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## CANADA DEPARTMENT OF MINES

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### BUREAU OF ECONOMIC GEOLOGY

GEOLOGICAL SURVEY

PRELIMINARY REPORT

# TERTIARY GRAVELS IN CRANBROOK AREA, BRITISH COLUMBIA

ву Н. М. А. Rice Paper 36-1

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BY

H.M.A. RICE

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#### TERTIARY GRAVELS IN CRANBROOK AREA, BRITISH COLUMBIA

By H.M.A. Rice

In three localities between Wycliffe and Kootenay river St. Mary river has exposed unconsolidated sediments which have been determined on fossil evidence to be Tertiary (Miocene) in age. At two of these localities gravels are lacking. The third is located on the north end of a sharp angle in the river 2 miles in a straight line below Wycliffe. At the base of this exposure, at river level, lies a small patch of rusty gravels to which attention is called.

The gravels are composed of well rounded pebbles up to 6 inches in diameter, many of which are sufficiently decomposed to be crushed between the fingers. Interbedded with these gravels are sandy beds in which are fragments of wood almost completely changed to lignite. The gravels may be recognized by these two characteristics.

It is believed, for the following reasons, that there is a possibility of commercial quantities of gold at some point in these gravels.

(1) The immediate source of the bulk of the gold in the placers elsewhere in the district must have been preexisting Tertiary placers.

(2) These gravels are definitely of Tertiary age.

(3) Small quantities of fine gold may be panned from the gravels at the place where they are exposed.

Certain facts must, however, be borne in mind.

(1) It is not certain that all Tertiary streams deposited placers.

(2) Nothing is known as to the shape or location of the old channel. In well washed gravels such as these the paystreak may be limited to the bedrock channel or to depressions in a false bedrock. (3) The extent of erosion of the ice is not accurately known, although it does not appear to have been very severe in this area.

It can readily be seen, therefore, that exploration in this locality cannot be undertaken with certainty of success and must involve a considerable outlay of capital to test the deposit thoroughly. Chances of success, however, appear to be sufficiently great to warrant such expenditure.

Ottawa, January 9, 1936. HMR:VD 10 N