

The Tequixquac Tunnel.

The Tequixquac tunnel, which now forms the most important link in the drainage system of the Valley of Mexico, was begun during the reign of the Emperor Maximilian. The work was stopped, however, at the fall of the Empire and was not resumed until 1885; even then the want of funds prevented any material progress until March, 1888.

This tunnel is $6\frac{1}{4}$ miles in length, driven through a mass of sand, mud and soft calcareous sandstone. It is brick lined throughout, the section is ovoid, with an extreme width of 13 ft. 9 in. and a height of 14 ft., and the tunnel has a gradient of 1 ft. in 1,388. The calculated flow of water is 450 ft. per second, or 200,000 gal. per minute. At first the headings were driven in the centre, but the bottom heading system was soon adopted of necessity. The greatest completed tunnel advance in any one month was 182 ft., and the greatest distance that any single heading was driven in a calendar month was 656 ft.

The Shoshone Tunnel.

The Shoshone tunnel, 1906-1910, is owned by the Central Colorado Power Co. Its intake portal is on the Grand River 12 miles above Glenwood Springs. The tunnel is 12,453 ft. long, 12 ft. high and 16 ft. 8 in. wide, and is driven wholly through hard metamorphic granite.

Where timber supports were necessary vertical posts and a three-piece arch were employed, all of which were afterwards completely covered by concrete lining. Driving was carried on from seven crosscut adits, as well as from both the intake and the discharge ends.

The cost of the tunnel, not including concrete lining, \$927,653, was divided as follows:

Construction Costs of Shoshone Tunnel per Linear Foot of Tunnel.

Test drifts	\$0.45
Drilling and blasting	20.66
Trenching and grading floor	1.15
Track work	1.76
Mucking and loading	17.28
Hauling.	2.88
Dumping and maintenance	2.18
Blasting supplies	8.35
Drill steel	2.91
Sharpening and repairing	4.60
Timbering, temporary and permanent..	3.87
Light and wiring	1.57
Ventilating.	.59
Pipe, air hose and connection	.85
Power drills	2.94
Hoists and trestles	.96
Pumping.	.21
Sundries.	.28

Total construction costs	\$74.49
Overhead costs, including surveying, management, office, etc.	30.91

Total cost per linear foot\$105.40

ONTARIO'S MINERAL PRODUCTION FOR HALF YEAR.

The statistics of Ontario's metallic production for the half year ending June 30th, 1914, have been compiled by the Bureau of Mines. As in most other industries the production as a whole for the half year shows a decrease. Copper, nickel, cobalt and cobalt

and nickel oxides show an increase, but there is a decrease in gold, silver, iron ore and pig iron. However, there is likelihood of the gold output being increased in the near future. Trade depression does not affect the "market" for this metal.

Summary of Metallic Production for Half Year Ending 30th June, 1914, Showing Comparison With Production for Similar Period, 1913.

Product.	Quantity.	Value.	Same period 1913
Gold, oz.	99,269	\$2,011,069	\$2,171,147
Silver, oz.	13,379,044	7,053,418	7,693,713
Copper, tons	8,357	1,197,059	832,645
Nickel, tons	13,105	2,872,843	2,514,414
Iron ore, tons	47,160	118,119	141,324
Pig iron, tons	343,408	4,429,664	5,051,840
Cobalt and Nickel.	129	22,581	7,374
Oxides, lbs.	757,268	379,152	186,347

NOT AS EXPECTED.

A London Post correspondent has received a letter from a high German officer saying: "The war is not going quite as we expected, and the resistance of the allied forces is extraordinary. We are beginning to feel nervous as to results.

"The German losses are so terrible that the Emperor has forbidden their disclosure. Our generals have been wantonly wasteful of our men, who have been mowed down in thousands. While it is impossible to say what our losses are, I estimate them at between 340,000 and 500,000. If they continue at this rate, we shall be quite unable to meet Russia with any hope of success."

CANADIAN COAL AND COKE CO.

At the annual meeting on Sept. 10, the following directors were elected for the ensuing year: Hon. Senator Curry, Montreal; Hon. Senator Mackay, Montreal; J. W. McConnell, Montreal; H. A. Lovett, K.C., Montreal; T. H. Saunders, Cleveland; D. W. Campbell, Montreal; R. M. Ballantyne, Montreal; O. W. Donner, Montreal; W. M. Dobell, Quebec City; John T. Ross, Quebec; A. H. Cook, K.C.; Hon. W. B. Ross, Halifax, N.S.; H. Beverley Robinson, Montreal.

NIPISSING.

Shipments of bullion from the Nipissing for the month of August was only \$69,855, owing to the condition of the silver market, but production was as high as ever, viz., \$212,965. The remainder of the Nipissing and customs ore is being stored.

The first discovery of coal in the United States was made by Father Hennepin, a Jesuit missionary, who in 1679 reported the occurrence of "cole" on the banks of the Illinois river, near the present city of Ottawa. The first record of coal mining in Illinois refers to the shipment of a flatboat load of coal mined in 1810 at a point on the Big Muddy river in Jackson county, Illinois.