

During the season Shuswap, Long, Mabel and Sugar lakes and a part of Okanagan lake were surveyed with a patent floating log and prismatic compass. Observations for latitude were taken with a seven-inch sextant to fix places not otherwise determined.

Neither Mabel nor Sugar lakes had ever been surveyed and were only very roughly indicated on existing maps. They are situated in the foot-hills of the Gold range on the Shuswap river and are about 35 miles apart by the river route. Their shores are rocky, being composed of gneiss and mica-schists of the Shuswap series, with large masses of pegmatite and graphic granite included. At the head of Sugar lake grey granite replaces the gneiss entirely, holding in many places angular fragments of mica-schist.

To the north-east of Enderby, and south of the Canadian Pacific railway, the mountains were ascended and two transit stations were established at an elevation of more than 6,000 feet. These mountains are almost bare of trees, and, where not too rugged, travelling is easy. Bear, caribou and deer are abundant.

Another transit station was made on the mountains north-east of Sugar lake on the eastern boundary of the sheet. These and several compass stations on either side of White valley, together with the points occupied in 1890, will afford sufficient data for the construction of an approximately accurate topographical map.

Southward and easterly from Salmon Arm, along Canoe creek and Deep creek, there is an extensive area of flat land, with grey silty soil, very suitable for farming. Generally this area is lightly timbered, while much of it having been burnt over would be easily cleared for cultivation.

About half way between Lansdowne, on the Shuswap and Okanagan railway, and the first crossing of the Salmon river by the waggon road to Grande Prairie, specimens of garnet were discovered. The crystals are nearly equal in size to the Stikine garnets and are enclosed in a light grey mica-schist and in places form at least half of the rock mass.

Though not included within the area of the Shuswap sheet, it may be mentioned that the numerous discoveries of silver-bearing galena and zinc blende on the North Thompson river at Mosquito Flat and above the Clearwater, are attracting a good deal of attention. These localities are situated about 50 miles and 75 miles respectively from Kamloops. The ores are said to give rich assays.

The following specimens from Mosquito Flat were assayed in the laboratory of this Department:—

1. Zinc blende with a little galena : gold, none ; silver, 11·666 ounces per ton.
2. Galena and zinc blende in quartz : gold, none ; silver, 48·125 ounces per ton.

During the season 330 miles of patent log surveys and 540 miles of track surveys were made.

Mr. McEvoy was assisted by Mr. J. McGregor, B.A.

The total cost of the exploration was \$1,459.73.

Mr. R. G. McConnell obtained leave of absence last summer for the purpose of visiting the European Alps and studying their structure as an aid to further work in the Rocky Mountains of Canada, and the field work done by him last summer was limited to an examination of part of the Bow River valley, in Alberta.

Mr. McConnell supplies the following statement respecting this examination: "This work was carried out during the month of June and was undertaken with a view of ascertaining whether the coal-bearing Cretaceous rocks of the Cascade basin recur east of the mountains. The section along the Bow proved to be too complicated and was intercepted by too many concealed intervals to trace the sequence of the formations definitely throughout, but sufficient evidence was collected to show that in all probability the conglomeritic beds exposed at the Kananaskis Falls are the equivalents of those overlying Marsh's mine, south of the Gap siding in the Cascade basin, and that the underlying dark shales consequently represent the coal-bearing formation. East of the