

Another well on lot 14, Middle road north, East Tilbury, gives 500,000 cubic feet per day. This will be used to supplement the Chatham supply.

The Chatham prices per 1,000 cubic feet range from a maximum of 35 cents down to 12 cents, according to quantity used. For domestic lighting and cooking it is 35 cents. For heating it is 27 cents per 1,000 for the first 100,000 cubic feet. For the next 50,000 the price is reduced to 27 cents. For any quantity over 150,000 the rate is 17 cents. For gas engine power the minimum charge is \$37.50 per month on the assumption that not less than \$250,000 feet per month will be used, which is at the rate of 15 cents per 1,000. Used under boilers the rate is 12 cents per 1,000 for any quantity. Artificial gas was formerly sold in Chatham at \$2.50 per 1,000, with a discount of 30 per cent. for cash within 10 days. Nearly every farmer along the gas pipe line into Chatham now uses gas for lighting.

The Chatham Gas Company is preparing to purify the gas by removing the sulphuretted hydrogen.

Two other gas wells supply the adjacent country.

In the Romney field oil is struck at 300 feet. There are no gas wells proper. During the summer the largest oil producer was the Hornick Farm Oil Company, whose output was 100 bbls. per day.

Handling the Oil in Tilbury.—The oil is first piped from the different wells on a farm into one or two tanks.

Thence to a large central station; and then to the railway station tank at Merlin. Pipe lines have been installed to carry the oil from the wells to the central storage tanks and pumping station. The main tank is of steel and has a capacity of 3,840 bbls. Other tanks bring the total capacity up to 6,000 bbls. The oil is conveyed in two pipe lines, 4 inch and 2 inch, to Merlin, four and one-half miles, under 200 to 400 lbs. pressure. As much as 3,500 bbls. can be sent in ten hours. At Merlin the oil flows by gravity into the cars.

One one farm there were nine producing wells. The power for pumping is supplied by a gas engine run by natural gas. The power plant is placed in a central position. Surface rods run to each well, at which a pump is placed. The pumps are run simultaneously by these rods. The local tanks usually have a capacity of 250 bbls.

Drilling is contracted for at rates of from 85 cents to \$1 per foot in Tilbury. Most of the wells are about 1,400 feet deep. Shooting with nitro-glycerine entails an additional cost of about \$175. The cost of lining brings the total outlay to about \$3,000. If the well proves a "duster" the casing is removed and the operator loses. Twenty-five days are usually taken to drill a well in Tilbury. In the Romney district the shallow wells are drilled with much less outlay.

(To be continued.)

ONTARIO'S MINING PROGRESS IN THE LAST DECADE.

BY PHILLIPS THOMPSON.

In no respect has the industrial expansion of the Province of Ontario during the last decade been more apparent than in connection with its mining and metallurgical activities. Owing to the discovery of new mineral deposits and the investment of large amounts of capital in mining and metallic industries, the increase in production has been considerably greater than in any other department of industry. Especially is this true of the later portion of the period under consideration. In 1897 the total mineral output was valued at \$3,899,821, of which only \$1,038,089 was metallic. Up to that time, and for some years later by far the larger proportion of mineral production consisted of non-metallic items, including building stone, brick, lime, etc. In 1901 (however, the metallic output had increased to \$5,016,734, or 42 per cent. of the total production, and in 1905, for the first time, the metallic exceeded the non-metallic output, being \$10,201,010, out of a total production of \$17,854,296. This figure, which was the highest record in the history of Ontario mining, was considerably surpassed in 1906, with a metallic production of \$13,179,162 and a non-metallic output of \$9,042,646, making a total of \$22,221,808. Partial returns, covering the first nine months of 1907, indicate that the advance has been continuous.

With the exception of pig iron, silver holds the first place on the list of metals. Prior to the development of the Cobalt deposits its production had for some years been declining. A drop in the price of the metal resulted in the closing down of mines formerly large producers in the Port Arthur district. The output in 1902 had decreased to \$58,000 in value, and in 1903 to \$8,949. The discovery of the silver-cobalt nickel ores in the fall of 1903 in the course of construction work on the Temiskaming & Northern Ontario soon attracted widespread attention from mining men and capitalists, and a rush

of prospectors to the new camp took place during that and the following year. Practical mining operations were speedily set on foot, the output of the camp for 1904 being 158 tons of ore, yielding in addition to other values 206,875 ounces of silver, valued at \$111,887. This year witnessed the beginning of operations on the Nipissing, La Rose, McKinley-Darragh, Trethewey, Coniagas and other prominent mines. During 1905 the number of shipping mines was increased to 16. The total production of silver for the year was 2,473,452 ounces, valued at \$1,372,877. The output was entirely from the Cobalt field, with the exception of small quantities extracted from the residues of the Copper Cliff nickel mattes. This was more than doubled in 1906, the yield having risen to 5,357,830 ounces, valued at \$3,543,089, with additional values of cobalt 312 tons, \$30,819; nickel, 156 tons, and arsenic 1,558 tons. A great drawback to Cobalt mining operation has been the difficulty of obtaining satisfactory terms from the American smelters. At first they were paid for the subsidiary products, but latterly the smelting companies, alleging the refractory character of the ore, have as a rule refused to make any allowance for the nickel, cobalt and arsenic contents. Other difficulties arising out of fluctuations in the price of silver have occurred more recently as a result of which shipments have been to some extent kept back, with a view of obtaining better terms from Canadian smelters, now in course of construction. Many recent consignments have been sent to the smelter of the Canadian Copper Company at Copper Cliff, Ont., where the terms are regarded as comparatively favorable.

The season of 1907 was characterized by continued expansion and greater attention to systematic and thorough development work on the part of producing mines. Early operations were largely conducted by crude, primi-