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Canadian unmanned submersibles make a splash, 1

Canada-Bahrain educational pact, 2

French prime minister visits Canada, 3

Canada provides aid for refugees and war victims, 4

Trade minister Lumley leads mission to Japan for talks, 4

Funding for biomass project, 5

Contribution to Polish aid program, 5

Export success for Ontario construction equipment firm, 5

Population increase leads to expanded Parliament, 6

Constitution stamp commemorates an historic occasion, 6

Wetlands projects for Saskatchewan, 6

Salty carvings win accolades, 6

News of the arts - print exhibit, awards, 7

News briefs, 8



Canada, for the first time will host the tenth world congress on the prevention of occupational accidents and diseases, May 8-13, 1983 in Ottawa.



Canada

External Affairs Affaires extérieures Canada

Canadian unmanned submersibles make a splash

A small British Columbia firm, International Submarine Engineering Limited (ISE), has established a foothold in the world of unmanned submersibles.

Its underwater machines, which look more like giant meccano sets than minisubs, seem to suit their trollish acronyms, TROV and TREC (for the curious, Tethered, Remotely Operated Vehicles and Tethered Remote Camera). But what the equipment lacks in aesthetics is more than made up in functional capability.

Jim McBeth, an engineer with the firm, sums up their attributes. "Our unmanned submersibles can carry out many functions performed by divers, and at less cost. In certain situations, the submersibles have even greater capabilities, such as strength, range and endurance."

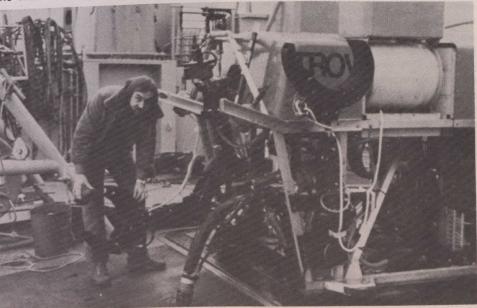
Unmanned submersibles are a fairly new phenomenon in the underwater world. They are a natural derivative of their larger cousins, the manned submersibles, such as the ones used by marine scientist Jacques Cousteau. McBeth explains: "Because of the disadvantages of the manned submersibles, they can cost

up to \$1 million and are so heavy that they require special handling ships, they have been relegated to a very minor role in underwater operations. Simple economics dictated the need for smaller, cheaper vessels to penetrate the market for underwater vehicles.

ISE builds three main types of submersibles: a TREC for underwater surveillance with a video camera for viewing and electric motors for propulsion; a TROV equipped with a crab-like mechanical arm for doing just about anything a diver can and more, closing valves, recovering torpedoes or carrying a sonar such as the one used in the search for the Titanic; and a DART, the sleek member of the family, used for surveillance in narrow channels such as effluent pipes.

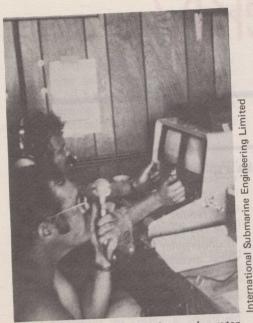
Umbilical cord

In operation, all three submersibles are controlled by an umbilical cord which tethers them to a command centre on board a surface vessel. An operator monitors the submersible's progress and manoeuvers it by transmitting signals to the vehicle's propulsion system. In the



This TROV's arms are equipped with a special grasping mechanism.

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Operators can observe the underwater scene conveyed by the unmanned submersible's camera from the safety and comfort of their on-board cabin.

case of TROV, its mechanical arm is operated by remote control.

In the competitive business world where cost cuts are always welcome, these submersibles can often pay for themselves many times over during their life-span. They also have the added benefit of sparing divers needless risks during dangerous underwater operations, whether fighting a raging undersea blowout, filming killer whales, or recovering unexploded torpedoes.

International Submarine Recently, Engineering embarked on a program to manufacture more sophisticated mechanical arms for its TROV; the arms are versatile and capable of force feed-back, a process which allows the controller up top to feel how much pressure is being applied. This ensures precision control, so that valves are not torn off or torpedoes crushed by the brawny machines. A tactile arm which acts like an extension of the operator's arm at the end of over 1 000 metres of cable adds whole new dimensions to the use of these underwater systems. To nurture this development, the National Research Council of Canada is providing financial aid to the company.

A case in point

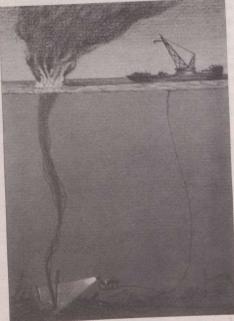
The use of unmanned submersibles became known during the oil industry's worst disaster, the catastrophic blowout at the offshore oil well, Ixtoc 1, owned by Mexico's national oil company, Pemex.

The crew had been drilling 4 000 metres below the seabed in the Gulf of Mexico when it encountered complications and began pulling up the kilometres of pipe attached to the drill. Just before extraction was complete, oil started to ooze out of the pipe, the incredible pent-up pressure of oil and gas burst through, and a torrent of grey-brown crude began gushing out at a rate of 30 000 barrels a day.

Normally, a blowout preventer, a 13metre stack of high pressure hydraulic rams on the ocean floor, is actuated, cutting through the drill pipe and sealing the blowout. That is what the drill crew tried, but it was not the drill pipe that now rested in the blowout preventer. It was the drill collar instead, a heavy gauge steel pipe used to add extra weight to the drill bit. This prevented the rams from sealing the flow.

Eventually the accumulating gas ignited on one of the hot motors on the platform, and the fire that raged for months was set. The drilling platform buckled from the intense heat, sending kilometres of pipe and equipment tumbling onto the blowout site and the disabled blowout preventer on the ocean floor.

An international emergency task force, assembled to cap the flow, determined that it would be too dangerous to send down divers to examine the situation. The outflowing oil was creating a tremendous vortex, made more dangerous by reduced visibility and the tangle of debris now lying around the well-head. Their solution was to use an unmanned sub-



Sketch shows how submersible was used in Ixtoc 1 blowout.

mersible, and a TREC, manufactured by ISE and owned by a Houston firm, was quickly delivered to the scene.

The Canadian-made submersible was soon launched on its way, flights ablaze, camera searching, following a grid pattern controlled from above via cable. After 14 hours of criss-crossing and threading through the debris, the well head and the blowout preventer stack came into view. Video inspection revealed that the blow out preventer was still intact and repairable. Then, the TREC inadvertently manoeuvered too close to the surging oil, was caught up instantly in the vortex and shot to the surface. Though damaged, the TREC was repaired and returned to the scene and used as a beacon for divers to locate the well and cap it. After many months of attempts and failures, the blowout at 1xtoc 1 was finally under control. Unmanned submersibles had proved their worth.

(Article by Sadiq Hasnain in Science Dimension, 1981/6.)

Canada-Bahrain educational pact

Trade minister Ed Lumley has annound ed the signing of an agreement to cover future co-operation in the field of education between Canada and Bahrain.

The agreement was developed by the Canadian Commercial Corporation (CCC) on behalf of the Ontario Educational Ser vices Corporation (OESC), a government agency which facilitates the provision of educational resources. The educational services procurement agreement was sign ed by Canadian Ambassador to Kuwalt lan Wood representing CCC, Ontario Minister of Education Bette Stephenson on behalf of OESC and Minister of Education Ali Fakhro for Bahrain.

The areas of co-operation included under the agreement are: teacher train ing, curriculum development, the provision of contract faculty and the develop ment of an institutional support system for Bahrain.

This represents the first procurement services agreement to be developed by CCC to provide educational services from Canada. The CCC is a federal Crown cor poration which contracts with foreign governments and international agencies chi, on behalf of Canadian suppliers of good Biand and services. Last year, CCC achieved sales of over \$400 million involving 50 Canadian firms and more than 50 foreign Joh customers.

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French prime minister visits Canada

French Prime Minister Pierre Mauroy visited Canada April 22-27 for meetings with federal and provincial officials.

Mr. Mauroy was accompanied by French Minister of External Affairs Claude Cheysson and French Minister responsible to the Prime Minister for Parliamentary Affairs André Labarèrre.

The visit included talks with Quebec Premier René Lévesque, Ontario Premier William Davis and New Brunswick Premier Richard Hatfield.

Mr. Mauroy's visit followed one earlier in the week by French President François Mitterrand who stopped over in Vancouver for talks with Prime Minister Pierre Trudeau. Mr. Mitterrand, who was returning from a trip to Japan, discussed with Mr. Trudeau the agenda for the 1982 Economic Summit which will be held in France, June 4-6.

During his stay in Ottawa, the French Prime Minister was received by Governor General Edward Schreyer and held working sessions with Prime Minister Trudeau and other Cabinet ministers, including Secretary of State for External Affairs Mark MacGuigan, Minister of State for External Relations Pierre De Bané, Minister of Energy, Mines and Resources



A Royal Canadian Mounted Police constable salutes Mr. and Mrs. Mauroy as they arrive at Prime Minister Trudeau's residence for a dinner.

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Prime Minister Trudeau (right) and Prime Minister Mauroy speak to reporters in Ottawa.

Marc Lalonde and Industry and Trade Minister Herbert Gray.

The ministers discussed Canada's interest in helping to produce a new European commercial airliner and possible French investment in the Arctic gas pilot projects.

At a press conference following their meetings, the two leaders expressed hope that a negotiated solution might be reached on the dispute of maritime boundary delimitations off the French island of St. Pierre and Miquelon.

Prime Minister Trudeau indicated that videotex systems, coal, gas and nuclear co-operation would be the subject of further discussions in the coming months. Their goal, said Mr. Mauroy, is to double trade between the two countries in coming years.

Total trade between Canada and France was \$1.82 billion in 1981. France was Canada's eighth most important trading partner with principal Canadian exports to France being wood pulp, lumber, minerals and chemicals. Principal Canadian imports from France include: beverages, transportation equipment, books, passenger automobiles, switchgear and protective equipment.

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Prime Minister Mauroy said France wants to build normal ties with Canada while maintaining France's traditional interest in Quebec. He added that his country intends to continue and to strengthen its special relationship with Quebec based on long-standing language and cultural ties. Mr. Mauroy said that France would also seek new ties with other Canadian provinces, especially those with significant Francophone populations.

Following his stay in Ottawa the French Prime Minister travelled to Toronto where he met with Premier William Davis and was guest of honour at a dinner hosted by the premier. Mr. Mauroy told those attending the dinner that it was only natural for France to want to "renew and revive" its ties with the 500 000 Franco-Ontarians who sought to preserve their linguistic and cultural identity.

While in Toronto, the French Prime Minister met with businessmen and representatives of Franco-Ontarian associations. Mr. Mauroy also toured the Ontario Science Centre.

In Moncton, New Brunswick at an official dinner given by Premier Richard Hatfield, Prime Minister Mauroy emphasized France's particular interest in the Acadians as descendents of the first French settlers.

Quebec visit

During a three-day visit to Quebec, the French Prime Minister travelled to the Saquenay region, Montreal and Quebec City.

In Quebec City, both at a luncheon speech and before the National Assembly, the French Prime Minister spoke in particularly warm terms of the close ties (Continued on P. 8)

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Canada provides aid for refugees and war victims

Canada will provide funds to assist refugees in Chad, cyclone victims in Tonga, human relief efforts in Africa and victims of conflicts including the Iran-Iraq war and civil strife in El Salvador and Lebanon.

The funds for the grants will be supplied by the Canadian International Development Agency through its international humanitarian assistance program.

Repatriation for refugees in Chad

Canada is making \$750 000 available for the repatriation program of Chadian refugees in response to an appeal by the United Nations High Commissioner for Refugees (UNHCR). In the spring of 1981 the UNHCR announced a limited repatriation program, but in August, an agreement was reached with Chad to repatriate 150 000 of its citizens who had taken refuge in surrounding countries, and to provide support to 50 000 displaced persons in the city of N'Djamena.

Relief to Tonga and Africa

Cyclone victims on the Tonga Islands

are being assisted by a Canadian grant of \$100 000. During the cyclone last March, approximately 95 per cent of the livestock was lost, many houses were destroyed and major crop damage was sustained, particularly in the Ha'apai and Vava'u groups.

The League of Red Cross Societies, working in concert with the Tonga Red Cross and other national societies in the South Pacific is providing the emergency relief, concentrating on basic food and medical supplies for four to six months as well as prefabricated shelters and warehouses.

Canada is also granting \$450 000 to the League of Red Cross Societies in support of its humanitarian relief efforts in Africa. This money will be devoted to the League's program to aid refugees of natural disasters such as drought and famine which plague the area.

War and civil strife victims assisted

Grants totalling \$880 000 are being made by Canada to the International Committee of the Red Cross (ICRC) in response to appeals early this year in aid of victims

of the Iran-Iraq conflict and civil strife in El Salvador and Lebanon.

Funds amounting to \$350 000 are being provided for ICRC's program to assist victims of the war in both Iran and Iraq and to act as neutral intermediary in all humanitarian matters there.

In El Salvador, \$350 000 has been allotted by Canada for an expanded relief program, bringing the Canadian contribution to the area to \$858 000. In 1981, over 10 000 prisoners and detainees were visited and the Central Tracing Agency was asked to act on more than 2 800 requests for news of missing persons. In addition medical assistance was given to displaced persons, mostly women, children and the elderly living in hazardous conditions. Food, clothing, health blankets and cooking utensils were supplied to over 40 000 displaced per sons in remote areas.

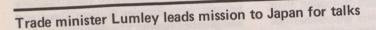
Canada's contribution of \$180 000 to Lebanon, brings to \$2.58 million the total Canadian contribution to the ICRC's humanitarian assistance programs there since 1975. It is estimated that more than 80 per cent of the casualities of the Lebanese six-day civil war were civilians.

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Left photo: Trade Minister Ed Lumley (right) greets Japanese Minister of Industry and Trade Shintaro Abe during his four-day trip ^{t0} Japan (see Canada Weekly dated May 5). The two discussed Canada-Japanese investment during their talks. Right photo: Mr. Lumley (left) along with Canadian Ambassador to Japan Barry Steers (centre) and Dale Tulloch (right) of t^{he} National Dairy Council of Canada sample cheese at the Canadian exhibit at Foodex 82 held in Tokyo.

Volume 10, No. 19 May 12, 1982

Funding for biomass project

The federal government has announced a \$5-million contribution to a biomassbased synthesis gas (syngas) demonstration project at St. Juste-de-la-Bretenières, Quebec.

The project, estimated to cost \$15 million over the next three years, is being undertaken by Biosyn, a general partnership of Canertech Incorporated and Nouveler Incorporated. Canertech is the federal government's venture capital development company that was created to invest in renewable energy conversion technology. It will invest \$5 million in the demonstration project. Nouveler is its Quebec counterpart. Through Canertech Participation and through its direct contribution, the government of Canada will provide \$10 million or two-thirds of the cost of the project.

Wood waste used

Biosyn will construct a nine-tonne a day plant involving new pressurized oxygen gasification technology based on forest products industry waste materials. It is intended, in a second stage, to build a further demonstration plant to convert the syngas into methanol. The current estimated cost of this further processing plant is \$30 million.

Canertech has also announced the signing of an engineering and supply contract between Biosyn and Omnifuel Gasification Systems of Toronto to provide a fluidized bed gasifier at their plant site southeast of Quebec City. Canertech is a 25 per cent partner with Ontario Energy Corporation in OGS, a joint venture to promote commercialization of this technology in which Canada has an international lead.

Contribution to Polish aid program

The Canadian government recently presented \$200 000 to the Canadian Polish Congress to support the group's aid program in Poland.

The Congress's program assists vulnerable groups in Poland — the elderly, disabled and children. In October 1981, Canada Provided \$100 000 through the Canadian International Development Agency to the Congress for the purchase, Poland. The current grant will allow the relief supplies to Poland.

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Export success for Ontario construction equipment firm



A workman erects part of a truss shoring system exported by Anthes Equipment Limited.

An Ontario construction equipment firm is enjoying success in international markets, particularly in Venezuela and the Caribbean.

Anthes Equipment Limited of Mississauga, near Toronto, manufactures truss shoring systems and frames for construction and in the last year with help from the Canadian embassy in Venezuela has shipped almost \$1 million in equipment to that country.

In addition to the orders for Venezuela, Anthes has shipped smaller orders to Trinidad, Bermuda and the Bahamas, and has recently appointed a vicepresident for international sales.

Scaffolding stays in place

The system the company exports does away with the need for scaffolding to be erected and dismantled every time the concrete is poured for a floor.

Instead, a crane lifts a number of boxes of steel framework onto a completed floor and aluminum decking is laid across them. Each strip of decking has a wooden ridge to which plywood can be nailed. When the plywood is in place, the concrete is poured. After it dries, the boxes of steel framework are lowered on their supporting jacks and everything pulls away from the newly-poured concrete. The boxes of steel framework then are lifted by crane onto the newlycompleted floor and the process begins again. Neil Woods, Anthes president, said one of the strong points of the company's systems is their simplicity.

"You can ship them knocked down to the site and when they arrive, you can train people quickly on their use," he said. "They don't have to put together a lot of bits and pieces."

Other uses

The same principle used on pouring concrete for floors can also be used for pouring walls and some of the same components can be used.

The systems are ideally suited for any high rise construction, including apartment units, offices, and large bay shopping malls, according to the company. They also can be adapted for bridge construction, temporary pedestrian or vehicular bridges, access stage platforms and temporary buildings for winter construction.

Anthes Equipment Limited had revenues of \$20 million last year and its wholly-owned U.S. subsidiary, Anthes Incorporated has revenues of \$10 million. In Canada and the U.S., the company rents its scaffolding and shoring. In addition to the \$1 million offshore export business, the Canadian company sent truss shoring systems to the U.S. subsidiary which resulted in revenues of about \$6 million last year.

(Excerpts from an article in EDC News, January 1982.)

Population increase leads to expanded Parliament

With the latest census figures showing that Canada's population grew by 12.9 per cent over the past decade, 28 additional members of Parliament will be elected to the House of Commons in a future federal election.

The expansion of the Commons is automatic following each decennial census for each of the provinces, there will be six new members for Alberta, five for British Columbia, ten for Ontario, four for Quebec and one for each of Nova Scotia, Newfoundland and Manitoba.

In announcing the census results, Supply and Services Minister Jean Jacques Blais said redistribution and expansion of the Commons could not be completed in time for the next election, which will probably take place no later than the fall of 1984. It is expected that the new members of Parliament will not be elected to the Commons before 1988.

Redistribution complicated

The determination of the specific areas which the new areas will represent is based on a complex formula grounded in decades of political compromise and partly included in both the British North America Act and the new Constitution.

The key element for the expansion is that Quebec receives four more members, whether its population rises, falls or remains the same. Representation for the other large provinces is adjusted according to their relative populations.

The redrawing of electoral boundaries is, however, a more complicated procedure; it involves public hearings and is done by the government's Chief Electoral Officer. Commissions to study boundary

adjustments are to be set up within two months.

The most populous areas of the country - Ontario, Quebec, Alberta and British Columbia - will continue to be relatively under-represented.

The final census population figures showed that, 82.3 per cent of the 24 343 181 people enumerated on June 3, 1981 live in these four provinces, but they will get only 78.7 per cent of the seats in the new 310-member Commons.

Prince Edward Island, with four members to serve a population of 118 229, will be the most over-represented province. In effect, the vote of one Prince Edward Islander will be worth more than two-and-a-half votes of other Canadians.

Large growth in west and north

The census indicated that the population of Alberta, the Northwest Territories, British Columbia and the Yukon have grown the most dramatically. Alberta's population expanded at about three times the national average, the population of the Northwest Territories rose by 31 per cent and that of British Columbia and the Yukon increased by 26 per cent.

Toronto, Montreal, Vancouver and Ottawa-Hull continue to rank as Canada's four largest metropolitan areas (in that order), but Edmonton and Calgary are growing rapidly. With 657 057 people, Edmonton is nearing Ottawa-Hull, with 717 978 people. And Calgary, with 592 743 people has moved up from ninth to sixth in city size.

Toronto with 2 998 947 people, continues as the country's largest population centre.

Constitution stamp commemorates an historic occasion

The Canada Post Corporation has issued a special stamp to honour the patriation of

Canada's Constitution.

The new stamp shows an open book, with illustrations that symbolize the history and tradition of Can-The left-hand ada. page depicts the Canadian coat of arms, a



from which the country has grown. A stylized Canadian flag, displayed as a bookmark; brings to mind a more recent historical milestone. And the right-hand page, with the words "Constitution 1982", evokes the importance of a new step for Canada and the hope it brings for the future.

Wetlands projects for Saskatchewan

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Ducks Unlimited is to spend \$10 million in the next five years to develop five major Saskatchewan wetlands - to be known as heritage marshes.

The conservation group has entered into the five-year agreement along with the province and three other conservation groups.

Saskatchewan Tourism Minister Reg Gross said Panass Lake, about 200 kilo metres northeast of Regina, had been de signated the first heritage marsh.

The project covers about 2 800 hec tares that is to be managed as nesting cover for ducks and for hay crops.

The Thunder Creek marshes north west of Moose Jaw, named the second marsh, cover about 3 200 heritage hectares.

The Saskatchewan Wildlife Federation has promised to buy 1 200 hectares of land in the initial phase of the agreement and the province is to contribute 4 000 hectares of Crown land.

The heritage marshes, believed to be the first of their kind in North America, will provide a guaranteed source of water for livestock, irrigation and waterfowl.

20 million mallards are About produced in Saskatchewan each year - about 40 per cent of the North American flock.

Salty carvings win accolades

Jan Lapinski, a Canadian chef from Lon don, Ontario has won first prize in the one-hundred-and-thirteenth annual Salo of Culinary Arts held in conjunction with the international hotel-motel-restauran show in New York.

Lapinski received the prize in t_{crit}^{he} artistic and practical decor category his Canadian fauna collection of five sal sculptures depicting the beaver, Canad goose, bear, turtle and seal in natura poses. Each sculpture was carved in single 18-hour sitting from a solid, 22 kilogram block of salt.

Lapinski said he became interested in art during his culinary training in tal and was also influenced by Canadia Inuit carvings.

Although he has made sculptures d materials such as tallow, ice and butter he said he prefers salt, it does not near refrigeration and can be used more that once.

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News of the arts

Volume 10, No. 19 May 12, 1982

Travelling print exhibition presented in Vancouver



Print entitled Coffee Bar, 1952 by Sybil Andrews.

A major travelling exhibition of 65 linocut prints, produced by Vancouver Island artist Sybil Andrews and 29 artists who Were her colleagues and contemporaries In England prior to the Second World War, Was presented recently at the Vancouver Art Gallery.

The exhibition, which will be seen in other Canadian centres, was organized by the Glenbow Museum in Calgary, Alberta with the assistance of the National Museums of Canada in Ottawa.

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The prints by Andrews, who is now 82, were made between 1929 and 1979.

Andrews' gift for visually conveying the dynamics of motion is a central feature of her work and she has spent a lifetime perfecting it. Speaking about Racing, a colour linocut reproduced both the exhibition poster and in the catalogue, Andrews said, "I'm not drawing the horses, I'm drawing the jump."

A number of the linocuts in the display were shown in November 1948 at the were shown in November 1948 at the Vancouver Art Gallery shortly after Andrews and her husband emigrated to

Canada.

At that time, artist/critic Mildred Valley Thornton wrote in a local journal: "All of them deal with life and motion and it is astonishing how much impelling action has been injected into each small picture without exhausting in the slightest degree the resource fulness of the artist. They are rich in colour and form, prolific in ideas, stimulating and satisfying from any point of view."

Andrews has used the linocut as her medium throughout the 50 years of her creative life. The pliable material demands a treatment that calls for simplicity, boldness of design and elimination of detail. She learned this process of printmaking in the Twenties from Claude Flight, an artist/teacher at the Grosvenor School of Modern Art in London. Linocuts by Flight as well as Cyril Power, with whom Andrews collaborated on the design of posters for London Transport, are also included in the exhibition, assembled from private and public collection in Canada, Britain and New Zealand.

Music industry presents Junos

The Canadian Academy of Recording Arts and Sciences recently presented the 1982 Juno awards at the twelfth annual show of the Canadian record industry.

Loverboy, a rock quintet from Vancouver, British Columbia, won a number of the Junos including the top three awards: best group; best album, Loverboy; and best single, Turn Me Loose. Loverboy's Mike Reno and Paul Dean won the best composer award for Turn Me Loose and Paul Dean and Bruce Fairbairn won the best producer award.

Among the other major awards, Anne Murray received the best female vocalist and best country female vocalist and Bruce Cockburn took both best male vocalist and best folk artist honours.

Comedy team presents awards

Bob and Doug McKenzie received the award for the best comedy album, The Great White North and presented the awards to Saga, the successful international rock group, as the most promising new group, the most promising female vocalist to West Coast singer Shari Ulrich, and the most promising male vocalist to Eddie Schwartz.

Sandra Beech won best children's record for her album, Inch By Inch. The best jazz album went to The Brass Connection for their record of the same name, and the classical album award went to L'Orchestre Symphonique de Montréal for Ravel, Daphnis et Chloe.

Country group of the year award went to The Good Brothers for the sixth consecutive year. Country male vocalist went to Ronnie Hawkins, and best instrumental album to Liona Boyd.

Other Junos

Other awards included best graphics to Hugh Syme and Debra Samuels for Rush's Moving Pictures album, and best recording engineer to Rough Trade's engineer Gary Gray who tied with Keith Stein for Loverboy.

Following the lead of the American Grammy awards, the best international album award went to John Lennon and Yoko Ono's Double Fantasy and the best single went to Kim Carnes' Bette Davis Eyes.

Ontario-born folksinger-songwriter Neil Young was honoured with induction into the Juno Hall Of Fame, joining such musicians as Guy Lombardo, Oscar Peterson, Paul Anka and Joni Mitchell.

Visit (Continued from P. 3)

and the need for increased co-operation between France and Quebec, promising France's unfailing support.

To emphasize the increased economic content of co-operation between Quebec and France, several arrangements were signed or witnessed by Mr. Mauroy and Premier René Lévesque.

The largest contract signed was a 25year agreement between Hydro-Quebec and the French consortium Pechiney Ugine Kuhlmann for the supply of hydro to a proposed aluminum smelter in the Trois Rivières area. Pechiney is due to complete feasibility studies for the smelter by the end of this year. If the project proceeds Hydro-Quebec would provide an initial 400 megawatts of electricity for two production lines, the first to be in operation by 1986 or 1987. The plant would produce more than 200 000 tonnes annually and would cost \$1.2 hillion.

News briefs

Saskatchewan Premier Allan Blakeney and his 11-year-old New Democratic Party government went down to defeat in the province's recent general elections. The Progressive Conservatives, under leader Grant Devine, took 55 seats in the 64-seat legislature with the New Democratic Party taking only nine seats. Both the Liberals and the Western Canada Concept parties did not win any seats. At dissolution, the New Democrats held 44 seats, the Progressive Conservatives accounted for 15 and there were two independents. Redistribution had added three seats to the legislature for this election.

Canadian companies will display their technology in a fair to be held in São Paulo, Brazil, September 27-October 1. The transfer of technology fair is being sponsored by the Canadian International Development Agency, which has presented such fairs in Geneva, Sri Lanka, New Delhi and Mexico City. The fair will promote technology geared to Brazil's requirements and will identify opportunities for transferring the technology to Brazilian companies and agencies.

The French government, in co-operation with the Manitoba government, is offering four-week summer courses for Manitoba teachers. The courses will be held in July in Quimper, France, with

one course for teachers who teach French as a first language and the other for teachers who teach French as a second language. The French government offers a bursary to each of the successful applicants to cover tuition fees and living expenses while in France. Under the France-Canada Agreement, the Manitoba government assumes a portion of the remaining costs, with the chosen candidates being responsible for the balance.

Lumonics Incorporated, Canada's largest manufacturer of lasers, increased its earnings in 1981 by 44 per cent over its 1980 earnings. The company, located in Kanata, outside Ottawa, had earnings of \$1.5 million in 1981, a rise of 44 per cent over the previous year's figure of \$1.04 million. Sales in 1981 were \$9.09 million up 23 per cent over 1980 sales of \$7.4 million. Export sales accounted for more than 90 per cent of the company's business.

Health and Welfare Canada has signed an agreement with British Columbia to share in the cost of services provided by the province to juvenile offenders in the care of British Columbia's youth containment program. Under the agreement, retroactive to January 1979, the federal government will pay over \$6 million including \$2.1 million for the fiscal year ending March 31, 1982.

Canadair Limited of Montreal reports it has completed the first flight of the Challenger 601, a business jet aircraft. The 45-minute test was completed at its test centre in Mojave, California.

Thomson Newspapers Limited of Toronto has agreed to buy six trade magazines from Robert Titsch, founder and president of Titsch Publishing Company of Denver, for about \$25-million (U.S.). The six magazines are Cablevision, C-Ed, Cable File, Mobile Radio Handbook, Two-Way Radio Dealer and Radio Communications Reporter.

The Export Development Corporation (EDC) has signed an \$11-million (U.S.) loan agreement to support a sale of trucks by Euclid Canada Limited, Guelph, Ontario to a consortium of West German and Italian companies working on a project in Iraq. The trucks will be used at the site of the Mosul Dam construction project in Iraq where the joint venture has undertaken the engineering and construction of the two-dam flood control, irrigation, hydroelectric project.

Datacrown Incorporated of Toronto has opened a \$10-million computing centre in Silver Spring, Maryland. It is the first U.S. operation established by Data-



Ken Hyndam of Ottawa gets a different view of the neighbourhood when h climbs onto his four-metre high stills The 15-year-old started off on one-metre stilts before graduating to three-m^{etre} and now four-metre stilts.

crown, a subsidiary of Crown Life Insu rance Company of Toronto. However Datacrown already supplies remote con puting for private and government users both in Canada and the United States.

Blair Howell, a 30-year-old parapleg intends to travel the more than 800Vancouver kilometres between Halifax in a wheelchair. Howell from Picton, Ontario was paralyzed nine year ago in an accident at home. He started trip in Vancouver and he is optimist that his journey will raise up to million for the disabled. Howell plans accept pledges for the Canadian Par plegic Association and for provincial crip pled children's societies.

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Material may be freely reprinted. A cre would be appreciated. Photo sources, if shown, will be provided on request to the editor Joanna Kerr.

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