

# Canada Weekly

Volume 8, No. 28

July 9, 1980



Ottawa, Canada

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## Joint Canada-U.S. action needed to solve acid rain problem

*Acid rain is one of the most serious environmental issues facing Canada and the United States, Environment Minister John Roberts told members of the Air Pollution Control Association at their annual meeting held in Montreal June 23.*

*Excerpts from the Minister's speech follow:*

Right now, as I speak in terms of thousands of Canadian lakes — and quite a few American ones — a process is taking place which, if we, Canada and the United States, do not respond as we should, is as inevitable as tomorrow's sunrise. You know what it is. It is the lowering of pH, the increasing of acidity. The process is simple. We know the rain is ten to 40 times as acid as it should be. We know these lakes, because of their geological setting, are poorly buffered, that it is only a matter of time — and for many not much time — until they take on the acidity of the rain. We also know that they do not have to get that acidic — only a pH of five — to lose their ability to sustain normal aquatic life, including fish, and thereby a major tourist and sport and commercial fishing industry. Already in

Ontario alone — where the sensitive regions are much less extensive than in Quebec, or proportionately, our Atlantic provinces — there are 140 lakes which prove the truth of what I am saying. Atlantic salmon streams are also affected. I could take you today to many dead lakes — dead because of what man, not nature, has done. In the United States the number of already dead lakes is greater and in both countries the list is growing.

Many of these lakes contain increasing amounts of toxic heavy metals. Indeed I am told that these metals are what kills the fish in many instances. Those metals are there because the increased acidity in the rain immobilizes them — leaches them out of the soil and into the water. People talk about liming the lakes to restore the pH balance or prevent acidification. In some places in particular circumstances this may well be useful as a temporary expedient. But will it restore the lake to its original chemistry? Our experiments so far suggest not and restocking of fish in some limed lakes has not worked. That sounds to me like irreversible damage, a terrible heritage for our children.

### Damage to vegetation

What of the soil drenched in acid rain or affected by dry deposition which some feel may be more damaging? Their chemistry is changing as surely as I am standing here looking at you. The only real arguments remaining among the scientific community are about the effects of these changes and most of these disputes are over the degree and speed of adverse effect on vegetation growth. Vegetation growth — it's such a neutral sounding expression. In Canada it means forests which sustain our largest single industry. That industry already faces the challenge of the newly expanding com-



Environment Minister John Roberts

One-hundred-and-eighty-seven years ago today...  
The importation of slaves into Upper Canada  
was forbidden.

mercial forests of the southern United States. Are we to face as well the man-made further disadvantage of acid rain?

In Europe, the Organization for Economic Co-operation and Development (OECD) expressed the view in a recent report that the worst effects of acid rain were not likely to be on lakes and forests but on building surfaces and human health. We know less about both of these than we do about lakes but I scarcely find the OECD's comments comforting. The deterioration of building surfaces would be gradual rather than sudden and therefore not necessarily noticeable, much less dramatic, except perhaps for valuable statuary. Yet I am told that if some of the early studies are valid the hidden cost to the Canadian and United States economies of more frequent building repairs could be enormous.

...My colleague, Monique Bégin, the Minister of National Health and Welfare, is concerned enough and has begun a major expensive program of study into the possible health effects of acid rain. A British report on the health hazards of lead recently concluded that the major focus of concern over this problem should be on the lead being absorbed from lead pipes by the acidic waters of Scotland. Why are these waters acidic? At least in part because of acid rain falling on poorly buffered streams and lakes. The Scots are suffering because of their famous soft water, very much like that of the Canadian shield. In Canada most of our major population centres draw their water from harder, better buffered sources but what of New York City? What is the history of pH levels in its reservoirs? I am not suggesting a problem equivalent to that of Scotland if for no other reason than the much rarer use of lead piping. However one could wonder what other metals may be picked up and what implications they may have.

Yet having referred to heavy metals, I must say that the principal concerns over health effects cited by most authorities are in another area entirely — the inhalation of fine particulates. Here the concern relates primarily to effects on people with respiratory ailments. More research is needed, the arguments continue but so does acid rain.

We know for a fact that the increased acidity in the rain — and in dry particulate deposition — is caused by sulfates and nitrates — in about 70 per cent to 30 per cent proportions — the precursors of which

*Canada Weekly* will not be published during the weeks of August 6, 13 and 20 but will reappear starting the week of August 27.

are sulphur dioxide and oxides of nitrogen. There are arguments about the precise behaviour of nitrogen oxides in the atmosphere but much less about sulphur dioxide. We know that high stacks designed to reduce local pollution not only send the sulphur dioxide and nitrogen oxides further afield but, in the case of the former, provide more time for it to be changed into the acid-causing sulfates. And we know where the pollutants are coming from in both countries. Atmospheric modelling is a relatively new science and the arguments go on about the accuracy of this or that specific calculation of the movement and transformation of pollutants. But from where I sit the arguments are mostly over points of detail — precise amounts of fall-out in a given place from a given source. No knowledgeable person questions the basic fact that these pollutants are going up, moving considerable distances and coming down in an acid-causing form. Also we know that at least half of the acid rain falling in Canada has its origin in the United States.

#### **Reducing acid causing emissions**

The solution is therefore very straight forward. We must reduce drastically the amount of acid-causing pollution that is being emitted in both our countries. I am told that it is technically possible to effect such reductions. The only stumbling block is cost. How much and to whom?

In Canada we are examining that question urgently — not from the perspective of wondering whether we should take action but with the intention of selecting the best means of doing the job. The provincial government has already begun in Ontario by putting a lid on INCO's sulphur dioxide emissions at a level of 1,100 tons a day below current allowable emissions and mandating a further 25 per cent reduction in two years.... Through a joint Canada-Ontario structure we will be developing much tighter emission requirements to be implemented later in this decade. We are also going after other major polluters both smelters and power plants. In a word we've started to move. I might add that our newest smelter at Timmins, Ontario, now under construc-

tion, will have 97 per cent sulphur dioxide removal....

Canada and the United States have committed themselves to develop an air quality agreement designed to deal with this problem. I sense that it will be some time before any agreement with real bite can be signed mainly because the legislative authorities needed in the United States to bring about rapid and major reductions in sulphur dioxide and nitrogen oxide emissions appear to be lacking.

For that reason we are also pressing for an interim understanding which would oblige both the United States and Canada to use existing authorities to the full limit in an effort to bring about some improvement in emission reduction while an agreement is being prepared.

Critics of early control action within Canada argue that there is no point in imposing expensive control requirements because the growth in U.S. emissions will simply occupy the space we are thereby vacating. That argument fails to recognize the geographic location of some of our major emitters and the relief which reductions obtained from them can offer some of our most sensitive areas. Nonetheless, there is enough truth in the argument for me to place equal importance on securing major reductions in U.S. emissions. Stated very bluntly I see no reason why Canada's ecosystems — let me be blunter yet — Canada's people — tourist camp operators, fishing guides, commercial fishermen, loggers, other forest product workers, building owners and tenants and possibly our asthmatics or others with respiratory illnesses — should have to pay the price of keeping the electricity rates of those coal-producing middle western states well below those now being paid along the United States eastern seaboard.

#### **Need for action**

Some Canadians among us have spoken darkly about "environmental aggression". I reject that phrase because it suggests a deliberate act designed to hurt another. There is no malice in the acid rain from the United States, nor I assure you in the much smaller amount of acid rain we send back. What we are experiencing is the result of a genuine lack of understanding of the consequences of what seemed like a reasonable cost effective control mechanism — high stacks and dispersion. What we failed to do was to build into our equations the hidden cost,

*(Continued on P. 8)*

## Mining committee appointed

Fifteen mining industry executives were appointed to serve on the National Advisory Committee on the Mining Industry (NACOMI) which met recently in Ottawa, Minister of State for Mines Judy Erola has announced.

The committee's main objectives are to facilitate a rapport between the Minister and representatives of the mineral industry and to identify present and future trends, problems and opportunities affecting mineral development in both a national and international context.

At the meeting NACOMI members reviewed the commodity situation and the general outlook for the mineral industry.

Mineral policy issues which were discussed included acid rain, health and safety, manpower problems, transportation and international developments.

## Satellite image analysis system opens in Victoria

Federal Environment Minister John Roberts recently opened a new Canadian Forestry Service satellite image analysis system which will allow federal scientists to conduct research on natural resources in British Columbia and the Yukon.

The \$402,000 Geographical Monitoring System (GEMS), located in Victoria, British Columbia, will take digital data from the orbiting *Landsat* satellite and resolve it into visual displays that show distribution of different tree stocks, insect outbreaks, fire damage, and information on wood supplies and logging practices.

The *Landsat* satellite passes over western Canada every 18 days and the GEMS system can convert the satellite's numerical data into images or graphic displays. It can reproduce the images in coded colours to show differences between land and water, between rivers and roads, or between coniferous or deciduous forests. The GEMS can monitor the environmental impact of pipelines in the Yukon and Northwest Territories, water pollution and changes in wildlife habitat.

The system, developed by OVAAC8 International of Downsview, Ontario, has already been sold in Poland. Sales to other countries as well as to Canadian resource companies are under negotiation.

## Women aid developing countries

Canadian women are working through the leadership of a national organization to help women in developing countries to help themselves.

When it comes to providing for basic needs — food, clothing and shelter — the best third world development projects are those initiated and run by third world communities themselves, according to Dr. Norma Walmsley, president of MATCH Centre International.

Unlike most third world development projects, MATCH does not administer programs from a central agency, but instead encourages women's community groups in Canada to take on specific projects of their own. MATCH's goal is one of matching women's groups on opposite ends of the world with the benefit of development.

Dr. Walmsley said that once people in the Third World see one project underway and succeeding, a snowballing effect takes over and many more projects begin to spring up. But it is of utmost importance

that Third World people themselves initiate projects on their own, she said.

MATCH's network is made up mostly of women's organizations. In some parts of the world women do most of the agricultural work as well as take care of the family. Thus, women can do much to improve the quality of life in their community.

The Canadian Government, through the Canadian International Development Agency (CIDA) will, in many cases, provide three-quarters of the total funding for development projects if local community groups are able to raise one-quarter. Under this arrangement, MATCH now has 50 projects underway and has a network of 120 contacts around the world.

Projects have included sending a Canadian speech therapist to a treatment centre in Calcutta, renovating a damaged water well in Malawi, training young women to sew in Sri Lanka, building a market place in Swaziland and digging a shallow well in Tanzania.

*(From Insight, May 1980.)*

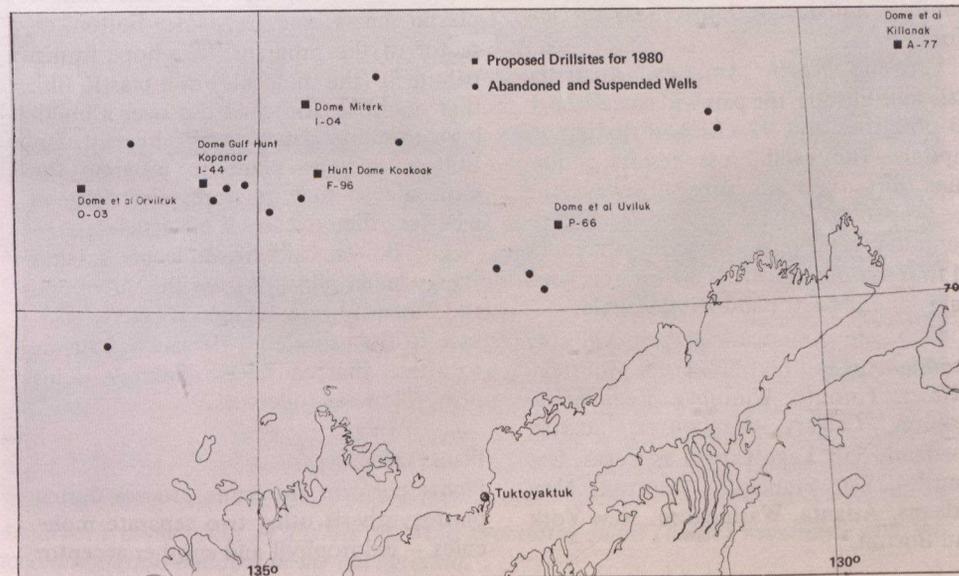
## Beaufort offshore drilling program approved

Federal approval has been given to Dome Petroleum Limited to resume offshore exploration drilling in the Beaufort Sea for the fifth consecutive year.

The company's 1980 program will be expanded from that of previous years. It plans to drill five new wells and to re-enter four previously suspended wells for further drilling or production testing.

Total planned expenditures for Beaufort Sea operations in 1980 is \$200 million.

Offshore operations will be aided this year with the deployment of the *Kigoriak*, a new Class 3 icebreaker that arrived in the Beaufort Sea in August 1979. It will assist the drillships to get to their designated sites earlier in the year when shore fast ice and pack ice is still present.



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## Canadians to circle globe

Jules Verne sent his fictional character Philius Fogg around the world in 80 days in a hot-air balloon, but a couple of young Canadians plan to complete the real thing in 77 days by automobile, reports Mike Hughes in the *Ottawa Journal*, June 7.

Garry Sowerby and Ken Langley, 29-year-old Maritimers will leave Toronto's CN Tower September 6 on the historic journey they hope to complete by November 21.

Even if they fail to achieve their target of 77 days, Sowerby, who will drive the entire 42,670 kilometres (26,514 miles), and navigator Langley probably will break the existing *Guinness Book of Records* mark of 102 days, established in 1976.

The Canadian pair will drive a Volvo DL Wagon assembled in Halifax.

"We first thought about 80 days after Mike Todd's successful movie; then we read a motorcyclist had completed the trip in 79 days," said Langley, who holds degrees in law and philosophy.

"The Guinness people were not able to confirm the motorcycle trip, but we settled on 77 days to be safe and because we first thought of the project in 1977 and because seven is a magical number."

The \$250,000-trip is now known as "Odyssey 77".

With ten days given to flying over water, the pair plans to average around 575 kilometres (350 miles) and ten hours a day on the road.

Other air journeys will involve San Francisco to Perth, Australia; Perth to Bombay, India, and Amsterdam to New York.

Crossing North America, Australia, Asia and Europe, the pair will pass through 23 countries and 92 cities, including 19 capitals. They will cross deserts, mountains, dirt roads and super-highways and are prepared for floods, snow, ice and extreme temperatures. They will experience all four seasons and cross the International Date Line, Equator and Arctic Circle.

In North America, the pair will stay overnight in Halifax, Moncton, Montreal, Ottawa, Toronto, Winnipeg, Regina, Edmonton, Calgary, Vancouver, Seattle, Portland, Salt Lake City, Las Vegas, Los Angeles, San Francisco, Houston, New Orleans, Atlanta, Washington, New York and Boston.

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## Canada's architecture praised

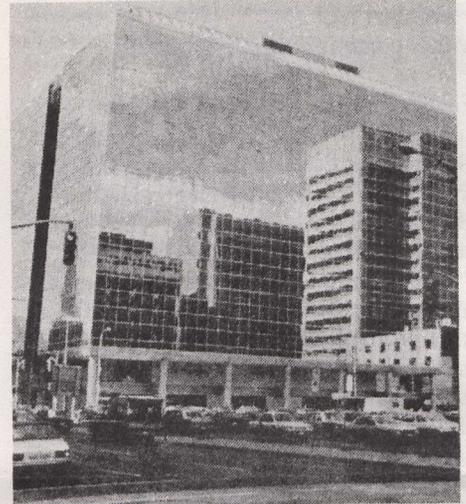
An Ottawa building has been singled out by Britain's top architectural magazine as an example of unique Canadian construction capabilities.

In a special edition devoted to Canadian architecture, the *Architectural Review* cited the C.D. Howe Building and Ottawa's Bank of Canada as examples of two forces shaping the look of Canadian buildings — weather and "the social climate".

"Of massive size, it is surely a luxury, but, suppressing puritanical misgivings, magnificent," said the article's authors, Lance Wright and Peter Collymore.

The Canadian architectural response to Ottawa weather — "bitter cold and blizzards" — is the ancient Roman idea of the atrium, an enclosed space at the centre of a building.

Explaining his reference to the "social climate", Wright said: "the Canadian architect seems able to respond more readily and more naturally than architects elsewhere to the public demand for an architecture people can live with".



C.D. Howe Building "unique".

The magazine goes on to say the C.D. Howe building "incorporates a fine old stone bank in the centre of a symmetrical arrangement of flanking mirror-glass office towers".

The magazine also states Canada has followed the ancient Roman tendency to produce "architecture which is unaffected, unique and of world-wide interest".

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## New molecule may be key to cheap solar energy

Scientists at the University of Western Ontario in London, have developed a molecule that could be the key to relatively cheap mass-produced solar cells.

The molecule, called P-Q, mimics plants' ability to use solar energy by duplicating the first stage of photosynthesis.

The photovoltaic cells based on the molecule could be sprayed onto film or plastic sheets, said Dr. James Bolton, director of the program. "We hope to distribute it (the molecule) in a plastic film that could be stretched out over a building's roof like saran wrap," he said. Dr. Bolton said he plans to program the molecule so that it stores electricity as a battery then releases it on signal.

Dr. Bolton said his molecule catches energy-laden photons from the sun at one end, then transfers a power-packed particle to the other end. He said he intends to attach that end to an electrode in his plant-like solar collectors.

### Plants use process

Plants perform the same process during photosynthesis using two separate molecules — chlorophyll and another acceptor

molecule — but neither is efficient at the process when taken out of its natural environment.

Dr. Bolton and his team had built and patented a chlorophyll-based solar cell and found it inefficient when it came to producing electrical currents. He then realized that he had to build a new molecule to duplicate the process in the test tube after he found that chlorophyll alone could not produce the desired results.

Most conventional solar cells made of silicon would cost \$40,000-\$50,000 to provide most of the electrical needs of an average size home, said Dr. Bolton. He speculated that solar cells using his molecule could do the same job for \$1,000-\$2,000.

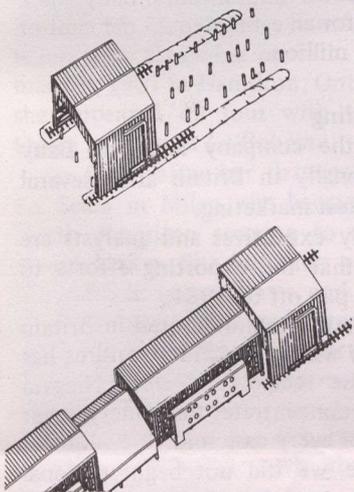
Silicon solar cells work with a power conversion efficiency of 10-15 per cent. Dr. Bolton said that although a solar cell using his molecule had not been made, preliminary tests indicate that such a solar cell could achieve an efficiency comparable to photosynthesis, which has an efficiency of about 18 per cent in its primary step.

**Arctic mine poses unique problems**

The construction of the world's most northerly metal mine will entail overcoming "formidable obstacles" but Cominco Limited of Vancouver, which will operate the mine, believes that a successful zinc-lead operation can be developed in the Canadian High Arctic.

The Polaris mine is situated on the northwest corner of Little Cornwallis Island some 900 miles south of the north pole (see *Canada Weekly* dated January 9, 1980). This small island of Arctic tundra that is frozen for most of the year contains a wealth of lead and zinc that will make the mine at least the eleventh largest producer in the world.

Within 70 miles of the magnetic north pole the island is surrounded by ice for most of the year. The only reprieve is a short period starting in late August that those assigned to the project call the "Arctic Window".



*First the shell is built, then the rest of the building is built under it, then finally it becomes a gymnasium.*

Only then will the waters around the island be navigable, the Arctic Window to the world so to speak. For some ships the window can be as short as six weeks, for stronger built vessels and depending on ice conditions it can be as long as 14 weeks.

**Dominates planning**

This window period will dominate the planning and scheduling for the project. Most construction equipment and materials will be brought to the island by ship but only when the window is open — a major logistics challenge. Almost everything right down to the last nail, will have to be part of the cargo of supply ships that will travel through the window this

summer. And when they get there they will bring with them another challenge — unloading. The dock at the site has yet to be built.

The ships' cargos will be unloaded onto flat bed barges, then ferried to shore. Although simple in theory, the exercise will be complicated by the shortness of the window.

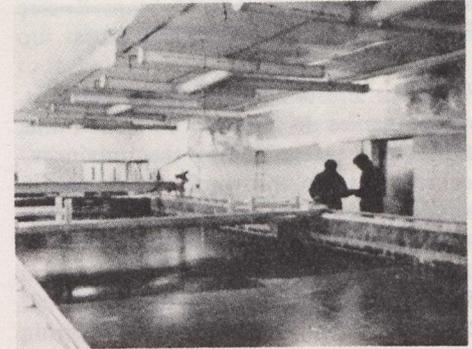
The window will also be watched closely by those who will operate the mine. Only once during the year will they

The mine, which is being developed for Cominco by Bechtel Canada, will produce two metals, zinc and lead, with an estimated reserve for both of 23 million metric tons with an annual production of 208,000 metric tons of combined zinc and lead concentrate. The project is the second Arctic mine that Bechtel Canada is developing for Cominco, the first was in Greenland in the early 1970s.

get the chance to send their production to market. Their year's work, some 200,000 metric tons of zinc and lead concentrate, will be stockpiled in a giant on-site warehouse.

**Accommodation**

The accommodation building for Polaris will be built in sections, under the cover of a huge shell. A shell the size of a gymnasium will be used to protect the construction crew from the harsh Arctic winter. As construction progresses the shell, built on tracks, will move to become



*Various simulated Arctic ice conditions created at Arctec Canada's Kanata, Ontario laboratory enabled engineers to test the design for Polaris' dock facility.*

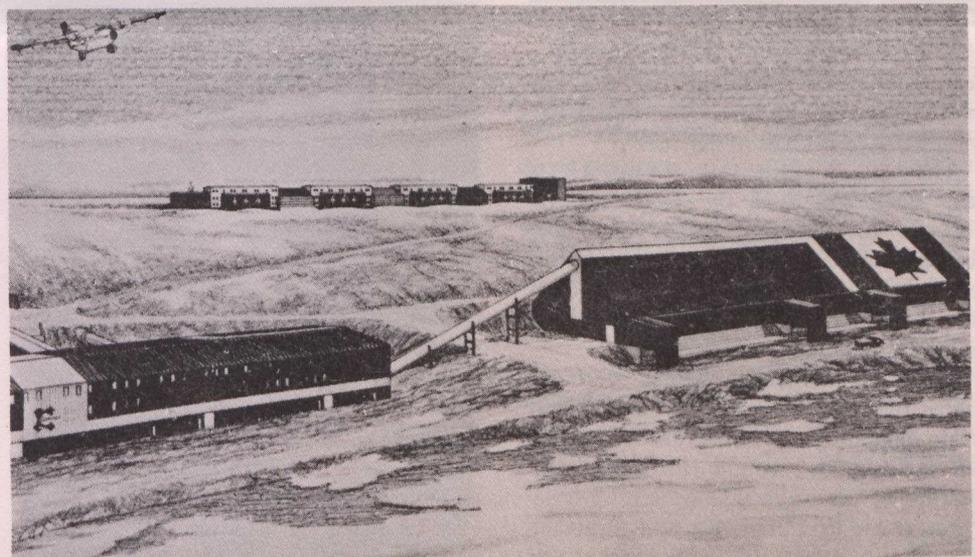
shelter for each successive section. Then when the building, which will include sleeping accommodation for 240, a large dining area, recreation hall, health centre, swimming pool and administration offices, is completed the shell will become a gymnasium.

**Plant towed to site**

A barge being built in Lauzon, Quebec at Davie Shipbuilding's yards will measure 400 feet by 100 feet, almost the size of a football field, and will be used to carry the Polaris project's processing plant consisting of concentrator, power house, warehouse, change house, shops and operating offices to the mine site.

The whole unit, barge and plant, will be ready for towing to the site in the summer of 1981.

Once there the barge will be permanently fixed on a prepared earth bottom and become the plant's "foundation".



*An artist's conception of Polaris showing processing plant (barge) warehouse and the accommodation building in the background.*

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## Foreign ownership of businesses

Foreign interests controlled 35.1 per cent of companies in Ontario in 1975, the highest percentage among the provinces, according to a provincial analysis of domestic and foreign-controlled firms prepared by Statistics Canada.

Since Ontario is also the largest provincial employer, it had 52.5 per cent of Canadian employment by foreign-controlled companies.

The figures are based on a sample of 31,611 companies throughout the country with employment of 4,352,588. A total of 2,330 of the companies, or 7.37 per cent, were foreign-controlled with a work force of 1,237,526, or 28.4 per cent.

Ontario and Quebec accounted for 70 per cent of the country's employment.

Employment by foreign firms in Ontario was 84 per cent from U.S. companies. In Quebec, the figures were 72.2 per cent from U.S.-controlled companies and 15.1 per cent from British companies.

Other provinces with foreign employment of more than 20 per cent, with percentages in brackets, were: Alberta (27.9), the Yukon and Northwest Territories (26.8), British Columbia (24.7), Quebec (24.5), Nova Scotia (21.5) and Newfoundland (21.4).

Prince Edward Island had the lowest level of foreign employment at 9.6 per cent, followed by New Brunswick at 12.9 per cent, Saskatchewan at 18.3 per cent and Manitoba at 18.4 per cent.

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## Bug produces oil

Scientists at the University of Toronto have discovered bacteria that could become reliable sources of car fuel.

The "bugs" called *Arthrobacter* AK19 have been tested at the University of Toronto for the past three years. Dr. Morris Wayman, head of the research team, said he and his colleagues are convinced that AK19 could be cultivated and its oil extracted for commercial use.

Under a microscope AK19, which is full of oil droplets, looks like an over-ripe string bean bulging with seeds. The single-cell creature was found thriving at the mouths of gas wells in southern Ontario where it ate up butane gas and turned it into oil.

The hurdle that must be overcome before AK19 can go into production is find-

ing the right food for "the bug".

While AK19 may like butane gas, Dr. Wayman's experiments showed that AK19 also thrives on sugars like glucose, readily produced by yeasts and other bacteria which eat carbon dioxide and other carbon compounds found in abundance in the oceans.

He said there are a number of microscopic "candidates" which can feed and live in harmony with AK19.

With funds from the Natural Sciences and Engineering Council, which has invested more than \$85,000 in the research since 1977, Dr. Wayman plans to grow AK19 and one of its partners in a small-scale tank. He plans to feed the microbial system with nothing more than sea water.

Dr. Wayman and his research team of three has got a "whole collection" of micro-organisms that can produce oil but Dr. Wayman says AK19 looks the most promising.

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## Research and rescue competition



*Canadian and American military search and rescue specialists recently competed in SAREX 80, this year's version of the annual Canadian-American search and rescue competition. SAREX 80 was held at March AFB, California with specialists competing in three events, each designed to test a different aspect of the rescue specialist's life-saving skills. The first phase was a para-jumping competition, the second a simulated search and rescue exercise, and the third a simulated medical exercise. Here a Canadian Forces Para-Rescue technician floats to earth in the para-jumping phase of the competition.*

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## Wine company seeks foreign markets

A successful Canadian wine company began a major sales campaign in Britain last autumn and plans to break into other foreign markets.

Joseph Peller chairman, chief executive officer and majority shareholder of Andres Wines Ltd., based in Winona, Ontario, has seen his company's share of domestic wine sales grow to 30 per cent from less than one per cent. It has six wineries, more than 1,200 shareholders and annual sales of \$34 million.

The company's success is attributed to Baby Duck, a sweet, pink bubbly wine containing only 7 per cent alcohol.

In fiscal 1970, the year before Andres introduced Baby Duck, company sales totalled \$2.5 million, and earnings were \$296,000 or 17 cents a share — a far cry from the \$33.7 million sales and \$3.1 million earnings (\$1.58 a share) in the year ended March 31, 1978.

Of the \$33.7 million sales, Baby Duck accounted for an estimated 25 per cent or about \$8.4 million.

### Test marketing

Last fall, the company launched Baby Duck nationally in Britain after several months of test marketing.

Company executives and analysts are confident that the exporting efforts to Britain will pay off by 1981.

Baby Duck is manufactured in Britain by a Leeds winery to which Andres has provided the recipe, and ships Niagara grape juice concentrate; the winery earns a royalty for every case sold.

"Because we did not begin national distribution until last October, our promotional efforts were not in time to catch the peak sales leading up to the Christmas period," says Mr. Peller.

### Company encouraged

But company executives were encouraged by the fact that the supermarkets that did order large quantities of Baby Duck found it sold "like hotcakes". (In Britain, Andres is going after the home consumer market, selling mainly from supermarkets where free tasting is permitted.)

Although Andres is budgeting for a loss in Britain in 1980, it expects to sell at least 300,000 gallons by 1981. And once it is established in Britain, Andres intends to pursue other foreign markets.

# News of the arts

## Molson prizes awarded

The Canada Council Molson Prizes for 1979 were awarded recently to singer Lois Marshall of Toronto; editor and radio producer Robert Weaver of Toronto and filmmaker Michel Brault of Montreal.

The Molson Prizes, each worth \$20,000, have been awarded annually since 1963 to recognize outstanding and continuing contributions to the arts, humanities or social sciences in Canada. They are financed by a donation from the Molson Foundation.

### Lois Marshall

Lois Marshall, one of Canada's "all-time great" musical performers, is beloved by audiences in Canada and around the world. Equally famous for her interpretation of oratorio, opera and lieder, Miss Marshall started as a high lyric and, later, dramatic soprano, and now sings as a mezzo-soprano.

Lois Marshall was born in Toronto and studied at the Royal Conservatory of Music. Her Canadian operatic debut was made in 1961 in Hamilton, Ontario where she appeared on tour with the Boston Opera as Mimi in *La Bohème*.

In 1958, after her first appearance at La Scala in Milan, she became the first North American soprano to sing in the Soviet Union. She has since returned to the U.S.S.R. several times, and is regarded as the greatest Western soprano to have appeared there in the past quarter century. Since 1966, she has performed with the New York-based Bach Aria Group as its soprano star. She has also maintained a 30-year association with the Toronto Mendelssohn Choir.

### Robert Weaver

Robert Weaver has served for over 30 years as what he calls a "literary middleman", scouting out fresh new talent, providing support, encouragement and intelligent criticism, and finding a public for writers.

In 1948, he joined CBC radio to organize its literary programs. He initiated two series *Critically Speaking* and *Canadian Short Stories* soon followed by *Anthology*, the program of poetry, fiction and interviews he has now produced for more than 20 years. He is currently executive producer of radio drama and literature for the CBC.

Mr. Weaver has edited several important

collections of Canadian short stories, served as a free-lance book reviewer and, since 1956, edited *The Tamarack Review*. His contribution to broadcasting was recognized in 1975 when he received the John Drainie Award from ACTRA.

### Michel Brault

Michel Brault has played a role in the development of film in Canada, and particularly in Quebec, for 30 years. As a scriptwriter, cameraman and director, he has been involved in the production of at least 170 films. His best-known work is *Les ordres*, a moving depiction of the impact of the 1970 October crisis on ordinary citizens. *Les ordres* won a prize for best direction at the Cannes festival.

He became a photographer and then a cameraman and in 1947 began to make experimental films with Claude Jutra. In 1956, he joined the National Film Board. Other well-known films in which Michel Brault participated as director or cameraman are *Kamouraska*, *Mon oncle Antoine*, *L'Acadie, l'Acadie* and *Mourir à tue-tête*.

## Canadian work presented at world music festival

*Oralléluiants*, a work by Montreal composer Gilles Tremblay, was included on the program of the annual World Music Festival of the International Society of Contemporary Music (ISCM) held in Israel from June 29 to July 5.

The panel, which included composers Lukas Foss, Cristobal Halffter and Fran-



Gilles Tremblay

çois Bernard Mâche, selected 49 scores out of the 365 that had been submitted to it by composers from 32 countries.

The Canadian work selected was composed in 1974. It was written for soprano, flute, clarinet, tenor clarinet, horn, three tubas and two percussionists.

The Canadian Music Council, which is the Canadian section of the ISCM also announced that it would host the World Music Festival in 1984. Some 20 contemporary musical performances from abroad and from Canada are expected to be organized for an international delegation and for the Canadian public.

It will be the first time that this annual festival has been held in Canada and only the third time in North America.

The World Music Festivals have been held annually since the founding of the ISCM in 1923.

## Supershow II tours Quebec and Atlantic provinces

For the second consecutive year, the *Greatest Little Travelling Supershow for Young People* brought the performing arts to young audiences in Canada. *Supershow II* visited Quebec and the Maritimes in May and June, starting in Montreal on May 1 and finishing in St. John's, Newfoundland on June 7.

As in 1979, when *Supershow* was created to celebrate the International Year of the Child, the Touring Office of the Canada Council produced and coordinated the event, with the co-operation of provincial and municipal governments and local sponsors.

The companies and entertainers participated in *Supershow*, which visited 33 communities in Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland: Théâtre L'Avant-Pays, the marionette company from Montreal; Nexus, a percussion ensemble from Toronto; Canadian Puppet Festivals, Canada's oldest professional puppet theatre company from Chester, Nova Scotia; Vancouver's contemporary dance company, the Anna Wyman Dance Theatre; harmonica player Alain Lamontagne of Montreal; The Dumptrucks, three musicians from Saskatchewan; Toronto's award-winning Lampoon Puppettheatre; Camerata, a chamber ensemble; Sharon, Lois and Bram, a singing group from Toronto; and Canada's oldest professional ballet company Royal Winnipeg Ballet.

## Acid rain problem (Cont'd from P. 2)

the damages being done to distant interests. We today understand the inappropriateness of such control mechanisms and I commend the United States for its control at source requirements in its new source performance standards for sulphur dioxide emissions from thermal power plants. I would like to see these extended to nitrogen oxides, especially in view of the projections for emissions of that pollutant. However, the real challenge is to apply the same concept to existing

sources. I am confident that when the American people understand what they are doing to their neighbours and to themselves, they will respond to the challenge with the same determination they brought to bear ten years ago near the beginning of what some call the environmental era. There is still time to save some lakes and to reduce some of the other effects of acid rain to which I have referred. But there is not much time. We should have started years ago.

...We in Canada have started in earnest the great task of controlling acid rain. We invite the United States to do the same.

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## News briefs

**The Department of National Defence** has established a group to review the report of the Task Force on the Unification of the Canadian Forces. The review group had been promised by Defence Minister Gilles Lamontagne after he had tabled the Task Force report in the House of Commons, May 2. The group is expected to complete its report by the end of August 1980.

**Canadian Pacific Investment Ltd.** changed its name and split its stock recently after showing yet higher profits in the first quarter of 1980. The new name is Canadian Pacific Enterprises Ltd., which is intended to reflect its active management role, Ian Sinclair, chairman and chief executive officer, told the annual shareholders' meeting. First-quarter profit was \$136.3 million, or \$2.07 a common share, a 62-percent jump from \$84 million, or \$1.38 a share, from the first three months of 1979. The largest gains were shown by oil and gas, metal mining, and forest products subsidiaries.

**AEL Microtel Ltd. of Vancouver** has been awarded a \$5.5-million contract to

provide a microwave communications system for the 2,375-mile (3,800 kilometre) gas pipeline being built for Petroleum Mexicanos (Pemex), Mexico's national oil company. AEL Microtel, a wholly-owned subsidiary of British Columbia Telephone Co. of Vancouver, will provide microwave and multiplex equipment for voice and data transmission along the pipeline, which will run along Mexico's east coast from Reynosa in the north to Villahermosa in the south, with branches to Mexico City and Monterey. AEL Microtel also designed the system.

**The British Columbia Government** has invested \$35 million in the federal Export Development Corporation which extends credit to foreign buyers purchasing Canadian goods. Finance Minister Hugh Curtis said the move is an excellent short-term investment for the province.

**The Canadian International Development Agency**, will provide up to \$150,000 to Aviation Planning Services of Montreal to carry out a program development study of maintenance and overhaul facilities for Garuda airlines at Cengkareng International Airport in Jakarta, Indonesia. Total capital cost of the new Jakarta facility is \$150 million. Canada could supply up to one-third of the necessary equipment and services for the facility. Cengkareng will be the site for operations of Garuda International Airways, Indonesia's national airline. The airline is currently based at Kamorayan Airport which is deteriorating rapidly and expected to be closed down in 1983.

**Alcan Aluminium Ltd. of Montreal** has signed an agreement with Instituto Nacional de Industria, the Spanish Government's industrial development agency, to

provide Alcan's "technology and operating resources" to Spain's largest aluminium producer. Alcan said the agreement will facilitate plans to increase its holdings in Empresa Nacional del Aluminio SA (Endasa), the Spanish aluminum company in which the Spanish Government has a majority holding. Alcan has opened a public bid for 1,367,292 Endasa shares or 16.7 per cent of Endasa not owned by it or the Spanish development agency. Alcan, before the bid held 2,154,802 Endasa shares or about 26 per cent of the stock outstanding.

**Malaysian Airline Systems** has awarded a contract worth about \$12 million to CAE Electronics Ltd. of Montreal to develop and manufacture two aircraft flight simulators for flight crew training, one for the McDonnell Douglas DC-10-30 and another for the Boeing 737. The simulators will be delivered to the airline's flight training centre at Kuala Lumpur, Malaysia early in 1982.

**Mitel Corporation of Ottawa** has signed two licencing pacts with Marconi Co. Ltd. of Britain and the British Post Office worth more than \$3 million during the first 12 months of the agreements. The agreements allow Marconi and the British Post Office to manufacture and further develop a Mitel process used to produce integrated circuits.

**Four University of British Columbia (UBC) faculty members** have been awarded Guggenheim Fellowships for 1980. The awards announced by the John Simon Guggenheim Memorial Foundation in New York, are made on the basis of "demonstrated accomplishment in the past and strong promise in the future". They range in value from \$16,000 to \$25,000 and enable recipients to pursue specific research while on study leave from a university without having to make a financial sacrifice. Chemistry professors David Dolphin and David Frost, mathematics professor Robert Miura and music professor Dimitri Conomos received the awards.

**Brascan Limited and John Labatt Ltd.** of Toronto announced that they had agreed to sell their 90 percent interest of Cervejarias Reunidas Skol-Caracú S.A., to Companhia Cervejaria Brahma of Brazil for about \$45 million (U.S.). Skor-Caracú operated seven breweries in Brazil and has about 14 per cent of the market. Brahma is one of the major Brazilian breweries and has about 52 per cent of the market.

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

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

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

*Alguns artigos desta publicação são também editados em português sob o título Notícias do Canadá.*