

few months prior to the outbreak of the war. Six carloads, of about thirty tons each, have been shipped from the mine; five of these yielded an average copper content of nine and a half per cent., while one carload selected from a portion of one of the old dumps carried five per cent in copper.

In the summer of 1912, Mr. Pierre Tetrault, of Montreal, started to erect a concentrating mill at the Huntingdon mine (lot 8, range VIII, Bolton) with the aim of working over some of the old dumps on that property. The building was completed but the machinery has not been installed. In the spring and early summer of 1914, the water was pumped out of the old Nichols shaft down to about 275 feet. At a depth of 180 feet, some prospecting work was done where they found the schist impregnated with small amounts of chalcopyrite and pyrite, and traversed, parallel to the schistosity by narrow stringers of quartz carrying chalcopyrite. Work was suspended on the property a month or more before the outbreak of the war. Mr. Tetrault has purchased the property from the Nichols' Copper Company.

In 1909, water was removed from the old shaft of the Lake Memphremagog mine (lot 28, range IX, Potton) and about 125 feet north of the open cut a new shaft was sunk to a depth of 80 or 90 feet.

In the fall of 1909, an Allis-Chalmers water jacketed furnace with a capacity of 80 tons per day, was erected at the old Acton mine, lot 32, range III, Acton by Mr. P. Tetrault of Montreal. The plan was to smelt portions of the old dumps at these mines, and carry on some custom work. About six hundred tons of cupriferous pyrrhotite were brought from the Lake Memphremagog mine; this pyrrhotite was roasted and then mixed with the copper bearing magnesian limestone of Acton. Fifteen hundred tons of ore, selected by hand-picking the old dumps at the Acton mine, are said to have carried about one and a half per cent. of copper. After a short run, operations were suspended and have not been renewed. It is certain that none of the dumps at the Acton mine will average a half a per cent in copper. At the Acton mine, black shales lie beneath an upper limestone and rest upon a series of massive limestone beds. The copper ore that was taken from this property in the early days came from the upper limestone and the uppermost portions of the shale in the vicinity of their contact with irregular dyke-like intrusions of a now highly altered diabase or closely allied rock. In 1913, in order to determine the possibility of mineralization of the lower limestone, a diamond drill hole was put down at what was considered to be the most favorable locality on the property; but no evidences of mineralization were found. This work was done under the direction of Prof. J. W. Bell of McGill University.

In addition to the above operations, some prospecting for copper has been done on other properties, but without discovering any deposits of economic value. During portions of the summer of 1914 prospecting work was being performed on lot 6, range VI, of Brompton, on lot 22, range V, of Stoke, on some lots in the vicinity of the deposit of pyrite at Stratford, and some diamond drilling was being done on lot 23, range III, Weedon, but no encouraging results were obtained.

Labor.—During the early days of prospecting and mining in the Eastern Townships, labor was cheap. Especially was this true of the period during and immediately after the Civil War (1861-65). At that time a considerable number of men, chiefly deserters from the army, and locally known as "skidaddlers," crossed the border into Canada. It was a good miner that during that period received \$1.00 a day; \$1.25 was a very exceptional wage, and many men considered themselves fortunate if they earned 75 to 80 cents a day.

At present wages are higher. At the Eustis, a miner receives \$1.75 a day. A large proportion of the men are

on contract and some of them earn \$3.00 or more a day. At Weedon, the average daily wage is \$2.60. Much of the development work is done under contract at the following rates:—Drifts, 7 x 4, at \$6.00 per foot; Raises, 6 x 10, at \$4.50 per foot; Winzes, 10 x 5, at \$12.50 per foot, and Shafts, 16 x 6, at \$25.00 per foot. These prices cover all labor and supplies, except drill repairs, compressed air and drill steel. In raising and drifting, the company does the shovelling.

MINE-RESCUE AND FIRST AID TRAINING IN BRITISH COLUMBIA.

The larger coal mines of British Columbia are those situated on Vancouver Island and in the Crow's Nest district of Southeast Kootenay, respectively. Smaller fields are those of Nicola and Similkameen, which are about midway between the two larger fields. In all these coalfields instruction is given to miners and other mine-employees in both mine-rescue and first-aid methods. During 1915 it was manifest that first-aid work had taken a firm hold in the larger fields, for in both there were held first-aid demonstrations and competitions. Further, there was a gratifying increase in the total number of members of classes for instruction held under the auspices of the Canadian Branch of the St. John Ambulance Association, which association is the Ambulance Department of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England, and is engaged in doing work similar in many respects to that of the Red Cross Society in the United States.

On Vancouver Island first-aid instruction classes have been held at Cumberland (Comox colliery), Nanaimo, South Wellington, and Ladysmith (Extension colliery). There have also been several first-aid public demonstrations, in Comox district, at Nanaimo, and at Ladysmith. At the last-mentioned place there was held in November the first annual competition for the Frost-Cunningham Cup, donated by the mines surgeon, Dr. A. C. Frost, and J. H. Cunningham, superintendent of the Extension colliery. Four teams, each of five men, competed, and the winners were the members of team B, from No. 1 mine, Extension. Similarly, there have been demonstrations of the use of oxygen-breathing mine-rescue apparatus and the pulmotor.

The approximate number of men who attended the first lecture of the St. John Ambulance course of instruction in first-aid in 1915 was 700. While less than one-half of these presented themselves at the final examination at the conclusion of the course, it is satisfactory to note that fully 300 passed and obtained the St. John Ambulance Association's certificate of competency to render first-aid to the injured. These numbers include men connected with metalliferous mines as well. Classes were conducted at 20 different mines in 1915. The total number of mine-rescue proficiency certificates issued to date by the British Columbia Department of Mines is 244. Mine-rescue and first-aid railway cars are maintained by the Canadian Collieries (Dunsmuir) Limited, and the Western Fuel Co., on Vancouver Island. There are Government mine-rescue training stations at Nanaimo, Merritt (Nicola), and Fernie (Crow's Nest). Both Thos. Graham, chief inspector of mines, and Dudley Michel, instructor, are zealous in fostering first-aid and mine-rescue training work in the province.