

Canada Weekly

Volume 4, No. 35

September 1, 1976



Ottawa, Canada.

Canada/United States consultations set a pattern for the future, 1

First contract after signature of pact between Canada and European Communities, 2

Education in Canada – report of the Organization for Economic Co-operation and Development released, 3

Master paintings from the U.S.S.R., 3

Military association centennial, 4

Athletes – born or made?, 4

Untappable telephones, 5

Canadian Indian appointed to senior federal post, 5

Ship safety system, 6

News briefs, 6

Canada/United States consultations set a pattern for the future

The Secretary of State for External Affairs, Allan J. MacEachen, was in Washington August 17 and 18 at the invitation of the United States Secretary of State, Dr. Henry Kissinger.

Among the bilateral and multilateral matters discussed was the “border television issue”, which had arisen over the Canadian Government’s decision to delete commercial advertisements carried into Canada from U.S. broadcast stations. Mr. MacEachen said in Washington that a meeting between officials of the two countries would take place in September to try to resolve the situation.

Dr. Kissinger was host at a formal dinner for Mr. MacEachen at the State Department on August 17, during which both ministers made short speeches.

The following excerpts are from Mr. MacEachen’s address:

* * * *

The close dealings which characterize Canada/United States relations have become almost a byword. Perhaps this is in part because we have had much experience. There has always been a full agenda of common interests to be pursued and problems to be resolved. There always will be. I like to think that the numerous meetings which Dr. Kissinger and I have made a point of holding in various parts of the world have played a part in setting the tone for the day-to-day dialogue which takes place between our officials. I regard it as most important that we preserve the habit of ready and continuing willingness to communicate openly.

This means that representatives from two neighbouring nations – nations who know and trust each other well – are able to speak candidly and realistically as friends. And, while it does not follow that sentiment and goodwill alone colour our perceptions of each other, neither are these irrelevant or unworthy factors.

At the same time – in a world still struggling to rise above the confines, imperatives and abuses of national sovereignty – we remain two nation states of unequal power, each with its own defined interests and objectives, most of which correspond, but some of which conflict. It is also true that as a nation, trying firmly yet responsibly to chart the direction of our own national development, Canada has taken a number of policy initiatives which are not directed against, but which affect most, our closest friends in the United States.

There is a balance to be struck here, between co-operation in mutual endeavour and the building of one’s own national strengths from within. A new balance is not always easy to achieve, but responsible Canadians agree that its achievement is a realistic and worthy goal.

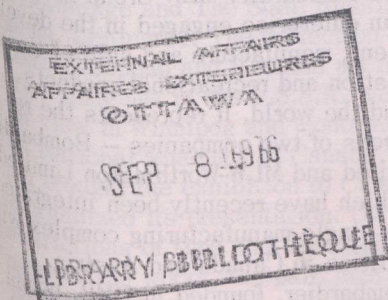
Balance should not be misconstrued

Of course, depending on one’s perspective of change, I suspect that Canada’s efforts to seek a new balance can be misconstrued. Perhaps this accounts for the conclusion of some observers that Canada/U.S.A. relations are somehow moving out of phase in certain

Mr. MacEachen to the Pacific

Following his visit to Washington, August 17 and 18, Mr. MacEachen was in Ottawa for a brief stay before flying to the Pacific region on August 20 for a 17-day tour of Indonesia, Malaysia, Australia and New Zealand.

The purpose of the visit, said Mr. MacEachen before leaving, was “to add substance to our role and our appreciation of our role as a Pacific nation. And also to work at the strengthening of bilateral relations with each of these countries, and to conduct talks with the leaders of each of these countries on Asian questions and obviously to add to my own understanding of the part of the world that I have not hitherto visited”.



areas, or that Canadian actions are chipping away at the traditional harmony between the two countries.

I don't think these assessments objectively describe Canada/U.S.A. relations. Rather, it seems to me they reflect different perceptions of how Canada/United States relations should evolve. As a result of these differences in perception, Americans and Canadians are holding our respective actions up to a different light.

However, as a people who this year are celebrating the bicentennial of your revolutionary experience, and who are reaffirming the ideals with which you have shaped your own nation, I am confident that Americans, above all our friends, can respect and appreciate why Canadians are concerned to give due attention to our own evolving national priorities.

It does not seem warranted to take the position that our bilateral relations are somehow less successful because of Canada's efforts to achieve national goals which Americans take for granted. Moreover, and this really goes without saying, it is unrealistic to conclude that Canada would acquiesce in what it regarded as a decline in its re-

lations with the United States.

The active assertion of national will in both nations requires that we acknowledge the legitimate aspirations and interests of the other, that we recognize the changes that are taking place in Canada and the United States, and that we take into account the fundamental desire of Canadians and Americans that our relationship, at bedrock, be mutually beneficial.

Against this background I think we are just beginning a long but orderly process which will involve a reasonable and constructive readjustment in our relations, in which each of us grows more aware of the other's proper concerns. We begin with the advantages of a long-standing friendship, and of a substantial degree of common interest. Canadians are the first to recognize the contribution to peace and world betterment which United States international leadership represents. And I think you will agree that there are many ways in which Canada does assist in shouldering the burden...I am confident the frequent consultations which Dr. Kissinger and I have found so useful will have established a pattern for the future.

systems make it the only Canadian company qualified to meet our standards."

The current range of Bombardier-MLW engines is now being used in applications such as the James Bay Energy Corporation for base power generation at LG2 and LG3 stations and for propulsion and ships' services for the Canadian Government's new "R" Class icebreakers under construction at Vancouver.

The G.M.T. engines satisfy the prime requirements for the higher-powered electrical generating plants and for propulsion of larger vessels. Engines of this size previously had to be imported into Canada.

A team of specialists from both companies is currently studying the start-up of Canadian manufacturing operations. Marketing for the new engines will be directed by the Diesel power systems department of the Canadian company.

The companies

G.M.T. is a joint venture between Fiat and Financiere, initiated in 1966. Fiat, the largest private industrial concern in Italy has a diversified range of products that includes cars, trucks, aircraft, gas turbines and nuclear plants. Financiere is the state-owned investment group with the major interest in Italy's shipbuilding, ship repairing and related industries.

The Bombardier-MLW Group is a Canadian enterprise engaged in the development, manufacture and sale of transportation and recreational products round the world. It represents the resources of two companies - Bombardier Limited and MLW-Worthington Limited - which have recently been integrated as a single manufacturing complex with facilities in Canada and Austria.

Bombardier, founded in 1942, began as a manufacturer of off-road tracked vehicles and became the world's largest manufacturer of snowmobiles in the 1960s; in the 1970s it diversified into other products such as motor cycles and sail boats. In 1974, Bombardier entered the urban transit industry.

MLW, established in 1902, was first a major manufacturer of steam locomotives and later became one of the world's largest manufacturers of Diesel-electric motive power units.

First contract after signature of pact between Canada and European Communities

The signing of a licensing agreement between Bombardier-MLW of Montreal and Grandi Motori Trieste (G.M.T.) of Italy, marks the first venture under the Framework Agreement between Canada and the European Communities signed in Ottawa, July 6 (see *Canada Weekly* dated July 21, 1976).

Under the agreement, which could mean immediate sales in the first year of up to \$5 million, increasing to \$20 million annually, the Canadian firm will have exclusive rights to market, manufacture and service G.M.T.'s medium speed Diesel engines in the 3,000 to 24,000 horsepower range in Canada. In addition, Bombardier-MLW will have non-exclusive rights for sales and service elsewhere in the world. Bombardier-MLW also receives exclusive Canadian market and service rights to other engines in the G.M.T. range up to 50,000 hp. per unit and non-exclusive sales rights for the rest of the world.

"Our delegation told the Europeans

we are interested in new investment, joint ventures, technology exchanges, inter-corporate linkages and improved business relationships generally and this new agreement proves that we are on the right track," Industry, Trade and Commerce Minister Don Jamieson said.

J. Claude Hebert, chairman and chief executive officer of Bombardier-MLW, said the agreement would "complement our present range of 700 to 4,500 hp. high speed Diesels. It is a natural extension of our capabilities to provide full service to Canadian customers with these new engines."

Luigi Laudisa, commercial director of G.M.T., said "we are pleased to have this new association with a Canadian company that has an excellent worldwide reputation with its Montreal-designed-and-built Diesel electric locomotives and Diesel power systems. The many years of experience MLW has in engineering, manufacturing, marketing and servicing Diesel engines and

Education in Canada – report of the Organization for Economic Co-operation and Development released

The publication by the Organization for Economic Co-operation and Development (OECD) of the OECD report on the review of education policies in Canada was announced on August 17.

The OECD, of which Canada is a member, conducts from time to time comprehensive reviews of education policies in its member states. The purposes of the Canadian review were twofold: to acquaint others with educational developments in Canada and, by examining the objectives, structures and content of Canadian educational systems, to assist Canadian education authorities in planning more effectively for the future.

In their report the examiners found much to praise in the systems of education in Canada but also raised critical questions for consideration by Canadian education authorities. The report, and particularly the questions raised by the examiners, will be re-

viewed carefully and will no doubt be of interest to individuals and organizations concerned with education in Canada.

The completion of this comprehensive review, which was co-ordinated by the Council of Ministers of Education, Canada, in close co-operation with the Government of Canada, is the culmination of over three years' work. The first stage was the preparation of a six-volume background report by Canadian authorities on education in Canada. It consisted of an introductory volume, a volume by the Government of Canada, and four regional volumes (Atlantic provinces, Quebec, Ontario and Western provinces). The second stage, following submission of the background reports to the OECD, was an "external" examination of education policies and systems across Canada by a team of five international education experts chosen by the

OECD. They toured the country and prepared a report based on first-hand observations. The third and final stage consisted of a "confrontation" meeting during which representatives of the Canadian educational authorities responded to questions raised by the examiners in their report. This meeting took place in Paris in December 1975.

The final report of the OECD review of education policies in Canada, just published, includes the introductory volume of the Canadian background report, the report of the external examiners and a summary of the proceedings of the December 1975 meeting.

The OECD report, published under the title *OECD Reviews of National Policies for Education: Canada*, ISBN 92-64-11545-5, is available by mail order from the Publishing Centre, Printing and Publishing, Department of Supply and Services, Ottawa, Ontario, K1A 0S9 at \$9 a copy.

Master paintings from the U.S.S.R.

Secretary of State for External Affairs Allan J. MacEachen, and Secretary of State J. Hugh Faulkner, announced recently that an agreement had been reached with the Ministry of Culture of the U.S.S.R. to bring to Canada a special exhibition of master paintings from The Hermitage and The State Russian Museum, Leningrad. The collection of Western European and Russian art from the two museums in the U.S.S.R. will be on view in Winnipeg and Montreal.

The National Museums of Canada, which brought the exhibition to Canada, also organized its presentation. Owing to restrictions of time and the fragility of many of the works, the paintings will be on display for 11 weeks in only two locations – the Winnipeg Art Gallery from August 13 to September 26, and the Montreal Museum of Fine Arts from October 8 to November 14.

First time in W. Hemisphere

None of the 42 paintings has been seen in the Western Hemisphere prior to its current North American tour. From the seventeenth century Flemish and Dutch schools come paintings by Rubens, (*Landscape with a Wagon*),



The *Lute Player*, painted about 1596 by Caravaggio, is one of the rare masterpieces in the exhibition from The Hermitage and The State Russian Museum in Leningrad, now in Winnipeg

and scheduled for a showing in autumn in Montreal. The collection of 42 paintings, never before seen in the West, has been touring the U.S. as a Bicentennial gesture.

Van Dyck, Rembrandt (two works), Heda, Hals, Ter Borch, and Van Ruisdael. The Italian masters are represented in works dating from the sixteenth century by Caravaggio (*The Lute Player*), Fetti, Tiepolo, Guardi, and Titian. Gainsborough's (*Portrait of a Lady*) comes from England and Cranach's sixteenth century *The Madonna of the Apple Tree* represents German Renaissance art. Spanish paintings include works by Zubaran, Velazquez and Murillo, plus two early works by Picasso. Art from France is displayed in paintings by Le Nain, Poussin, Claude Lorrain, Chardin, Fragonard and Boucher, with Cézanne, Gauguin and two works by Matisse illustrating nineteenth and twentieth century art.

The 12 examples of Russian art from The State Russian Museum of Leningrad date from 1773 to 1906 and include landscapes by Ivanov and Levitan and portraits by Repin (*Tolstoy* and *Anton Rubinstein*), by Kramskoy and by Bakst (of the choreographer *Sergei Daighilev*).

The exhibition tour marks an important development in the growing cultural relations between Canada and the U.S.S.R., under the terms of the General Exchange Agreement signed in Ottawa by Prime Minister Trudeau and Premier Kosygin in October 1971, and the Final Act of the Conference on Security and Co-operation in Europe signed in Helsinki in August 1975.

Military association centennial

Canada's oldest military confederation marks its hundredth anniversary this September 17 when the Royal Canadian Artillery Association celebrates its centennial in Ottawa.

Events in honour of the occasion will be held across Canada by regular and militia artillery units throughout the period from September 3 to 20.

Formed in 1876 by Major-General Thomas Bland Strange, the association set as its original aim "the development of gunnery skill, and the dissemination of artillery knowledge throughout the Dominion of Canada".

The Artillery Association now forms part of the national Conference of Defence Associations, which provides various service groups across the country with a forum for presenting

their views and recommendations regarding defence policies to the Minister of National Defence and to the Chief of the Defence Staff.

Among dignitaries and prominent artillery figures scheduled to attend this year's meeting will be Field Marshal Sir Geoffrey Baker of Britain, Brigadier-General E.M.D. Leslie, Colonel Commandant of the Royal Regiment of Canadian Artillery and Major-General H.A. Sparling, the regiment's past Colonel Commandant.

Athletes — born or made?

Dr. Vassilis Klissouras, a physiology and education professor at Montréal's McGill University, has carried out studies on some 200 sets of twins to determine the relative importance of heredity and environment in a human being's functional capacity, particularly in regard to athletic ability. He concludes that physical training can increase individual capacity but only within the limits of genetic make-up.

The professor decided in 1968 that the study of twins was the best way to tackle the question since identical twins have the same genetic make-up; therefore, any differences between the two can be ascribed to events which are not hereditary. Fraternal twins, on the other hand, have different genotypes and can be viewed as siblings of the same age. Some 50 per cent of the twins studied were identical, the others non-identical.

Method

To gauge the functional capacities of the participants, Dr. Klissouras measured their maximal oxygen uptake after they had exercised to exhaustion on a stationary bicycle or treadmill. Air containing a measured amount of oxygen was fed to the subject to breathe through one apparatus while the exhaled air, containing oxygen and carbon dioxide, was collected in another. Computations could thus be made of the amount of oxygen being picked up from the bloodstream by the body tissues. The oxygen uptake reaches its maximum when the subject is close to exhaustion since the tissues then crave oxygen. The test is based on the principle that the higher a person's maximal oxygen uptake *per kilo-*

gram body weight, the better the functional capability and thus the athletic ability.

Other experiments

Dr. Klissouras has undertaken a number of different types of experiment. In an early study, for example, he worked with 25 pairs of twins — 15 identical and ten non-identical. The subjects, who ranged in age from seven to 13 years, were each asked to perform a series of runs on a treadmill. Measurements were made of maximal oxygen uptake and of maximal blood lactate concentration, which is an indication of anaerobic (non-oxygen) functional capacity. The results showed a much greater difference between the uptake values for non-identical twins than for identical twins. In fact the differences between individual identical twins were so minimal the researchers concluded that heredity accounts almost entirely for differences in functional capacity.

Follow-up study confirms

Because the subjects in this experiment were young, it could be argued that environmental influences, had some influence on maximal oxygen uptake. Dr. Klissouras therefore did a follow-up study to determine whether the small differences between identical twins and the marked differences between non-identical twins persist throughout life. Thirty-nine pairs of twins (23 identical and 16 non-identical) of both sexes ranging in age from nine to 52 years were used as subjects.

The results of this follow-up study confirmed the conclusion that heredity was the overriding factor.

Effects of training

These two studies illustrate the importance of heredity rather than environment in functional capacity. However, they do not take into account the potential effects of training on athletic ability.

To obtain some insight into this, Dr. Klissouras tested a pair of identical twins over one-and-a-half years. One trained as an athlete, the other did not. The untrained twin had a maximal oxygen uptake of 35.9 millilitres *per kilogram* body weight, whereas his trained

Untappable telephones

Some military personnel at National Defence headquarters in Ottawa are talking at the speed of light these days, their words flashing through hair-thin glass fibres of an evolutionary communications system called "fibre optics".

The system, switched on in June, provides certain key sections of NDHQ with internally "secure", virtually untappable telephone and closed-circuit television communications.

It was designed jointly by military and commercial engineers to overcome limitations in the Canadian Forces' new headquarters building, which was originally intended to house the Department of Transport.

The multi-towered structure was already five storeys high when it was assigned to the military in 1972, and structural changes to include a "guarded" communications system could not have been made without drastic — and expensive — alterations.

"We had to be able to pass secure closed-circuit television and voice communications," said Major Robert Jenkins, an engineer on staff of the Director of Communications Security at NDHQ.

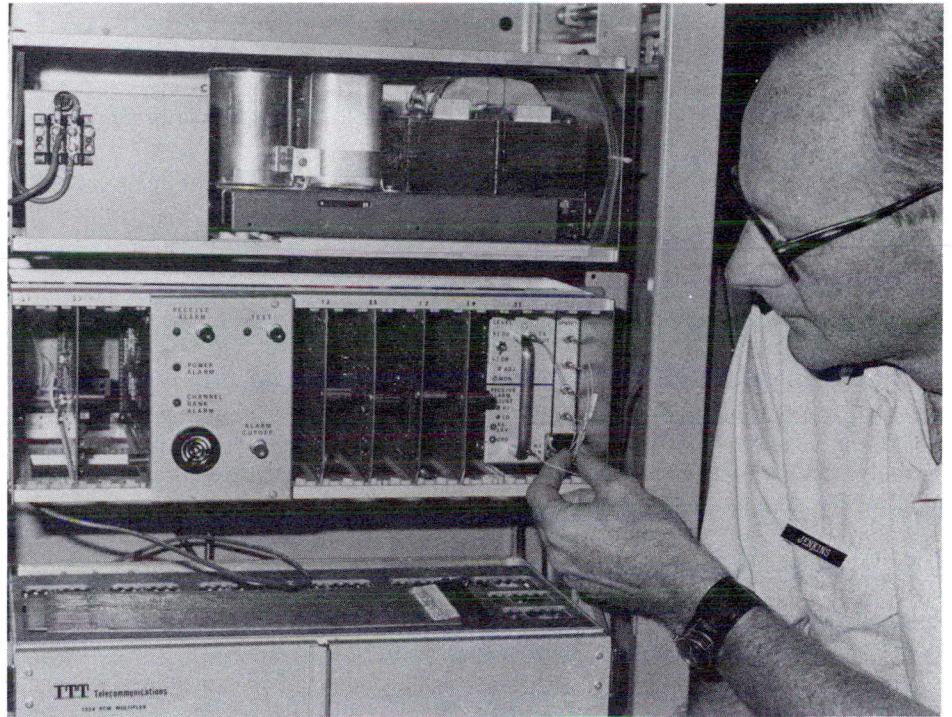
So, in the summer of 1974, the military's Chief of Research and Development (CRAD) contracted with Bell-Northern Research to adapt existing fibre-optics technology, still in the testing stage in Canada, into an operational and "secure" communications system for key sections of NDHQ.

They succeeded, and today the Department of National Defence (DND) owns and operates the first fully operational fibre-optics communications system in the country.

Major Jenkins, who worked with Bell engineers in designing the system, said recently it was "working very well", and added that in the field of fibre-optical telephone technology, DND "is about two or three years ahead of the industry in Canada".

Fibre optics, also under development in Japan, the United States and Britain, promises to revolutionize today's communications industry as much or more than did the invention of the telephone a century ago.

In a conventional telephone system, sound waves are converted into elec-



Major Robert Jenkins examines tiny "glass" wires of National Defence headquarters' new fibre-optical telephone and closed-circuit television

trical pulses, which travel along a copper wire to another phone, where they are reconverted to sound waves.

In fibre optics, light speeding along a glass wire replaces the electrical pulse. For security, fibres have enormous advantages over copper wires because they do not "leak" light as wires "leak" electricity, the source of modern-day tapping.

So far NDHQ's attempts to tap its own light-filled lines have failed. Even if they did, interruption of light flow

system. Designed jointly by military and civilian engineers, it is the first fully operational fibre-optical telephone hook-up in Canada.

would set off an alarm. Fibres also eliminate cross talk and static that occurs when one telephone wire "spills" some of its signal into a neighbouring line.

Major Jenkins and other military personnel have high hopes for the future of their fibre-optics system.

For example, he pointed out, "the fibre cable weighs just 17 pounds per thousand feet", which has the potential to get "rid of a truck carrying spools of wire".



Canadian Indian appointed to senior federal post

Fred Kelly (left), an Ojibway Indian from the Sabaskong Indian Reserve in northwestern Ontario, has been appointed Director General of Indian and Eskimo Affairs for the Ontario Region.

Mr. Kelly, President of Grand Council Treaty No. 3 Ontario and former special assistant to the President of the National Indian Brotherhood, becomes the first Indian to assume the position of Director General for the Ontario Region.

Ship safety system

Transport Minister Otto Lang announced recently that the Canadian Coast Guard had begun a system of vessel traffic management for ships entering waters on the east coast of Canada.

The Eastern Canada Traffic System (ECAREG CANADA), which will operate for a one-year trial as of July 1, is designed to help ships navigate safely, to establish efficient routing of vessel traffic on the eastern seaboard and to ensure compliance with Canadian shipping regulations.

Ships may request information about ice conditions from Canadian Coast Guard radio centres which are manned 24 hours a day, and receive routing instructions as well as icebreaker assistance if necessary.

Radio contact with all ships will improve search-and-rescue co-ordination and the gathering of data on east coast ship traffic.

ECAREG CANADA operates in a two-part zone. A northern area extends northward from Cape Chidley on the northern tip of Labrador into Davis Strait and Baffin Bay. It covers eastern Arctic waters westward to include the eastern half of Melville Island and encompasses the whole of Hudson Bay, James Bay and Ungava Bay.

The southern area includes all territorial waters within the 12-mile limit as far north as Cape Chidley and the fishing zones and inland waters on the Gulf of St. Lawrence as far west as Sept Iles.

This southern section does not include Placentia Bay, Newfoundland, Canso, Nova Scotia, Halifax, N.S., and the Bay of Fundy, where Canadian Coast Guard vessel traffic-management (VTM) centres are in operation.

Canada Weekly is published by the Information Services Division, Department of External Affairs, Ottawa, K1A 0G2.

Material may be freely reprinted. A credit would be appreciated. Photo sources, if not shown, will be provided on request to (Mrs.) Miki Sheldon, Editor.

Cette publication existe également en français sous le titre Hebdo Canada.

Algunos números de esta publicación aparecen también en español bajo el título Noticiario de Canadá.

Ähnliche Ausgaben dieses Informationsblatts erscheinen auch in deutscher Sprache unter dem Titel Profil Kanada.

Athletes — born or made?

(Continued from P. 4)

brother managed to attain a value of 49.2 millilitres.

While this demonstrates the potential effects of training in increasing oxygen uptake, it also points out the limitations imposed by heredity. Despite rigorous training, the trained twin was not able to exceed an uptake of 50 millilitres *per* kilogram body weight, which was the average value for untrained men of his age. This suggests that rigorous athletic training cannot contribute to functional development beyond a limit set by the genetic make-up of the individual. Thus the question "Is an athlete born or made?" should be rephrased to read "Does everybody

have the genetic material which appropriate training can tune to produce a superior athlete?" And the answer is "No." This is not to say that training has no purpose but rather that, even with training, each of us has a ceiling of performance dictated by our genes beyond which we will not pass.

International recognition

Dr. Klissouras, who has also worked with other methods of studying the question of genetics and athletic ability, has received invitations to conduct research from Belgium, Finland, Japan and Switzerland. He has also been asked to establish a sports medicine unit in Malaysia and to study a primitive jungle tribe in the area.

News briefs

- An additional \$13 million in Canadian aid will be available to help repair earthquake damage in Guatemala, announced Secretary of State for External Affairs Allan MacEachen, August 20.
- Canada's ten provincial premiers failed to reach consensus after a meeting in Banff on "bringing the Constitution to Canada". They will meet again in Toronto in October in an effort to resolve differences.
- Some 295.2 million bushels of wheat were in storage in Canada at July 31 — about the same amount as last year — but well below the average stockpile of about 587.4 million bushels. Farmers held a mere 58 million bushels of wheat, a dramatic decrease from a ten-year average of 242 million bushels. Heavy sales during the past two years to such countries as the Soviet Union, have caused the continuing depletion.
- The six federal book stores will be closed within 90 days as an economic measure. Supply and Services Minister Jean-Pierre Goyer said August 5 that the closings would save about \$1 million in the next year. The stores, in Vancouver, Winnipeg, Toronto, Ottawa, Montreal and Halifax, will be taken over by commercial book stores and the Government's central order service in Ottawa.
- A study by the federal Manpower and Immigration Department shows that

fewer jobs will open in Saskatchewan from 1974 to 1982 than in Manitoba or Alberta. Alberta will generate 75.8 per cent of all new jobs in the Prairie provinces for the eight years, Manitoba 12.4 per cent and Saskatchewan 11.8

- The Saskatchewan government bought its first potash mine August 12 for \$128.5 million. Premier Blakeney said the purchase of the mine, six miles west of Saskatoon, operated by Duval Corporation, a wholly-owned subsidiary of Penzoil Corporation of Houston, Texas, was an important "first step in implementing the provincial government's potash policy". During the last legislative session, Saskatchewan's New Democratic Party government passed an act enabling it to take over all or part of the province's potash industry.
- Chartered banks' general loans rose \$236 million to \$46.17 billion during the week ended July 28 from the previous week's figure. This was \$8.18-billion more than in the same period last year, reports the Bank of Canada.
- Collective agreements reached in the second quarter of 1976 show a lower rate of wage increase than in settlements reached in the first three months, says the Department of Labour. The 143 settlements reached during April, May and June produced average annual increases in base rates of 11.5 per cent, compared to the average of 14.5 per cent three months earlier.