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CANADA EXTENDS ITS TELECOMMUNICATIONS

Addressing a luncheon gathering of the Canadian Overseas Telecommunication Corporation at Corner Brook, Newfoundland, on September 23, Transport Minister Hees reminded his audience that, when the facilities of Cable and Wireless Limited and Canadian Marconi Company had been taken over in 1950 by the COTC, it had been clear "that considerable expansion was imperative to provide the service that would be expected with the expansion of the Canadian economy." The programme undertaken to meet this need, he said, had been successfully carried out. Mr. Hees went on to describe this phase of Canada's telecommunication development in the following words:

"...This programme included:

(1) Additional installations at Drummondville and Yamachiche, Quebec, for the purposes of direct radiotelegraph communication between Canada and France, Italy and Germany.

(2) A new cable station at St. John's, Newfoundland, and renewal of direct Canada-United Kingdom telegraph cable.

(3) New radio sending and receiving stations at Cloverdale and Ladner, British Columbia, providing direct radiotelegraph, radiotelephone, telex and picture transmission services with Australia, New Zealand and Japan.

(4) Bamfield cable operating-station abandoned and the two Pacific telegraph cables extended to a new automatic relay station at Port Alberni, British Columbia, this change

resulting in substantial economies as well as more efficient operations.

(5) New terminal operating building at Vancouver.

(6) New head office building in Montreal, in which is housed the main operating-centre.

(7) In collaboration with the British Post Office and American Telephone and Telegraph Company, the first trans-Atlantic telephone cable was constructed, installed and brought into service in 1956, at present providing for Canada 13 high-quality voice circuits and 22 telegraph circuits and permitting the following important developments:

- (a) greatly improved overseas telephone services;
- (b) international telex with 47 countries;
- (c) high-fidelity programme services to and from the United Kingdom and Europe;
- (d) first-class picture transmissions that enabled Canada to share with the United Kingdom the honour of producing the first trans-Atlantic slow-scan television pictures on the occasion of the visit to Canada of Her Majesty The Queen in 1959;
- (e) capacity for privately-leased circuits;
- (f) provision of adequate telephone capacity between the mainland and Newfoundland, now comprising 24 circuits;
- (g) provision of facilities to meet defence and government communication requirements....

TRANS-PACIFIC TELEPHONE

"On the invitation of the Government of Australia, a conference was held in Sydney, New South Wales, on September 28 last year, attended by representatives of Great Britain, New Zealand, Australia and Canada. The purpose of the meeting was to study the practicability of a trans-Pacific telephone cable-system between Vancouver Island, New Zealand and Australia. This was proposed as a part of a segment of the Commonwealth round-the-world telephone-cable network recommended by the Commonwealth Telecommunications Conference in 1958. The recommendations of this meeting were subsequently made to the Governments of the four countries concerned, and approval for this trans-Pacific network was granted. Detailed planning and engineering are now proceeding, and completion is scheduled for 1964.

"Several months ago, the COTC called to my attention a definite need to provide a cable-ship adequate to recover and repair submarine cables in the North Atlantic.

"The Government considered this request and a decision was taken to proceed forthwith to prepare plans for a cable-repair ship.

DUAL-PURPOSE SHIP

"During the study which was made with officials of COTC and the Department of Transport, it was decided to design a ship suitable for cable-ship operations and one that could be used as an ice-breaker, as and when her primary roll permitted.

"This dual-type ship, which has been decided upon, will be the only one of its kind in existence. The ship is at present being designed to act as a cable-maintenance and repair ship and an ice-breaker, and will have a capacity to carry 400 miles of cable.

"The estimated cost of this ship is approximately \$7 million. It is hoped that the design will be completed in order to enable tenders to be called for the construction of this ship in the summer of 1961.

"Because Newfoundland is the central landing-point for the North Atlantic cables, it has been decided that the new cable repair ship will be based in St. John's."

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UNIVERSITY RESEARCH INCREASING

National Research Council support for research at Canadian universities reached a record \$9.37 million in 1959-60. Figures released for the forty-third year of the Council's foundation programme show increases of \$2.62 million over 1958-59 and \$6.25 million over 1955-56. This rate of growth has been caused by rapidly-increasing student enrolment and the resulting expansion of staff and research facilities in the universities.

The major responsibility in deciding how and where this money can best be spent rests with university scientists sitting on NRC committees. Support for direct research amounted to \$8,586,265 in 1959-60. Seventy-seven per cent of this was for studies in science and engineering and 23 per cent for medical research. The largest item in the programme was \$7,263,389 for research grants to university staff members. Another \$1,322,876 financed more than 450 scholarships and fellowships for graduate students. The cost of publication of Canadian scientific journals, contributions to scientific organizations and conferences and administration of the programme - described as indirect support - amounted to \$784,102.

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PEACE RIVER BRIDGE OPENED

A crowd of almost 10,000 attended the formal opening of the new Dunvegan Bridge over the Peace River on August 31, when the final symbolic bolt was fastened by Mr. E. C. Manning, Premier of Alberta.

Landing by helicopter at the south end of the bridge, Mr. Manning led a motor procession over the new structure to the north end, where the golden bolt was tightened. He was handed the torque wrench by a steelworker who had worked on the bridge from the beginning.

The giant structure, measuring 2,375 feet, spans the Peace River at a point approximately 50 miles north of Grande Prairie, Alberta. The fourth largest suspension bridge in Canada, it was built at a cost of \$5 million.

The Dunvegan Bridge is comprised of an 1800-foot suspension span and 575 feet of steel girder approaches. The two towers, standing 231 feet and 201 feet high, support the suspended 900-foot centre span and two 450-foot side-spans. The bridge-deck is about 100 feet above the surface of the river.

SPECIAL ENGINEERING PROBLEMS

The characteristics of the Peace River required careful planning of the substructure. The river is subject to extreme changes in water level necessitating deep footings that will not be endangered by erosion. The north tower pier was set at 70 feet below stream bed and the south pier at 40 feet. These two piers supporting the towers required the excavation of 10,000 cubic yards of bed material and placing of an equal volume of concrete.

The north and south anchorages for the main suspension cables are firmly set 35 feet below groundline. Each anchor consists of a concrete walled cube divided into sections and ballasted. The north anchorage weighs 18,400 tons and the south anchorage 14,000 tons. Structural steel for the bridge weighs 3,300 tons.

The mounting of the cable was accomplished initially by taking one end of a small firmly-

anchored cable across the river by boat. The cable became part of the catwalk, which was fitted with equipment for winching the main cable across the tower and into place. The main cables each consist of twenty 2 1/8-inch strands each containing 91 individual wires. Stiffening trusses were erected on shore and were hung from the suspension system using a winter-time ice bridge.

The deck of the bridge consists of 6 1/2-inch concrete with an additional travel surface of 2-inch thick asphalt. The bridge is designed to rest at its normal cambered position under dead load, at a temperature of 30 degrees F. Under temperature and load changes the center span may raise as much as three feet above normal or lower by 4 1/2 feet.

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COLUMBIA RIVER RESOURCES

The United States and Canadian delegations appointed to negotiate an agreement for the co-operative development of the water resources of the Columbia River system held their seventh session in Ottawa, September 26, 27 and 28.

The chairmen of the delegations, Mr. E. F. Bennett, United States Under-Secretary of the Interior, and the Mr. E. D. Fulton, Canadian Minister of Justice, announced on the final day of the meeting that a progress report to governments had been agreed upon and would be submitted to them for consideration as soon as possible. In accord with the usual procedure and the understanding prevailing throughout, announcements of detail will be made simultaneously by the respective governments.

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DATA PROCESSER TO PAKISTAN

The Department of External Affairs has announced the appointment, under the Colombo Plan, of Mr. Jean-Théophile Lamontagne (61) of Quebec to advise the Government of Pakistan on data processing for the agricultural census now being taken in East and West Pakistan.

This census is a major step in the Government of Pakistan's programme to deal with the problem of food shortage. Mr. Lamontagne will be carrying on the work originally planned by Mr. J.H.B. Gann of British Columbia who, under the Colombo Plan, spent some months in Pakistan in 1959 working on the development of a programme for tabulating the census.

Mr. Lamontagne, a resident of Quebec City, received his education at the École Normale Laval. He was employed for ten years as a teacher by the Quebec City School Board and, in 1930 he joined the provincial Department of Agriculture as a statistician, where he introduced the punched-card system. He transferred to the provincial Department of Trade and Commerce in 1936, and was subsequently appointed Chief of the Data Processing Service.

CANADA SALUTES NIGERIA

On September 30, Prime Minister Diefenbaker issued the following statement on the occasion of Nigerian Independence Day:

"I am happy to extend a few words of welcome to Nigeria as it assumes its new status of full membership in the Commonwealth association of sovereign nations. I assure you that the people of Canada feel a special affinity to Nigerians on this great day of the achievement of independence for, as you know, Canada was the first member of what is now the Commonwealth to demonstrate that both independence and a close association with the Commonwealth can be, and have been, happily maintained.

REGIONAL DIVERSITY

"Canadians have had, and still face, some of the problems of diversity in national character which you have experienced and which you will probably confront and be confronted with in your role of independence. The division of Nigeria into the Northern, Eastern and Western regions is perhaps analogous to our division into provinces. The prevalence of many languages, the variety of religions in your country, correspond, although in a more complex and dramatic way, with the diversities that have characterized and enhanced the Canadian nation.

"It may well be that the similarity of some of the problems of nation-building will strengthen the bond between us born of mutual admiration for parliamentary institutions, for the Common Law, and for democratic government.

INDEPENDENCE AND RESPONSIBILITY

"I think it is right to say that Nigeria has, with astonishing wisdom, been able to grasp the inseparability of the twin ideas of independence and responsibility. Your political leaders and your Civil Service are a credit to your nation. We have already had the opportunity to welcome a considerable number of them and I hope that in the years ahead we shall meet many more. One of the most remarkable achievements of Nigeria is, of course, the success with which educational facilities have been brought to the people. As a result of the sincere and intense effort, I am informed that more than two and a quarter million children are now enrolled in primary schools in your country. This is a magnificent achievement.

"May I assure you that Canadians have welcomed the contacts that have already existed between our countries. We feel that Nigerians are our friends and my hope is that the contacts between us will multiply and that your friendship will grow in the years to come. It is with confidence in our increasing friendship and understanding too that I now, speaking for all Canadians, welcome you into the Commonwealth brotherhood of nations. May prosperity and success be yours always."

ADDITION TO FISHERIES FLEET

Construction of a 179-foot multi-purpose fisheries-patrol vessel for Canada's Atlantic waters will start soon, Fisheries Minister J. Angus MacLean announced recently. It will be based at St. John's, Newfoundland. Mr. MacLean announced that the contract for the building of the vessel has been awarded to the Halifax Shipyards, Halifax, Nova Scotia, at a cost of \$1,114,516.

The steel diesel-engined vessel will have an aluminum superstructure and will be used primarily in the Department's protection fleet. It will also supplement the Department's Bait Service in Newfoundland, and will be available for rescue work when called upon by the Marine and Rescue Co-ordinating Unit.

Largest of the Department's protection fleet, the vessel will have a cruising range of several thousand miles. Its engines will develop in excess of 2,000 horse-power. The vessel's rugged construction will enable it to stay out in the most adverse weather conditions; the hull is strengthened for navigation in ice. Because of its size and speed the new vessel will be able to patrol efficiently in offshore waters to enforce the Coastal Fisheries Act and Canadian fisheries regulations.

The vessel's design is such that, in the event of future requirements for oceanographic duties, modifications for laboratories and other specialized equipment could be easily made. To facilitate its role in the Department's Bait Service programme, the vessel will be equipped with cold-storage space of 3,400 cubic feet enabling it to carry 50 tons of frozen bait. When required it will pick up bait at the Department's Newfoundland depots for transfer to the various holding units.

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INTERNATIONAL PAYMENTS

Canada's current imbalance from transactions in goods and services with other countries rose in the second quarter of 1960 to \$471 million, from \$315 million in the first quarter. At this level the current deficit was higher than in any quarter since the second of 1957, when it reached \$545 million. In the half year, however, this imbalance of \$786 million was less than the \$848 million imbalance in the first half of 1959, because of the lower level of the deficit in the first quarter this year. The level in the half year was also considerably below that in the first half of 1957.

IMPORT BALANCE

The largest part of the rise during the first and second quarters this year was due to a fourfold rise in the import balance on merchandise trade. Part also resulted, however, from a larger deficit from non-merchandise transactions, which made up well over

half of the deficit in the quarter. And in comparison with that for the second quarter of 1959, the rise was entirely from the larger deficit from non-merchandise transactions, which was also some 10 per cent higher than in 1959 in the half-year comparison. The imbalance from non-merchandise transactions was greater in the quarter for each group of transactions, with the exception of official contributions. In the half year too, the larger imbalance originated in most groups of transactions, the only exceptions being official contributions and new gold production available for export.

INFLUENCING FACTORS

Among the factors influencing the balance of the half year were the coincidence of unusually strong demands from overseas countries for Canadian industrial materials and the maintenance of export totals to the United States at generally high levels in most of the period combined with the moderating of the upward trend in Canadian imports that had been characteristic of recent years. At the same time, the deficit from non-merchandise transactions has continued to grow with a rising balance of indebtedness to other countries and high incomes in Canada. And inflows of capital into Canada in long-term forms in the half year were substantially higher than last year.

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ALUMINUM IN 1959

Recovery from the manufacturing decline that continued to affect Canada's aluminum markets in the preceding year was evident in 1959, particularly in its second half. Production, which amounted to 599,342 tons, was nevertheless 34,750 tons below the output of 1958. World production, on the contrary, increased - from the 1958 total of 3,890,000 tons to an estimated 4,355,000 tons. As the world rate of increase in consumption did not match the growth in production capacity, competition for markets was intensified, with the result that countries normally considered to be net importers of aluminum had metal for export. Also, the control of captive markets by other producers tended to reduce Canadian participation in some export markets. The result of these developments was that, owing to the need to balance production, demand and accumulated inventories, a number of Canadian smelters operated for part of the year at production rates that were low in relation to the industry's 865,600-ton capacity.

EXPORTS UP

While production in relation to capacity declined, the volume of exports rose 4.6 per cent for primary forms and 44.6 per cent for semi-fabricated forms. On a value basis, exports increased only 1.6 per cent for primary forms but 31 per cent for semi-fabricated

forms, and manufactures increased 48 per cent

The United States remained the largest single outlet for Canadian primary production, although shipments declined by 20.3 per cent in 1959 to 169,841 tons, or 8.7 per cent of United States consumption. In 1959, Canadian exports of primary forms to the United States amounted to 70 per cent of the primary aluminum imported by that country, which totalled 241,796 tons; in 1958 they came to 84 per cent. Shipments to the United Kingdom, the second largest market, amounted to 164,795 tons. This represents a rise of 3.5 per cent and comprises 50.9 per cent of United Kingdom consumption as measured by 'dispatches' to consumers. These dispatches rose 24 per cent in 1959 to 323,630 tons.

Producers' domestic shipments in Canada declined to 89,000 tons in 1959 from the 101,886 tons shipped in 1958.

LOS ANGELES ENVOY

The Secretary of State for External Affairs, Mr. Howard Green, has announced the appointment of Mr. George Roscoe Paterson, Director of the Agriculture and Fisheries Branch of the Department of Trade and Commerce, as Consul General in Los Angeles, California, U.S.A. It is expected that Mr. Paterson will take up his new duties shortly.

Mr. Paterson is a graduate from the University of Toronto, where he obtained a Bachelor of Science degree in agriculture. He is also a Master of Science from Iowa State College. Mr. Paterson has been with the Department of Trade and Commerce for some 21 years. During this period he served in London and Washington and on many international and interdepartmental committees.

AUGUST SEAWAY TRAFFIC

Preliminary toll-traffic statistics released recently by the St. Lawrence Seaway entities reveal that cargo traffic for the April through August period of this year is up 5.0 per cent for the Montreal - Lake Ontario section and 10.7 per cent for the Welland Canal section over that recorded during the same period in 1959.

Cargo through August for the Montreal-Lake Ontario section amounted to 12,401,578 tons as compared to 11,814,917 for 1959. For the Welland Canal section, a total of 18,296,895 tons have been recorded for this period, a 1,771,863-ton increase over the April through August 1959 tonnage of 16,525,032.

Upbound tonnages for the month of August of both sections reflected a sharp decrease from the upbound traffic recorded for the same month of 1959, but the decreases were partly offset by substantial increases in downbound traffic.

Vessel transits, exclusive of pleasure craft, continued to be fewer, despite more cargo tonnage, than those reported for the same period in 1959. For the Montreal-Lake Ontario section, the vessel total was 4,290, and for the Welland Canal section, 4,640. The 1959 vessel transits were, respectively, 4,386 and 4,922.

HYDROGRAPHERS GET NEW VESSEL

Something new in the way of hydrographic vessels, an inshore survey unit, will make its appearance in the fleet of the Canadian Hydrographic Service next spring in time for the Service's 1961 operations in Canada's coastal waters.

Mines and Technical Surveys Minister, Paul Comtois, describes it as a new type of hydrographic ship, which boasts the valuable feature of being specially designed for inshore survey work and will, in fact, be an intermediate unit in size between the launches used by land-based shore parties and a fully staffed ship. It will be specially valuable for work along the more rugged and isolated parts of Canada's eastern seaboard.

The new craft will have a range of over 2,000 miles and a speed in excess of 12 knots. It will be capable of carrying and providing living accommodation for a crew of 20 persons. It will have the latest in navigational aids, and many of the amenities of modern living. It will, moreover, be a "launch" carrying launches, for it will be equipped with two 26-foot motorboats, each with inflatable life rafts. Initially it will work off the south coast of Newfoundland and later off the coast of Labrador.

STRUCTURAL FEATURES

The vessel will cost an estimated \$450,000; a contract for its construction has been let to Halifax Shipyards Limited at Halifax. An inshore vessel, of steel, it will be an attractive-looking craft of the raised-forecastle type, with raised wheelhouse and deck-house amidships. It will be 115 feet in length, with a breadth of 26 feet.

It will have twin screws and twin rudders for good manoeuvrability. The two engines will be about 350 horsepower each. Its navigational aids will include a gyro compass, radar, and radio-telephone ship to shore, and it will have automatic steering.

The vessel's additional feature of carrying launches will give the surveyors aboard three working craft in one package. Its deck machinery, including the boat hoists, will be hydraulically operated to facilitate work in icy weather.

The new ship will permit oceanographic research to be carried out on board in a small laboratory provided for this purpose. The normal duties of the vessel, however, will be hydrographic.

The new vessel will be named the C.H.S. "Maxwell" in honor of the late Staff Commander W.F. Maxwell of the Royal Navy. Before the establishment of the Canadian Hydrographic Service, the Royal Navy was responsible for the charting of Canada's coastal waters. Staff Commander Maxwell was in charge of the first detailed survey of the coasts along which the new vessel will be working. It was under him that Staff Commander Boulton, also of the Royal Navy, worked for nine years in this area, and it was Maxwell who made the final report leading to arrangements with the Admiralty for the long-term loan of Staff Commander Boulton to Canada for the establishment of the Georgian Bay survey. The Canadian Hydrographic Service has already honored Boulton by naming a small vessel after him.

"PIRATES" AT STRATFORD

A new production of Gilbert and Sullivan's "The Pirates of Penzance", directed by Tyrone Guthrie in the Avon Theatre, a continuation of the Music Workshop, and a series of week-end concerts in the Festival Theatre will form the basis of the music season of the Stratford Shakespearean Festival of 1961, according to a recent announcement by Glenn Gould, Leonard Rose and Oscar Shumsky who, with Ezra Schabas as music manager, form the new music directorate of the Festival. In addition to acting in an executive capacity, Messrs Gould, Rose and Shumsky will, as they did this past summer, appear as the Festival's featured artists.

The choice of "The Pirates of Penzance" as next year's operatta is considered a logical sequel to the immensely popular 1960 production of "HMS Pinafore", which, following three capacity weeks at the Avon Theatre, has since become a New York hit at the off-Broadway Phoenix Theatre.

The production will be accompanied by the National Festival Orchestra, again conducted by Louis Applebaum, former music director of the Stratford Festival and now television music consultant of the Canadian Broadcasting Corporation.

NCC MANAGER APPOINTED

The appointment of Mr. Eric W. Thrift as General Manager of the National Capital Commission was announced on September 20.

For some months the Government had been looking for a replacement for Mr. Alan Hay, who has been the senior executive officer of the Commission for many years. It is felt that a fortunate choice has been made in securing a man with Mr. Thrift's outstanding qualifications.

Mr. Thrift is the Director of the Metropolitan Planning Commission of Greater Winnipeg. He has acted as consultant on Planning and Development to several cities, towns and dis-

tricts in Western Canada and in 1957 organized a Planning Service for the Government of Manitoba.

Recently Mr. Thrift has had the task of laying the groundwork for the establishment of the administration for the new Metropolitan Government in Greater Winnipeg.

After receiving the degree of Master of Architecture from Massachusetts Institute of Technology in 1938, Mr. Thrift secured professional experience in various architects' offices and with the Hudson's Bay Company and for a time lectured in architecture and planning at the University of Manitoba. Following the war, he was Technical Adviser on Planning to the Postwar Planning Committee of the Government of Manitoba. For the past 15 years he has held his present position as Director of the Metropolitan Planning Commission of Greater Winnipeg.

In the field of professional activities, he is a past president of the Manitoba Association of Architects and of the Town Planning Institute of Canada and is a member of the board of directors of the American Society of Planning Officials.

HALF A YEAR OF JET SERVICE

On September 30, Trans-Canada Air Lines completed its first six months of jet operations, having established new levels of aircraft speed and reliability and set two official speed records.

On October 1, following delivery of its fourth DC-8 jetliner, TCA inaugurated a second daily trans-continental jet flight. This second flight operates Montreal - Toronto - Winnipeg - Vancouver return, giving the Manitoba capital daily-return jet service for the first time.

FLIGHT FIGURES

Since going into service, TCA's fleet of three jet aircraft has logged more than 3,500 revenue air hours, travelling some 1,750,000 miles - a distance 70 times around the earth at the equator at an average ground speed of 500 miles an hour over all routes. In addition, they've logged more than 400 hours in training and familiarization flights.

To accomplish this, according to TCA officials, with just three aircraft is proof of the phenomenal reliability of the DC-8.

On May 28, one of TCA's DC-8's established two official trans-Atlantic speed records, covering the 3,322 miles between Ottawa and London in five hours, 55 minutes, and the 3,247 miles between Montreal and London in five hours, 44 minutes.

These records have been confirmed by the Federation Aeronautic International, official custodians of all the world's speed records, which had two officials aboard the record-making flight.

TCA has ordered a total of 10 of the \$6-million DC-8's.