

an Order in Council dated June 26, 1902, rescinding the Order in Council dated July 26, 1901, which provided for such refund. Although the Order in Council of June 26, 1902, provides for the free assay of the gold deposited by the Yukon miner in person in the assay office at Vancouver, and puts him, therefore, in the same position in which he would be if he deposited his gold in the United States assay office at Seattle, there is no reason for the Yukon miner on his way to the States to stop off in Vancouver to deposit his gold in the Dominion of Canada assay office, which offers him to special advantage over that at Seattle. 2nd. Most of the gold of Yukon origin is handled by the banks in Dawson, and therefore, only comparatively small amounts of bullion are taken out of the Yukon by individual miners to be personally deposited by them in assay offices, either in the United States or Canada. 3rd. On all deposits, of whatever source, representing gold on which no royalty has been paid to the federal government, the regular assay charge and commission for marketing the gold are exacted as provided by the Order in Council dated June 26, 1902. Under these circumstances, the amount of business coming to the Dominion of Canada assay office will continue to be small, and not until a market has been created in Canada for Canadian gold, by the establishment of a mint, will its business be commensurate with the gold output of Canada.

"The Canadian Bank of Commerce at Vancouver, which is authorized by the Government of Canada to market our deposits, received from the assay office gold bars to the value of \$570,444.13, and realized from the same of these bars and clippings \$572,034.28, showing a difference of \$1,590.15 in favour of the Government. In April, 1903, the express companies refused to ship bullion from Vancouver to Seattle at the cut rate of 50 cents per \$1,000, and charged the regular rate of \$1 per \$1,000 bullion. On account of this advance in expressage it became necessary to recoup the bank for the additional expense in marketing our gold bars, and increase the commission 12 cents per \$100 allowed them to 17 cents. This additional amount of 5 cents was directed to be added to the assay charges exacted on bullion deposits made in our assay office.

"The expenditures during the year amounted to \$14,992.53; the earnings, including extra assay charges, special assay charges, and value of sweeps, recovery of grains and residues amounted to \$2,504.75. The unexpended balance of the appropriation of \$21,000 amounts to \$6,017.15. The percentage of net expenses to the total deposits is 1.52962 per cent.

In accordance with your instructions to have a representative collection of gold dust and nuggets made from the Yukon, British Columbia and the Northwest Territories for exhibition at the World's Fair, to be held in St. Louis, in 1904, and afterward to be kept permanently in the museum, arrangements have been made with the Canadian Bank of Commerce to procure such collection for the Government, the collection to consist of gold dust of 1-16 oz. in weight and of nuggets of moderate size, the specimens to be num-

bered, their exact locality given and the whole to be sent to the Dominion of Canada Assay Office for assay. The manager of the Dominion of Canada Assay Office has been instructed on receipt of the collection to have the specimens assayed to ascertain the fineness and value per ounce of each specimen, and in the case of the nuggets, to have a cut made to remove just sufficient gold for assay, and to have the number corresponding to the specimen stamped neatly and in small figures on the upper side of the nugget when occupying a position of stable equilibrium upon a level surface.

"From the report on the quartz mill and assay office, Dawson, Y. T., of Mr. A. J. Beaudette, Government Mining Engineer, it appears that the agreement made between the Government and the contractor, Mr. Matheson, of the Dawson City Water and Power Company, Limited, to erect a two stamp mill, together with a concentrating plant, has not been carried out, but that Mr. Matheson re-modelled and put into operation a stamp mill situated on the Klondike River, formerly operated by Mr. Munger. This mill, Mr. Beaudette reports, is entirely unsatisfactory, and was on his advice to the Commissioner, on March 20, 1903, closed. Mr. Beaudette recommends, and I concur in the recommendation, that, unless a modern mill to correspond with the provisions of the original agreement be erected by Mr. Matheson, the contract be cancelled. The assay office established as an adjunct to the quartz mill is in charge of an officer paid by the Government and under the supervision of the Government Mining Engineer. The assay office is well patronized by the public, 384 assays having been made for fiscal year ended June 30, 1903. These assays were, in accordance with a resolution passed by the Yukon Council, made free to the public, the local government paying Mr. Matheson a set price of \$3 per assay. The cost per assay, according to Mr. Beaudette's calculation, is on the average \$1.74. In view of the failure of Mr. Matheson to meet the provisions of the contract, it would be in the interests of the Government to take over the assay office, charging for assays made a price just sufficient to cover expenses and remove the assay office from its present inconvenient location to one nearer the administration building.

"The separation of the gold from the black sands of the pay-gravel is, on account of the high specific gravity of the black sand, not completed in the sluice-box. Assays made of such black sands from the placer diggings of Bonanza and Dominion creeks show that these sands retain gold to the value of from \$62.01 to \$293.49 per ton of sand. Amalgamation has been resorted to in some cases to extract the gold from these sands, but this method of extraction has not been satisfactory, the treated sands still containing a notable percentage of gold, besides being costly on account of the loss of mercury connected with the process. A more promising method would be the employment of electro-magnetic separators which would separate the highly magnetic black sands from the gold. Such a separator might be set up near a source of electricity for custom work, or separators with per-