

INVESTIGATION OF A REPORTED DISCOVERY OF PHOSPHATE IN ALBERTA.

INTRODUCTORY.

On September 10, 1915, the announcement was made public by the Commission of Conservation, that officers of the Commission had discovered rock phosphate within the limits of the Rocky Mountain Park, near Banff, Alberta.

The great potential value of deposits of phosphate at such a point, for eventual use in the manufacture of superphosphate for western lands, lent considerable interest to the discovery; since up to this time no sedimentary phosphates of any economic importance had been reported within the Dominion. The only occurrences of such sedimentary material hitherto known were certain low-grade coprolitic beds, containing *Lingulae*, in the Potsdam series of the Provinces of Quebec and Nova Scotia; and a thin "bone-bed" layer in Niobrara beds of the Cretaceous formation on Wilson river in Manitoba. Neither of the foregoing possesses any economic value whatever, the percentage of $\text{Ca}_3(\text{PO}_4)_2$ in the first-named being only from 36 to 44, and in the second 37-70.

Accordingly, the author was instructed to proceed to Banff, with a view to estimating the economic importance of the reported phosphate discovery. Banff was reached on October 1, and the field work, which yielded the results set forth in the following pages, occupied from 1st to 22nd of the month. A definite phosphate horizon in the Rocky Mountain Quartzite series was determined, and the bed was measured and sampled at a number of different localities.

The writer desires to express his acknowledgement to Mr. W. J. Dick, of the Commission of Conservation, for kindly placing at his disposal samples of the phosphate found in the Rocky Mountain Park, together with details relating to its discovery.