

weight to post-glacial changes, much can be learned of the vein itself.

Points Four and Five deal with the same indications of value.

Sixth, the presence of heavy overburden is not necessarily a deterrent. Only when prospecting is carried on without system will the depth of cover be a serious factor.

Seventh, the possibility of drainage should be well considered.

Eighth, the possession of water-power is often of vital consequence.

Ninth, the saving implied by the use of water-power should be measured in terms of steam-power.

Tenth, the accessibility of the mine is sometimes in Nova Scotia a serious item, and the possible need of building roads will, naturally, affect its value.

Mr. Prest then further suggests that all employees should become shareholders in the mine where they work. Gold-mining is not competitive; but knowledge and co-operation are much needed in the small mines of Nova Scotia. Intimate knowledge, for instance, of post-glacial geology is a *sine qua non* for the prospector. And the workman, who often farms, lumbers, and fishes in addition to doing a little mining, requires a direct inducement to keep him at work.

Mr. Prest's suggestions amount broadly to this,—let the operators pool their knowledge of the country and of the industry, give the miner a tangible and fixed interest in the mine, and the spirit of co-operation will at least have been generated. To an extent it will be possible to control valuation and capitalization. The mining fraternity, working as a unit, can accomplish these things and many more.

GEOLOGICAL SURVEY SUMMARY REPORT.

The summary report of the Geological Survey Branch of the Department of Mines, for 1911, is the most comprehensive yet published. Although, for sufficient reasons, it makes its appearance very late in the year, the character of the report itself compensates in a measure for this delay.

The Survey staff now includes 40 technical officers, 13 draughtsmen, and the necessary complement of stenographers. There are also an official photographer, a librarian, taxidermist, a collector, and several special clerks, etc. The total grant for the year ending March 31st, 1911, was \$381,889, of which an unexpended balance of \$120,594.81 remained unexpended at that date, and lapsed. The seeming anomaly was, no doubt, due to the fact that the arbitrarily fixed fiscal year does not correspond with the calendar year.

The field work during 1911 was conducted by 30 geological parties, and six topographical parties. The expenditure in each Province is given herewith:

Explorations in British Columbia	\$26,352.37
Topographical surveys in British Columbia	39,766.30

Explorations and surveys in Ontario	10,770.60
Explorations in Quebec	4,904.39
Explorations and surveys in New Brunswick	6,203.45
Explorations in Nova Scotia	4,549.49
Explorations in North-West Territories . . .	8,710.84

It will be noticed that British Columbia gets nearly two-thirds of the whole sum expended in field-work. While allowance must be made for the fact that long distances must be covered and heavy expenses incurred in geological investigation or topographical surveying in British Columbia, yet the disparity between the expenditures in the west and in the east is too marked. Quebec, New Brunswick, and Nova Scotia are more in need of attention than ever before.

In his introductory remarks the Director refers feelingly to the deaths of Dr. R. W. Ells and Mr. R. L. Broadbent. The former had been in active service for no less than 39 years. The latter was largely responsible for the excellent mineralogical exhibits now housed in the Victoria Museum.

Reference also is made to the resignation of Mr. J. A. Dresser, who accepted a very responsible position with a mining corporation. The Director lays stress in mentioning this resignation upon the urgent need of higher salaries and more rapid promotion. He points out that the loss of such an experienced officer is irreparable. However, as the Survey continues to be absolutely removed from political and other undesirable influences, and as it has a considerable body of well-trained young geologists and topographers to draw upon, its general position is healthy.

One important event during the year was the acceptance by Dr. Charles D. Walcott, secretary of the Smithsonian Institution, of the honorary position of Collaborator in Geology. This insures co-operation whenever necessary between workers on both sides of the boundary.

In the report before us several important papers are presented in fuller detail than has hitherto been usual. Quartz mining in Klondike district, mining in Portland Canal district, the geology of Nelson map-area, the progress of clay investigations, placer gold in Quebec, the gypsum of New Brunswick, the gold-bearing series of the Midway Basin, N.S., are among the subjects treated at length.

The Summary Report for 1911 may fairly be described as a comprehensive and satisfactory publication.

NICOL HALL.

The formal opening of the Kingston School of Mining's new Mining and Metallurgical Building took place on October 16th. A description of the building will be found elsewhere in this issue. We wish here to congratulate the School upon this much-needed addition to its equipment. We desire also to place on record our appreciation of Professor William Nicol's devotion and generosity. Without Professor Nicol's munificent financial aid, or, in fact, without his unceasing labours in every direction, the erection of the new structure