

of St. Hyacinthe and Richelieu, an area of 250 square miles. One well was sunk to a distance of 1,860 feet, and produced a flame when lighted of from 75 to 100 feet in height, giving a pressure from a 2½-inch pipe, of approximately 600 pounds to the square inch. Encouraged by this success, the company extended its operations and have now almost completed the sinking of another well. The power for operating the machinery for this second well comes from the gas flowing from the first. It is the company's intention to sink a third well this summer, so as to ascertain definitely the extent of the "find."

Squamish, B.C.—The P.G.E. Railway Company has appointed Mr. J. Cumming in full charge of all the harbor and railway development work to be carried out by the company at Squamish. The harbor work will involve changes in the channel at the mouth of the Squamish River at its entrance to the Sound. The plan is to alter the course of various channels in such manner as to bring the river up against the base of the mountain and thus reduce erosion. The entire plans for this big undertaking will not be finished for several months, but in the meantime it will be possible to proceed with filling and banking work, and the clearing of the Indian reserves recently acquired by the company at Squamish. The reserves contain altogether 13,100 acres, from which should be deducted 200 acres of steep mountain sides. Besides these 900 acres, however, the company is filling in 200 acres of tideflats on the southwest waterfront of the old townsite of Newport. Wharves and waterfronts are to be laid out by Mr. Cumming, as well as a wide boulevard on one side of the old townsite.

Winnipeg, Man.—It has been announced that the administration board of the Greater Winnipeg Water District will call very shortly for tenders in connection with the various works in connection with the 84.72 miles of aqueduct for the Shoal Lake water project, which will cost approximately in totum \$8,729,000. Advertisements are to be placed in journals in Canada, the United States, England, France, and Germany. Last year a division of cost of the work was made by the consulting engineers of New York and Boston as follows:—1,880,000 cu. yds. earth excavation west of the Summit Cut, at 60c., \$1,116,000; 1,100,000 cu. yds. earth excavation in Summit Cut, at 75c., \$825,000; 94,000 cu. yds. of rock excavation, at \$2.50, \$235,000; 2,300,000 cu. yds. refilling and embankment at 40c., \$920,000; 340,000 cu. yds. concrete at \$13.00, \$4,420,000; 29,000 cu. yds. reinforced concrete at \$17.00, \$493,000; 13,000 ft. timber platform at \$40, \$520,000; steel for reinforcing aqueduct, \$70,000; special work at and near river crossings, including waste weirs, \$80,000; gate and screen chamber and other works at intake, \$50,000; total for concrete aqueduct and appurtenances, \$8,729,000.

Victoria, B.C.—An announcement has been made by J. S. MacLachlan, Government resident engineer, to the effect that by the end of July, the first signs of the Ogden Point breakwater, being constructed by Sir John Jackson, Limited, will appear above water. Previously, difficulty has been experienced in the laying of the granite boulders which form the foundation, owing to the inclined surface of the sea bottom at the inner end of the breakwater. But the work has advanced, nevertheless, satisfactorily; and, according to the engineers' statistics, the weight of granite blocks laid since the operations were started amounts to 3,677 tons. Throughout the month of June the divers placed in position a total of 1,199 tons. June has also been a record month in the dumping of rubble on the breakwater site, 60,606 tons having been dumped. This exceeds that of the previous month by 10,000 tons. The total amount of rubble now dumped is placed at 373,608 tons, which now comes to within 20 feet of low water as far as the final stretch, or the last 700 feet of the break-

water. An idea of the work which has been done may be gleaned from a consideration of the base of the breakwater, which is 200 feet in width and tapers up to a height of 72 feet. The contract is so far advanced that actual operations will be started this month on the concrete work forming the superstructure of the great sea wall. At the present time 1,250 barrels of cement have been delivered on the site by the Associated Cement Company, of Bamberton, which has been awarded the contract to supply all the cement necessary for the breakwater. Before being used this cement is to be given a 28-day test. The leveling off of the wharf area is now practically complete, 1,717 cubic yards having been leveled off last month. And the fifth and last of the dolphins has been driven, marking the extreme end of the sea wall.

Vernon, B.C.—A publication from Vernon states that July will see the commencement of construction on the branch line of the C.N.R., running from Kamloops to the Okanagan Valley. The Hon. Price Ellison, provincial minister of finance, has signed the \$5,110,000 guarantee passed by the British Columbia Legislature in February; and the Hon. Mr. White, Dominion minister of finance, has signed the guarantee of the Dominion Government to the C.N.R. amounting to \$45,000,000. The \$50,000,000 worth of bonds which have thus been made available are to be marketed at once in England. Operations will be begun simultaneously at three points, Vernon, Armstrong and Kamloops. From Vernon construction work will proceed in four directions; from Vernon toward Armstrong, toward Kelowna, toward Okanagan Landing, and up the White Valley toward Lumby and Shuswap Falls. The entire branch line will be about 148 miles in length. From Kamloops to Vernon the survey is 81 miles long, from Vernon to Kelowna 35 miles, from Vernon to Okanagan Landing about 4 miles, from Vernon to Lumby 17 miles and from Lumby to Shuswap Falls 10 miles. The last named 10-mile extension is not included under the recent guarantee, but will be built to reach the company's power site and townsite at the falls, where electric power is to be developed to operate the Lumby and Kelowna lines and probably the entire line through to Kamloops. Active development work on the power site will probably not be begun until next spring. But in every way possible, the work will be hastened; and grading, with the exception of the few heavy pieces of rock work on the Kamloops-Okanagan line, is expected to be practically completed by January 1, 1915. In connection with the section from Vernon to Okanagan Landing, the C.N.R. plans to build a fleet of passenger steamers and freight barges, which will increase the traffic from this district.

PROGRESS OF CONSTRUCTION ON THE P.G.E. RAILWAY.

A report upon the work done up to date upon the P.G.E. Railway, was made recently by A. H. Sperry, general manager of the railway company, to D'Arcy Tate, vice-president of the company, and to the Premier of British Columbia, Sir Richard McBride. Mr. P. F. Welch, of the firm of Foley, Welch and Stewart, the contractors for the railway construction, has chief charge of the work, and has in his employ 5,600 men. The work on the road is being rushed as fast as possible to an early completion. It is planned to have the grade work completed all the way to Fort George this year, before the frost enters the ground. It is stated that an excellent standard of efficiency is being maintained in every detail of the work along the entire 810 miles of length of the railway from Squamish to Peace River, via Fort George. Mr. Sperry reported that for a distance of 13 miles from Vancouver, grading and tracklaying have been completed and