Silver-lead-zinc.**—The eastern limit of the Coast Range batholith and its outliers was examined in selected areas from southern Yukon as far south as Tacla lake, British Columbia. The batholith and its outliers intrude Palaeozoic and Mesozoic sediments and volcanics. Post-batholith phases in the form of basic and acidic dykes and sills are in certain areas found invading the whole. Shatter zones and fissures formed during the intrusion and later readjustment were filled by mineral-bearing solutions emanating from the cooling magma. The different periods of shattering and fracture filling lend a diversity and complexity to the age and character of deposit types. At the contact of the batholith and limestone metasomatic replacement deposits occur; replacement deposits are found in basic dykes and in altered wall rock near the dykes. Continuance of readjustment faulted some of the mineral deposits and in places metamorphosed them. In some portions of the zone, late volcanic flows completely mask the earlier geology. Prospecting up to date has been confined principally to the batholith; it appears that