MINING ENGINEERING SUMMER SCHOOL.
June 15—July 7, 1902.

Under the guidance of Prof. R. H. Richards, a party of twenty-two of the second, third and fourth year mining engineering students took a three-weeks' trip to Nova Scotia and Cape Breton Island. The object of the summer school was to show by actual examples the mining and milling of gold ores, and the different methods of mining, sizing, washing and coking of bituminous coal; also, the Nova Scotia blast furnace practice and the manufacture of steel from pig metal.

By way of emphasis, the smaller and more incomplete plants were visited first, so that the impressions made by the larger plants were so much the more marked by a later comparison.

The party left Boston Saturday, June 14, 1902, bound for Halifax, N. S., on the former United States transport "Olivette." Arrived at Halifax Sunday afternoon, the party was at once conveyed by barge to the little gold-mining town of Waverley, a distance of some twelve miles. Hotel accommodations being scarce, some of the party were quartered at the different houses and some in an old hotel. The next morning the party, dressed in old clothes, went into the mine of the Waverley Gold Mining Company and inspected the methods of sinking the shaft, mining, tramming and hoisting the gold-bearing barrel quartz; also the ventilation, mine drainage and use of compressed air. This was supplemented by a study of the geology of the adjacent country and its bearing on the method of working the mine. The generalities of mine management were also explained. The next day the power-plant and mill were examined. A 98-inch Pelton water wheel (73 feet head) was used to drive the air compressor, and a 15-inch Crocker turbine furnished the power for the 60-stamp mill and four Wilfley tables, for crushing, amalgamating and concentrating the ore.

From Waverley the party went to New Glasgow, which was to be headquarters for the next five days. A visit was made to the Drummond Colliery (Mr. Charles Fergie, general manager) at Westville. Here the students were given an excellent opportunity to study the details of a modern direct-connected hoisting engine, with its winding drums, clutches, etc.; also the ventilating (Walker fan) and air-compressor plants and boiler rooms. The party went into the mine and saw the coal mined by the so-called "long wall" method. From the workings the coal was traced to the sizing and washing plant. The one-quarter-inch coal product from the sizing and hand-picking house was followed to the washer house, where it was fed into a Robinson washer, thence to the draining sieve and finally to ten pairs of beehive coke ovens, from which 60 to 72-hour coke was obtained.

The first blast furnace was seen at the plant of the Nova Scotia Iron and Steel Company at Ferrona, where there was also a Stein jig-system coal-washing plant and a bank of Otto Hoffmann coking ovens. The theory of the hot blast for the iron furnace was here practically illustrated, the air from two 1,000-horse-power blowing engines being sent through one of three, 3-pass hot-blast stoves, in which the temperature of the air was raised to about 1050° F. before it entered the bustle-pipe of the furnace.