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PEACE RIVER POWER

More than 500 engineers and workmen are now on the construction site transforming the dream of Peace River power to reality. They are tackling the first major job in one of the world's giant power developments in the foothills of the Rocky Mountains.

The assignment, as bold as any previously undertaken in British Columbia, is to create a temporary by-pass for the Peace River round part of the existing stream-bed, to permit construction of Portage Mountain Dam, due to begin early in 1964. Completion is scheduled for the 1970's.

Portage Mountain Dam will rise 650 feet and stretch 1.3 miles across the Peace River valley. A storage reservoir covering more than 950 square miles and impounding some 88 million acre-feet of water, will provide the nucleus for generating 2,500,000 kilowatts at the main dam power-house site. A smaller dam and a 650,000-kilowatt power-house located 12 miles downstream from Portage Mountain Dam and an extra-high voltage power delivery system stretching 600 miles from the Peace River to the province's southwest corner are also part of the project.

First power from the Peace River is expected to be flowing to the lower mainland in 1968.

POTENTIAL RECOGNIZED

For decades the Peace River, rising from the mingling waters of the Finlay and Parsnip Rivers at Finlay Forks, has been considered a potential source of hydroelectric power. But only within the past five or six years has it been recognized as a major power source.

In mid-March, a \$16,900,000 contract was awarded for construction of diversion tunnels to reroute the Peace River round the dam-site of the existing river-bed. Diversion entails excavation of a channel 175 feet deep, approximately 600 feet wide and 1,200 feet long in the west bank. Water from the Peace will be directed by this channel into three diversion tunnels, each 2,500 feet long, with an inside diameter of 48 feet. If the concrete-lined tunnels are completed before August 15, 1963, the contractor will receive a bonus of \$250,000. On the other hand, delay after this date, or such later time as the consulting engineers allow, will result in damage payments of \$25,000 a day up to a limit of 55 days.

DIVERSION SYSTEM

As the diversion tunnels near completion in 1963, work is scheduled to begin on coffer-dams to direct the river into the diversion system.

Diversion of the river will leave dry a 3,000-foot section of the river-bed. Workmen will excavate the gravel, sand, and loose rock to give the dam a solid seating on bedrock. Some 65,000,000 cubic yards of gravel, sand, rock, and clay will then be moved from nearby deposits. This, dumped into the Peace River canyon, will form Portage Mountain Dam.

ELECTRONIC ASSISTANCE

Before machines start moving construction material to the dam-site, however, the mammoth dam will be completely built in the complex circuitry of an electronic computer located in Vancouver.

(Over)

The machine will provide an extensive analysis of the dam design and the materials that will be used to build it. Thus aided, engineers can create a detailed picture of the dam in a short time and get answers to many vital questions, such as the effect on the dam of fantastic stress both from its own weight and the depth of water that will build up behind it.

LARGE RUN-OFF

Portage Mountain will be one of the largest dams in the world, 3,000 feet thick at the base, narrowing to 50 feet at the crest.

The river behind the dam that will impound 88 million acre-feet of water, most of it from the Rocky Mountain Trench, will create an artificial lake about 70 miles along the west side of the Peace River to Finlay Forks. The lake will then spread north 90 miles along the Finlay and south for 110 miles along the routes of the Parsnip and Crooked Rivers. While run-off waters from some 25,000 square miles are filling the dam over a seven or eight year period, adequate water-supplies will be passed through the dam to the lower reaches of the river.

The entire completed project will provide a total of 3,150,000 kilowatts for the continued expansion of British Columbia.

VISIT OF SURVIVAL EXPERT

Brigadier J.E.S. Stone, Director of Work Study for the British Army, visited Canada recently for discussions on the "Critical Path" planning method now used by the Canadian Army in planning, scheduling and controlling both costs and time on large military construction projects. While in Ottawa, on August 13 and 14, Brigadier Stone conferred with heads of the Quartermaster General Branch at Army Headquarters. On August 15 he flew to Quebec City, to visit the Provincial Regional Emergency Headquarters project located at Valcartier before leaving for Washington, D.C., on August 17.

USE IN CANADA

Based on the most important steps in planning, and type of project, the "Critical Path Method" has undergone extensive study in both the United States and Canada and will be added to the curriculum at the Royal Canadian School of Military Engineering at Camp Chilliwack, British Columbia, this fall.

The technique has been used with outstanding success by the Department of National Defence in construction projects for the national survival programme. Used in the construction of provincial headquarters buildings for the Emergency Measures Organization, the new planning system may be made mandatory in the calling of tenders for National Defence building projects in the future.

The "Critical Path Method" was first tried by the Canadian Government in the Ottawa area two years ago on a building project of a year's duration. Since then further study has revealed that the same techniques can be applied to advantage in other fields, including that of military tactics.

GREAT LAKES RESCUE CUTTERS

Transport Minister Léon Balcer has announced that contracts are being awarded for three small, high-speed search-and-rescue cutters, to be operated by the Canadian Coast Guard on the Great Lakes.

The 70-foot wooden vessels will have a double skin below the low-water-line, a curved, flared, "soft-nosed" stem, a transom stern and a continuous main deck. The wheelhouse will be admidships.

Each cutter will be powered by twin diesel engines, developing a total of 1,050 brake horsepower. Driving through a fluid coupling and a two-to-one reverse reduction gearbox, the engines will be operated by remote control from the wheelhouse.

Provision will be made on each of the vessels for a jet-propelled workboat to be carried in a rapid-launch recess aft.

The cutters will also be fitted with a gas-turbine fire pump delivering 500 gallons a minute at a head of 100 pounds a square inch through a fire monitor mounted aft.

In spite of their small size, the cutters may have to remain on continuous duty for up to six days and their accommodation will, therefore, be of a high standard.

The cutters will cost about \$275,000 each. The contracts call for completion of the vessels by early summer 1963.

TRAFFIC IN SECURITIES

Security transactions between Canada and other countries gave rise to a net capital outflow of \$96 million in the second quarter of the year compared to \$61 million in the first. Trade in outstanding Canadian securities was dominated by the repurchase from non-residents of some \$46 million of Canadian stocks. In both May and June, repatriations set new monthly records for the postwar period. Investors in the United States, in the United Kingdom, and in other overseas countries sold Canadian stocks. There were on balance net sales \$4 million of outstanding Canadian bonds and debentures to non-residents in the second quarter, sales in May and June having more than offset a substantial purchase balance in April.

New issues of Canadian securities sold to non-residents produced \$167 million in the quarter, up sharply from the figure of \$38 million recorded in the first quarter. Some \$125 million was applied to refinancing external indebtedness in other forms. Retirements of foreign-held securities totalled \$61 million in the quarter.

FOREIGN ISSUES

Net acquisitions of foreign securities by Canadian residents totalled \$35 million in the second quarter. This outflow followed one of \$27 million in the first quarter. The largest part of the outflow in each quarter covered the purchase of outstanding foreign stocks, mainly of United States corporations.

During the first half of 1962, trade in outstanding Canadian and foreign issues led to a capital outflow from Canada of \$120 million. In the corresponding period of 1961 there was an inflow of \$113 million. The outflow in the current year included \$27 million to the United States, \$44 million to the United Kingdom, and \$49 million to other overseas countries.

In addition to these transactions, gross sales to non-residents of Government of Canada treasury bills and other short-term issues and of commercial and finance paper approached \$200 million in the second quarter; but, after maturities were taken into account, increases by non-residents in holdings of treasury bills were largely offset by reductions in holdings of other paper. The data do not include official security transactions related to the reciprocal currency arrangements undertaken in the quarter between Canada, the United States and the United Kingdom.

NHB CARGO-HANDLING EXPOSITION

An exposition of cargo handling, sponsored by the National Harbours Board, has been scheduled for September 19 and 20 at Montreal Harbour. It will feature conducted tours in the port area to examine techniques used in handling bulk and general cargo. A highlight of the programme will be a visit to Shed 62, the longest transit shed in the world, where side-port loading operations with mobile mechanized equipment will be seen under working conditions. Activities for the two days will include a visit to the Canadian Pacific Railway hump yard at Côte St-Luc, a demonstration of stevedore and other handling equipment at the port and a reception by the City of Montreal at the Chalet on Mount Royal.

Discussions of the various aspects of cargo handling will take place at a general seminar on the second day, by a panel of experts on steamship, rail, truck, stevedoring and bulk handling. NHB port managers will be available for consultation on shipping matters. Guest speaker at the luncheon will be Mr. R.D.L. Kinsman, vice-president of Alcan International and a past president of the Canadian Exporters' Association.

VIGOROUS WINTER WORKS POLICY

Mr. Michael Starr, the Minister of Labour, said recently that the "do-it-now" winter employment campaign would be aggressively promoted again this winter. He assured the building industry there would be no reduction in the Municipal Winter Works Incentive Programme, under which the Federal Government pays 50 per cent of the "on-site" labour costs of a large variety of municipal projects, nor any cut-back in the Government's commitments to the vocational and technical school building programme, under which the Federal Government is paying 75 per cent of provincial costs of new vocational, trade or technical schools until March 31, 1963. He reported that by July of this year federal commitments toward 440 new schools or extensions totalled more

than \$256 million. Many of these projects would be at their peak this winter, he said, to the benefit of construction industry.

Mr. Starr made his statement while officiating at the presentation of a plaque to the "Building Supply Dealer of the Year" - Allied Building Supply of Ottawa. This firm, which received national recognition as the retail building-supply firm doing most to promote winter business and winter employment, was the winner of a contest sponsored annually by the national trade magazine *Building Supply Dealer*.

In making the presentation, Mr. Starr said there was an increasing effort by retail building suppliers to overcome the Canadian habit of putting things off until spring. Winter business, it was coming to be realized, could be maintained at the same level as summer business, to the benefit of firms, their employees and their communities.

Mr. Starr urged businessmen generally, not only those connected with the building supply industry, "to abandon old habits born in the horse-and-cutter days when deep snow clogged our roads forcing much of the economy to grind to a halt each winter." He suggested that they follow the example of the modern merchandiser, who long ago recognized the existence of a year-round market for goods and services.

NOTED RADIO EXPERT RETIRES

A radio operator of the First World War who became one of the world's best-known specialists in international radio regulations started his retiring leave from the Department of Transport recently. He is Charles James Acton, who, as superintendent of radio regulations and international agreements in the Department's Telecommunications and Electronics Branch, spent the past 25 years making sure that Canada received its fair share of the use of the radio spectrum.

In 1959 Mr. Acton was unanimously elected chairman of one of the largest technical conferences in history, the 117-nation Seventh Administrative Radio Conference of the International Telecommunications Union (ITU) at Geneva.

EARLY EXPERIENCE

Mr. Acton's interest in the field of radio began during the First World War, when he helped in the establishment and operation of radio communications systems for the Canadian Army. In 1919 he joined the Government as a radio operator and spent four years at west coast radio stations. He returned to Ottawa as a senior radio operator in 1923 and became a radio inspector in 1930.

At the beginning of the Second World War, Mr. Acton assumed the responsibility for allied general frequency co-operation in the area of Canada and the Northwest Atlantic.

SINCE WORLD WAR II

After the war, the use of radio increased to a point where international regulations had to be revised. In 1947 Mr. Acton was a member of the Canadian delegation to the ITU conference in Atlantic City, where these revisions were carried out.

He subsequently attended such international conferences as the Provisional Frequency Registration Board, Geneva, 1948-49; the High Frequency Broadcasting Conference, Mexico City, 1948-49; the Extraordinary Administrative Radio Conference, Geneva, 1951; and the Buenos Aires Plenipotentiary Conference in 1952.

He also represented Canada for many years on the ITU Administrative Council, which meets annually in Geneva, and was chairman of that body in 1954, the year he was appointed to his present Department of Transport position.

A native of England, Mr. Acton came to Canada at an early age and settled in Brockville. He now lives in Ottawa.

BRAZILIAN ENVOY INSTALLED

On August 16, His Excellency Sergio Corrêa da Costa presented his Letter of Credence as Ambassador Extraordinary and Plenipotentiary of Brazil to Canada.

The ceremony took place at the Supreme Court of Canada, Ottawa. The Chief of Protocol of the Department of External Affairs, Mr. Henry F. Davis, presented the Ambassador to the Honourable Patrick Kerwin, Chief Justice of Canada, Deputy Governor General.

The Ambassador was accompanied by the following members of his staff: Mr. Adolpho Justo Bezerra de Menezes, Minister-Counsellor; Mr. Arnaldo de Oliveira Ferreira, First Secretary.

Mr. Corrêa da Costa entered the Brazilian Foreign Service in 1939 and has served in Buenos Aires, Washington and Rome.

REPORT ON NICKEL

The interim report of The International Nickel Company of Canada, Limited, and its subsidiaries for the six months ended June 30, 1962, shows net

earnings, in terms of United States currency, of \$52,344,000 after all charges, depreciation, depletion, taxes, etc., equivalent to \$1.77 a common share.

In the first six months of 1961 net earnings were \$37,653,000, or \$1.28 a common share. Net earnings of \$25,133,000, or 85¢ a common share, in the three months ended June 30, 1962, compared with \$18,993,000, or 65¢ a common share, for the second quarter of 1961.

CAUSE OF INCREASE

The increase of \$14,691,000 in earnings for the first six months over the corresponding period in 1961, the report explained, "was brought about by the better prices prevailing for nickel, the benefits arising from the lower exchange value of the Canadian dollar, the tax savings we receive because our sales include nickel produced from our new Thompson, Manitoba, mine operation, and the smaller amount in our sales of non-profit nickel which had been acquired from the United States Government or its suppliers at market prices".

IRON-ORE RECOVERY PLANT

During the first six months of 1962, the report said, the company made capital expenditures of \$25,724,000, principally for its greatly expanded iron-ore recovery plant in the Sudbury district of Ontario, to be in operation next year. For the first six months of last year, capital expenditures were \$22,205,000.

NICKEL IN OUTER SPACE

The use of nickel in the sintered-plate type of nickel-cadmium battery, a scientific development perfected in recent years, was discussed by the chairman of the Board of Directors in a message accompanying the interim financial report. He noted that this battery, which was used in the "Telestar" satellite, was also responsible "for ushering in to the world an age of cordless electrical appliances and equipment."

VICTORIOUS WINTER WORKS POLICY

Mr. Michel, Minister of Labour, said that the "Victorious Winter Works Policy" would be aggressively promoted again this winter. He assured the building industry that there would be no reduction in the Municipal Winter Works Incentive Programme, under which the Federal Government pays 50 per cent of the "on-site" labour costs of a large variety of municipal projects, not any cut-back in the Government's commitment to the vocational and technical school building programme, under which the Federal Government is paying 75 per cent of provincial costs of new vocational, trade or technical schools, until March 31, 1963. He noted that by July of this year federal commitments toward 440 new schools or extensions totalled more