

# BIG TUNNEL IS FINISHED AT LAST

Researched By: Ralph Drew, Belcarra, BC, August 2013.

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## Drill pierced the wall of rock. Rejoicing at Lake Beautiful [Buntzen Lake] to-day when crews working on *Vancouver Power Company's* scheme met under centre of mountain — Facts concerning the Great Work.

The *Vancouver Power Company's* tunnel is finished.

The practical completion of this extensive work took place this morning when a ten-foot drill pierced a hole through the last intervening section of rock in the two-and-a-half-mile bore, which will connect Lakes Coquitlam and Beautiful [Buntzen Lake] for the generation of electrical energy.

After two and a quarter years of incessant work, involving an expenditure of \$320,000, the drill broke through this morning from the Lake Coquitlam end, and leaving but 10 feet of rock remaining, which will be removed by this evening. This marks an important step in the development of the Hydro Electric Power Scheme which is ultimately intended to develop 30,000 horsepower for distribution in Vancouver, New Westminster and Steveston.

The big tunnel forms a silent, but eloquent testimonial for the triumph of modern engineering, for, after working from both portals beneath a mountain four thousand feet high for over two years the two ends of the bore met exactly true.

Amid cheers of surprise and delight the workmen employed at the Lake Beautiful heading of the tunnel being driven for the *Vancouver Power Co.*, saw the end of a steel frill break through the wall of rock on which they were engaged at 7 o'clock this morning. The other end of the drill was being operated in the Coquitlam Lake heading of the tunnel, and the piercing of that last fragment of rock meant the completion of work that had progressed tirelessly day and night for over two years. Away in the depths of a mountain whose snow-clad peak towered nearly 4000 feet above them, that little group of men made the rocky tunnel ring with cheers. But in a short time this same tunnel will re-echo with the gurgle of the waters of Lake Coquitlam, as they flow through to mingle with those of Lake Beautiful to aid in the generation of electrical energy that will turn countless wheels and furnish light in this city, New Westminster and Steveston, to say nothing of the numerous other uses to which the subtle fluid is put.

### CONTRACTORS JUBILANT

With five days to spare in the time allowed for the completion of the tunnel, it was little wonder that Messrs. Ironside, Rannie & Campbell, contractors of this huge undertaking, were jubilant at the news which reached them from the North Arm of the Inlet [Indian Arm] early this morning. Others were equally interested in the good news, among them, Mr. R. H. Sperling, general manager of the *British Columbia Electric Railway Company*, who was one of the electrical experts who passed upon the adoption of this power scheme.

Mr. Sperling lost no time in wiring the welcome news to Mr. Buntzen, managing director, who is at present in Victoria. While all the head officials of the *British Columbia Electric Railway Co.*, and the *Vancouver Power Co.* are glad that the tunnel is practically finished, none are more delighted than Messrs. Hermon and Burwell, the engineers in charge of the work. The successful completion of the tunnel and the exactness with which the ends of the long bore met, despite the many engineering difficulties encountered, is sterling tribute to their ability. Mr. Wynne Meredith, consulting engineer of the *Vancouver Power Company*, who is also deserving of much of the credit for overcoming obstacles met with in the construction and progress of the work, has not yet learned the good news. He is at present up at the Britannia mines, but a special steamer is being sent after him this afternoon, and he will be brought down in time to see the last fragment of rock removed this evening.

### TWO CREWS KEPT AT WORK

At the beginning of the week, it was not expected that the final piercing of the tunnel would be accomplished before next Saturday or possibly Monday. The latter date was announced by the Contractors in the case of any unforeseen delays. But that date was also based upon the fact that it was

at first intended to cease work at the Coquitlam end of the tunnel last Sunday. Subsequently, after examination of the face of the tunnel at that end and a re-measurement of distances, it was decided to start the Coquitlam crew at work again. Consequently, the last fifty feet, which remained on Monday were drilled in just half the time previously estimated.

The sound of drilling has been heard from opposite ends for months, and it was in itself a proof of the correctness of the engineers' surveys. But yesterday the sound seemed to grow louder as each inch was removed. So preparations were made for the Coquitlam Lake crew to quit, this time finally. But, before doing so, the long watches of the night was employed in sinking a single drill hole, 10 feet long in center of tunnel that end. The changing of the long drill as one hole sank deeper, occupied a good deal of time, and it was just a few minutes after 7 o'clock this morning, when in an interval between the gear of the drill at the Lake Beautiful end that the workmen noticed the rock slowly crumbling in a spot exactly in the centre of the tunnel. Slowly but surely the steel point emerged. The Coquitlam Lake crew soon knew by the fact of there being no resistance as the drill was forced along that they had broken through. If any further confirmation was needed, it was in hearing the signals made by tapping on the drill point by the men at the Beautiful Lake end. The long drill was soon withdrawn, and hearty congratulations exchanged through the two-and-a-half-inch-hole.

### **NOW FOR CELEBRATION**

There yet remains the ten-feet of rock pierced by the single hole between the two ends of the tunnel. This will be cleared away by this evening, when a party of officials of the *British Columbia Electric Railway Company* will be present to see the end of the long bore finally connected. The men will also have a jubilation after their long period of incessant work. Foreman Wallace Fraser was in charge of the crew at the Coquitlam Lake end, and Night Foreman J. McDonald was present at that end when the drill went through. Mr. Joseph Goldsworthy, foreman at the Trout Lake end, stated over the long distance telephone to the Province [newspaper] this morning that the hole was in the exact centre of the tunnel. "I will bet 1000 to 1 that the line is not an inch out when the last rock is taken out" said the delighted foreman. It will require about a week or ten days to remove the tramway rails from the tunnel and prepare the sluice gates at the Lake Coquitlam intake before the water will be finally turned on. Then it is Managing-Director Buntzen's intention to have a large party, comprising the Mayor, members of the City Council and Provincial Legislature up to witness the formal opening.

The firm of *Ironside, Rannie & Campbell*, contractors for the Coquitlam tunnel. Mr. Campbell had personal charge of the work, which has occupied all his attention for the last three years.

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### **CONDENSED FACTS ABOUT THE TUNNEL**

Cost: \$320,000

Total Length: 12,775 feet, or nearly 2½ miles.

Size: 9 by 9 feet, with rounded corners.

Area of normal cross section: 73 square feet.

Number of men employed on construction: 100 to 175.

Time required for drilling: Two years, 2 months & 3 weeks.

Average rate of progress per day: Between 15 & 16 feet.

Average rate of progress per week: 120 feet.

Greatest distance driven in one week: 80 feet at the Lake Beautiful end, on week ending October 30<sup>th</sup>, 1904.

Explosives required: Over 200 tons of dynamite, gelignite and blasting gelatin.

Fuse used in blasting: 500,000 feet, or nearly 100 miles.

Candles required to light the work: 175,000.

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