foreign trade

Timber and Plywood for British Buyers

Engineering Opportunities in the Maghreb

Canada Gets Its Feet Wet

Department of Industry, Trade and Commerce, Canada

May 8/71

In This Issue

Among the international trade fairs in which the Department of Industry, Trade and Commerce is sponsoring displays in 1971 is one that reflects the Department's interest in the new technologies that are developing, such as those used in exploring the oceans. This was Oceanexpo 71, held in Bordeaux, France, in March, and in which 22 Canadian companies participated under ITC's wing. The front-and-back cover shows the colorful design of our exhibit and there are other pictures, including those of notable visitors to that exhibit, in the story on page 40, "Canada Gets Its Feet Wet".

Leading off this issue is our once-a-year review of the vital British market for Canadian timber and plywood, contributed by the Department's chief timber man in the London office. Mr. Charles reviews our 1970 British sales, tells how our competitors fared, and discusses a number of factors that will influence our 1971-72 position, and especially the growth in popularity of particleboard and the continuing acceptance by British builders and building societies of timber frame housing methods.

In our April 24 issue, we discussed engineering opportunities—and Canadian success in capitalizing on these—in West Africa. This time we move north to the Maghreb countries of Morocco, Algeria, Tunisia, and Libya and tell of mooted projects there. We also present three case histories of work that is being carried out by engineering firms from Montreal, Quebec City, and Vancouver. One of these is an exhaustive survey of land-use and ownership in the Kingdom of Morocco; we were able to talk with the Canadian manager of this survey when he was in Ottawa shortly before Christmas. Another is concerned with the design and supervision of an iron ore pelletizing plant and we flew out to Vancouver in February to get that particular story. Our assistant editor then went to Quebec City in Carnival Week to interview the firm that is involved in a forest preservation and control project in Algeria. (He complains that his assignment kept him so busy that he never did get to see Bonhomme Carnaval.) The Vancouver trip, incidentally, also resulted in the success story on page 32, "The Chips Are Down".

After living through 174 inches of snow in Ottawa this past winter, we are a bit cold to the joys of snowmobiling. Perhaps, subconsciously, that is why we chose to include in this May 8 number a piece with the title "Beyond the Snowmobile". It was contributed by our Detroit office and covers such relative newcomers to the mechanical transport field as trail bikes, ATV's and Hovercraft. Canadian companies are already making and selling them, as you will see if you turn to page 26.

Already at the press is most of the copy for our May 22 issue, which will cover ten countries of South America—and will include a look at Canada's many ties with that continent in terms of both aid and trade.

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Articles

Departments

Timber and Plywood for British Buyers

The move to the metric system, greater emphasis on dry lumber, stiffer competition in the plywood field and growing use of particleboard will all affect Canadian sales. Developments in housing should work to our advantage.

T. A. CHARLES, Commercial Counsellor (Timber), London

This is part of a 72-dwelling housing development at Wooburn Green in Bucks. All the houses have load-bearing timber frames; the development required 296,000 board feet of structural lumber and about 28,000 board feet of exterior timber cladding.

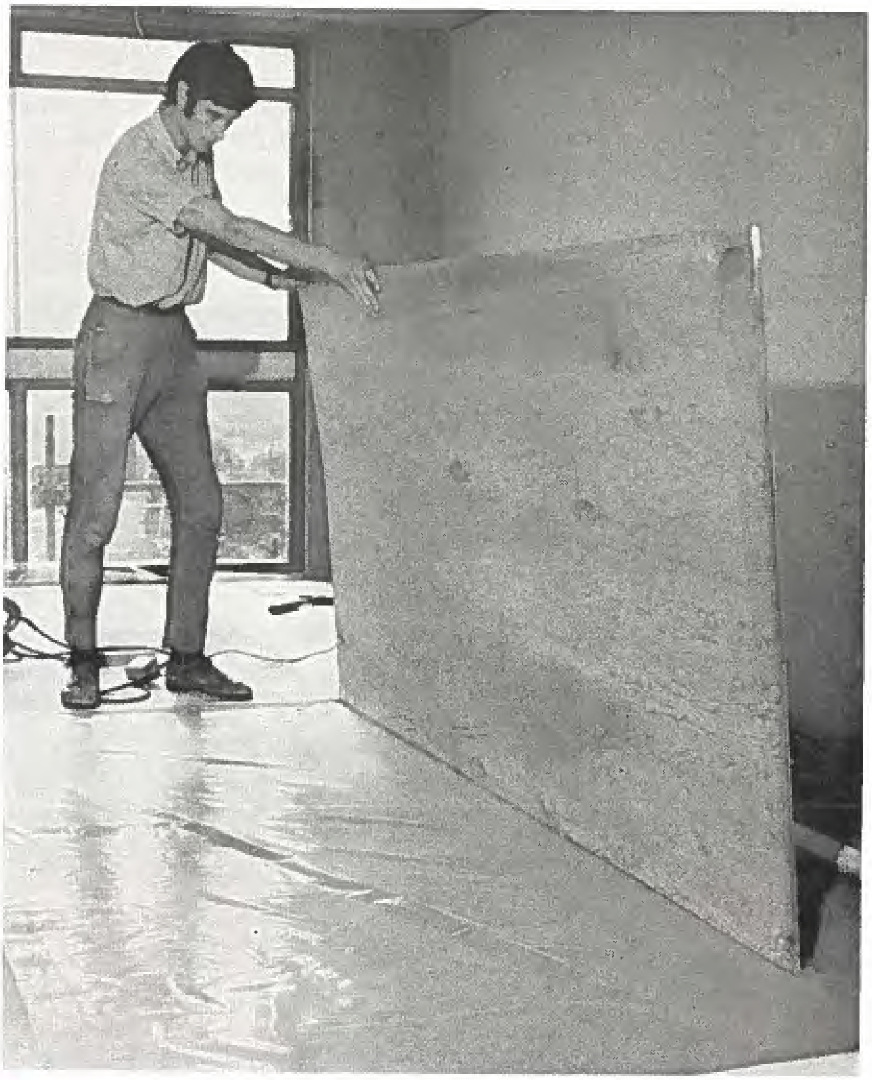
Looking back at the developments that took place in Britain's timber and plywood trade in 1970, it is small wonder that timber agents, importers and merchants there were pleased to see the year draw to a close. Wages, costs and prices in all industrial and commodity fields rose throughout 1970. The anti-inflationary measures that the British Government adopted meant less building, shortages of cash, high interest rates, tight credit and generally rising operating costs. Building activity declined from 1969, which was itself not a spectacular year, and because construction provides the largest market for wood products, timber and timber products were seriously affected.

Against this background, how did Canada fare in its trade in wood products with Britain?

Softwood Lumber—Canada managed to increase its share of the sawn softwoods market in Britain last year, in spite of these adverse conditions. Of total softwood timber imports of 8,070 thousand cubic meters, (1,727 thousand standards) Canada supplied 1,469 thousand (314,000 standards) or 18 per cent, compared with 829 thousand, or 11 per cent, in 1969 (see Table 1). Competition from other traditional suppliers remained keen; Sweden once again dominated the picture with shipments of 1,878 thousand cubic meters (23 per cent), followed by the Soviet Union with 1,726 thousand (21 per cent), and Finland with 1,685 thousand (just under 21 per cent).

It has been estimated that Britain's needs for softwood lumber are likely to increase to between 9 and 9.5 million cubic meters within the next five to ten years, a rise of some 1 to 1.5 million cubic meters from 1970. The National Forest Economics Institute of the Canadian Forestry Service forecasts that Canada's production of sawn softwoods will rise from 25,677 thousand cubic meters in 1969 to 31,854 thousand in 1980. It will therefore be necessary to keep in close touch with world requirements if this growing volume is to be marketed to our long-term advantage.

There are a number of unknowns in the future of the softwood lumber trade in Britain and trends there will bear close watching. The requirement for metrically sized lumber, for example, is becoming more and more important, as the British construction industry goes into high gear on metrication and contracts for projects designed in imperial measurements taper off. There will, however, be a large market for some time to come for replacement stock to be used in renovating and modernizing older buildings, but it is doubtful whether this will provide a large enough outlet for our expected rise in production. The requirement for dry lumber in Britain is also increasing and will increase even more in the future.



Here a workman lays a Douglas fir plywood floor panel over a layer of dry sand covered with a sheet of plastic at the same housing project in Buckinghamshire.

Largely as a result of the Department's promotion efforts, and with the co-operation of the representatives in Britain of the Council of the Forest Industries of B.C., more and more builders are recognizing the economic viability of timber frame building techniques. Industrialized building systems using timber and plywood have made great strides but growing numbers of firms engaged in this form of construction are calling for dry lumber. Nearly all of the stock shipped to Britain from our Scandinavian competitors is either kiln- or air-dried and can be bought in relatively small volume for delivery in a matter of days. This is important to the smaller timber merchant or builder, as well as to many larger importers, in this time of high interest rates, tight credit, and shortages of working capital. Canadian exporters must realize that supplies in standard metric sizes of suitably dried lumber, available in reasonably sized parcels for prompt delivery at competitive prices, are going to be essential in selling softwoods in Britain in the future. The removal of the import deposit last December and the trend towards industrialized timber frame building hopefully should mean an increase in our sales of CLS lumber in 1971.

Hardwood Lumber—The market for hardwoods in Britain last year was anything but buoyant, yet figures for the twelve months show that hardwood lumber imports, at 802,000 cubic meters, were 4 per cent higher than in 1969. Apparent consumption of hardwood lumber for that period was the same as in 1969, at 1,046 thousand cubic meters. The quantity of hardwood logs imported fell from 294,000 cubic meters in 1969 to 219,000 in 1970, or by about 25 per cent.

Sawn lumber accounted for 802,000 cubic meters of total hardwood imports of 1,021 thousand cubic meters in 1970. There is considerable speculation about whether planed or patterned hardwood may be imported in greater volume in future, especially with the removal of the import deposit. Britain imported 652,000 cubic feet of machined hardwood lumber last year and of this, Canada supplied 326,000 with a value of about \$1.14 million, a rise of 21 per cent over 1969 and representing half of British imports.

The British hardwood trade also officially switched from imperial to metric measures at the end of 1970, and all quotations, stock lists, invoices, etc., will now be in metric terms. But because there are still substantial stocks of imperial-sized hardwood timber, and because not all shippers are likely to supply metrically-sized lumber immediately, the trade has still a long way to go before it is completely converted to metric.

Plywood and Veneer—The latest figures indicate that for the fourth year in succession, consumption of plywood and blockboard in Britain during 1970 probably exceeded one million cubic meters. At the end of December, total imports of plywood, blockboard, laminboard and battenboard exceeded this figure. Canada supplied some 277,000 cubic meters ($39 million), Finland 323,000, the U.S.S.R. 109,000, Malaysia 62,500, Singapore 45,000 and Japan 29,000. (See tables 2 and 3.)

According to an FAO survey, 2,000 plywood plants throughout the world produced 38 million cubic meters in 1969, up 14 per cent in two years. By the end of 1971, the survey estimated, production capacity will be up a further 12 per cent, with most of the increase coming from new operations in Malaysia, Korea and Taiwan.

There were a number of developments in Britain last year that could have a bearing on the future of the plywood trade. One was the removal of the import deposit; the trade will, over the next few months, get back much-needed funds that had been on deposit with H.M. Customs & Excise. Another was the introduction of Finnish birch-faced plywood, with spruce cores. This is considerably less expensive than the all-birch product and preliminary reports on it are favorable. This could mean further competition for Douglas fir plywood in Britain, in addition to that expected from Far East suppliers.

With the slowdown in the United States construction field last year, a substantial amount of United States plywood that would normally be used at home was shipped to Britain. Although these shipments did not account for an appreciable percentage of the over-all market, they provided direct competition for our Douglas fir plywood and tended to disrupt the marketing of Canadian stock. Imports from the U.S. rose from 4,800 cubic meters in 1968 to over 13,000 in 1969 and to 21,131 in 1970.

The changeover to metric measurements in the construction industry is also creating problems for Canadian plywood shippers. Unless our suppliers are prepared to offer plywood in metric sizes at prices competitive with the Scandinavians and other manufacturers, it will be more difficult to retain our share of the market. With firms

TABLE 1

BRITISH IMPORTS OF SAWN SOFTWOOD

Country of Origin	Volume '000 cu. m. 1969	1970	Per cent of market 1969	1970
Canada	829	1,469	11	18
Sweden	2,066	1,878	27	23
U.S.S.R.	2,029	1,726	26	21
Finland	1,709	1,685	22	21
Poland	429	504	6	6
Brazil	167	157	2	2
Czechoslovakia	167	128	2	2
Other countries	381	524	4	7
Total	**7,777**	**8,071**	**100**	**100**

TABLE 2

BRITISH PLYWOOD AND BLOCKBOARD TRADE

	'000 cubic meters									
	1966 P	B	1967 P	B	1968 P	B	1969 P	B	1970 P	B
Consumption	649	198	774	238	859	228	704	303	826	232
Production	38	22	32	22	31	22	29	19	n.a.	n.a.
Imports from										
EEC	28	21	34	25	26	23	15	19	14	16
Canada	211	—	285	—	290	—	234	—	276	—
Finland	110	124	141	167	155	160	151	144	160	163
Malaysia	3	—	13	—	23	—	33	1	60	2.5
U.S.S.R.	106	—	113	—	136	—	119	—	109	—
Israel	29	—	41	—	37	—	33	—	34	—
United States	2	—	14	—	5	—	13	—	21	—
Other—P & B. combined	140		167		220		193		225	

Per cent exterior glueline in 1969 imports of plywood: EEC 20, Canada 100, Finland 80, Malaysia 50, U.S.S.R. nil, Israel 33, United States 95, other 10.

Source: Year Book of Timber Statistics—1969 Timber Trade Federation of the U.K.

The main center of the Canada-Britain timber trade has in recent years moved from London to the Tilbury docks farther downstream. There specially equipped terminals and modern methods of handling packaged lumber ensure fast turn-around time for incoming ships.

such as British Gypsum producing metrically-sized plasterboard only, the builder is sure to have problems if he tries to use this in conjunction with 4′ by 8′ Canadian plywood panels.

Particleboard is also making inroads into traditional plywood uses. Its consumption is growing in Britain and is expected to reach about 417,000 tons this year. Within five years it could rise to some 675,000 tons and particleboard could be used for jobs that currently call for plywood. To hold this market, Canadians will need to stress market research, product innovation, and effective promotion in the effort to provide what the market wants at a competitive price.

The British furniture industry uses less plywood than it did five or ten years

TABLE 3

BRITISH PURCHASES, ARRIVALS AND APPARENT CONSUMPTION OF PLYWOOD AND BLOCKBOARD

	'000 cubic meters January—November			
	1968	1969	1970	Average 1964–68
Purchases	1,039	974	865	824
Arrivals, plywood	786	697	804	657
Arrivals, blockboard	204	183	208	177
Apparent consumption	968	903	977	830

TABLE 4

PARTICLEBOARD STATISTICS FOR BRITAIN AND THE EEC

	'000 m. tons 1969 actual; 1971 forecast									
	Consumption		Production		Imports		Exports		Capacity	
Country	1969	1971	1969	1971	1969	1971	1969	1971	1969	1971
Britain	401	417	193	141	208	276	—	—	250	n.a.
West Germany	2,047	2,438	2,041	2,405	158	195	152	162	2,150	2,900
France	738	943	637	887	131	111	30	55	845	1,050
Italy	411	470	504	600	4	—	97	130	620	710
Belgium & Luxembourg	359	370	600	615	33	35	274	280	575	705
Netherlands	252	253	68	58	195	208	11	13	68	71
Total EEC	**3,807**	**4,474**	**3,850**	**4,565**	**521**	**549**	**564**	**640**	**4,258**	**5,436**

Source: ECE Document TIM96—October 29, 1970.

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ago, but it still accounts for a fairly substantial volume. This industry ended 1970 on a firmer note, with production and sales improved over the first half of the year. It is in this sector, however, that particleboard has made the greatest inroads, and with a substantial rise in particleboard production forecast for both Britain and the EEC countries, this trend is expected to continue.

The container industry has also used a good deal of plywood in recent years. With an excessive number of companies going into the container manufacturing field, however, a number of them have recently discontinued operations.

The most important outlet for Canadian Douglas fir plywood in Britain continues to be concrete formwork, which accounts for about 35 per cent of all fir plywood imports. (See Table 5.)

Housing Sector—Residential construction is the largest single consumer of Canadian timber and plywood in Britain and developments in this sector are most important. The figures for 1970 clearly indicate that it was not a particularly good year for British home builders. Only 351,800 permanent homes and flats were completed, compared with 366,800 in 1969; housing starts numbered 319,000 units as against 343,500 in 1969. Most of the decrease was in the public sector. The Minister of Housing and Construction forecast a slight decline again this year in the public sector, with the private sector holding the line or perhaps showing a slight improvement. He also added that, since the completion time for new houses averages 15 months, the effects of increased activity would probably not be felt until 1972.

Even in the face of this decline in housing construction from the pace of 1967 and 1968, the interest in and acceptance of timber frame housing has held up extremely well. This shows the effectiveness of the sustained promotion efforts of the Department and Canadian industry over the years in selling these techniques to the British building industry and to government housing authorities. In addition, several of the larger and more important building societies in Britain have now been convinced that timber frame is a satisfactory form of construction, meriting mortgage loans on the same terms as for homes built using traditional methods.

The Department's efforts have been aided by the activities of the Timber Research and Development Association (TRADA) of Britain. TRADA recently designed, developed, and gained approval for a scheme of four-storey, timber-framed maisonettes and bungalows. (See picture on page 2.) This project used 192,000 square feet of Douglas fir plywood—equivalent in area to about four football fields—and some 296,000 board feet of structural lumber, plus about 28,000 board feet of exterior timber cladding. TRADA is confident that this is only the first of several such developments throughout Britain and studies are now under way on the design of structures of up to ten stories built primarily by the timber frame method.

Another development in housing that could help sales of Canadian lumber and plywood is the Government's home-improvement scheme, which is intended to upgrade and modernize some of the estimated three to four million homes that need it. The fact that the number of dwellings so improved in 1970 totalled about 141,000 compared with 118,000 in 1969 illustrates the extent and importance of the scheme. In addition, recent figures show that the volume of deposits held by British building societies for their members rose by over 60 per cent and that in 1970 mortgage loans set a record. They financed the purchase of 504,000 houses, of which only 133,000 were new.

In anticipation of the trend towards greater activity in the private housing sector, the Timber Section of the Canadian High Commission in London has been active in promoting self-supporting group visits of builders, architects, and reporters from the national press and trade journals to the Dumez-Campeau timber frame housing project at Igny, near Paris, in which the Department has played an active role. Three such tours to the building site and factory have been carried out so far, with the co-operation of our Paris office. This has won a number of British builders over to timber frame techniques and resulted in a good deal of publicity in various publications.

TABLE 5

USE OF DOUGLAS FIR PLYWOOD IN BRITAIN

	Per cent
Concrete formwork	35
Residential housing components	20
Non-residential building components	15
Agricultural uses	15
Export packaging and other industrial uses	15
	100

Outlook for the Future—To an important extent, the future of Canada's forest products trade with Britain will hinge on the outcome of the latter's current negotiations with the European Economic Community. Canadian shippers could conceivably be faced not only with the loss of the Commonwealth preference under which practically all our forest products enter duty-free, but also with the possibility that some of our competitors will have relatively improved access, in the form of lower tariffs, for their plywood, newsprint, pulp and paper, surfaced lumber, and various other wood products going to the British market.

Even without the factor of possible British entry into the EEC, competition for sales of various wood products is expected to remain keen. In addition to our traditional Scandinavian competitors, Japan, Korea, Taiwan, Malaysia, Singapore and Israel all will vie for a share of the plywood market. Particleboard has made strong inroads in such fields as furniture and interior construction where plywood was formerly used and the further expected rise in consumption of this product calls for close attention, especially in view of the large production capacity in the EEC and EFTA countries. Plastics and metals have also taken over part of the traditional wood products market. Aluminum and plastics have eroded the exterior cladding market, plastic shopping bags are appearing everywhere, and plastic shrink-wrap packages are replacing paperboard. Thus there is no room for complacency and continued action in the form of market and industrial development programs is essential if Canada is to maintain its position in the British forest products market.

Engineering Opportunities in the Maghreb

The four Maghreb countries—Algeria, Libya, Morocco and Tunisia—all have plans for developing agriculture and industry, and for improving transportation and communications. These plans open up opportunities for Canadian consultants; some of them are outlined in the following pages.

Algeria

DOUGLAS LINDORES, Assistant Commercial Secretary, Paris

Algeria is a country in transition. Although most of its people still live on and from the land, the development and exploitation of the substantial oil and natural gas reserves in the Sahara is a dynamic new factor. In fact, it is rapidly transforming the economy from that of a colonial state to that of a modern industrial country. Government expenditures on economic development are resulting in rapidly rising imports of basic raw materials, high-technology equipment and machinery, and consulting services in almost all fields.

The key document for economic development over the next four years is the Government's 1970-1973 Four Year Plan. By means of planned investment over that period of 27.7 billion dinars ($5.2 billion), the Algerian Government is striving to attain and maintain a 9 per cent annual growth rate. Its planners have decided that the most efficient route to economic development is heavy investment in the basic manufacturing industries. As a result, the industrial sector of the economy will receive 45 per cent of total investment scheduled for the Four Year Plan, agriculture 15 per cent, infrastructure 17 per cent, education and other social requirements 23 per cent.

Oil and natural gas remain the backbone of the economy and it is on the success of these two that the development plan will stand or fall. It is now believed that the revenues from the forecast exports of gas and oil for the

Natural gas has to be liquefied before it can be exported and earn the foreign exchange that Algeria needs. At the CAMEL liquefaction plant in Arzew, a worker adjusts some controls. The gas will go by special tanker to England and France.

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period of the Four Year Plan will be insufficient to support the Government's investment program, unless Algeria succeeds in increasing sharply the oil reference price or there is a significant rise in foreign aid.

A major new market for Algerian liquefied gas could open up as the result of an agreement recently signed with El Paso Gas for the export of large quantities to the east coast of the United States. This agreement, which is still awaiting United States Government approval, would provide some 12 per cent of the natural gas consumed on the east coast of the United States by projected shipments of 15 billion cubic meters per year over the next 25 years. It would lead to investment in Algeria of more than $1 billion.

There can be little doubt that Algeria holds great promise as a larger market for Canadian exports. Algerian officials believe that Canada is in a unique position to meet many of its needs. Canadians are able to work in the French language and to provide the most up-to-date North American technology.

Our ability to provide modern technology is particularly important, for in their efforts to advance development, Algeria's planners have decided that production efficiency should take second place to the development of a technological base. Thus, although unemployment is one of the country's most serious problems, the Algerians almost always opt for automation and capital-intensive procedures in establishing new industries, rather than relying on labor-intensive techniques. Sophisticated processes developed by Canadian industry for use in the high-labor-cost markets of North America can operate effectively in what, on the surface, might appear to be a relatively unsophisticated market.

The desire to develop modern technology in the country means that French-speaking Canadian consulting and engineering firms in particular should be in a strong position to compete in Algeria. Engineering services should be considered as one of the best potential areas for promotion— a conclusion reinforced by the current Algerian lack of expertise in many areas and the desire to get development schemes under way quickly through turnkey projects.

Several Canadian consulting firms are already operating in Algeria, both in projects financed by the Canadian International Development Agency and under strictly commercial contracts. It is estimated that over 500 Canadians are now in Algeria in various technical capacities.

On the commercial side, the Montreal firm of Surveyer, Nenniger and Chenevert is currently involved in the planning and construction of a cement plant. Part of the 1970-1973 Four Year Plan, the plant is located close to Algiers and will produce one million tons of cement a year, using the latest computer-controlled processes.

ATCO Industries Ltd. of Calgary has used its advanced prefabricated building techniques to play a major role in the Algerian Government's housing program. Although it entered the market originally through sales of mobile homes for oil crews in the Sahara, the company has increased its involvement by working hand in hand with the Algerian Government to develop an effective approach to housing problems. This has included studies to determine the viability of a domestic prefab industry and exploration of the means by which ATCO could assist the development of such an industry.

Another Calgary firm, Globe Universal Sciences Canada Ltd., is embarking on an extensive project for the Société Algerienne de Recherches et d'Etudes Geophysiques (ALREG). The work will involve geophysical exploration and research for hydrocarbons and other mineral resources in Algeria.

Several other Canadian firms are pursuing opportunities in such diverse fields as seismic testing, poultry and livestock, pulp and paper, fisheries, and petrochemical industries.

A number of firms have gained valuable contracts and Algerian experience through programs sponsored by CIDA. Shawinigan Engineering has undertaken a study of electrical transmission between Bechar and Oran. The forestry consultant firm of Gauthier, Poulin, Thériault Ltée is currently assisting Algerian authorities in developing a forest protection and reforestation policy. (See article on page 9.)

Where Opportunities Lie—Algerian officials have also indicated interest in securing Canadian aid for a wide range of projects, including meteorology, urban studies, civil aviation, cartography, technical institutes, transportation, telecommunications, and water and mineral resources.

A close look at the investment program as developed for the Four Year Plan shows the wide scope of the opportunities for consulting and engineering firms in Algeria at the moment. In industrial development, $840 million is allocated for investment in the oil and gas industries and a further $700 million is earmarked for metallurgical processing and mining. Projects in these two sectors range from geological surveys to pipeline construction and to a zinc ore washing plant.

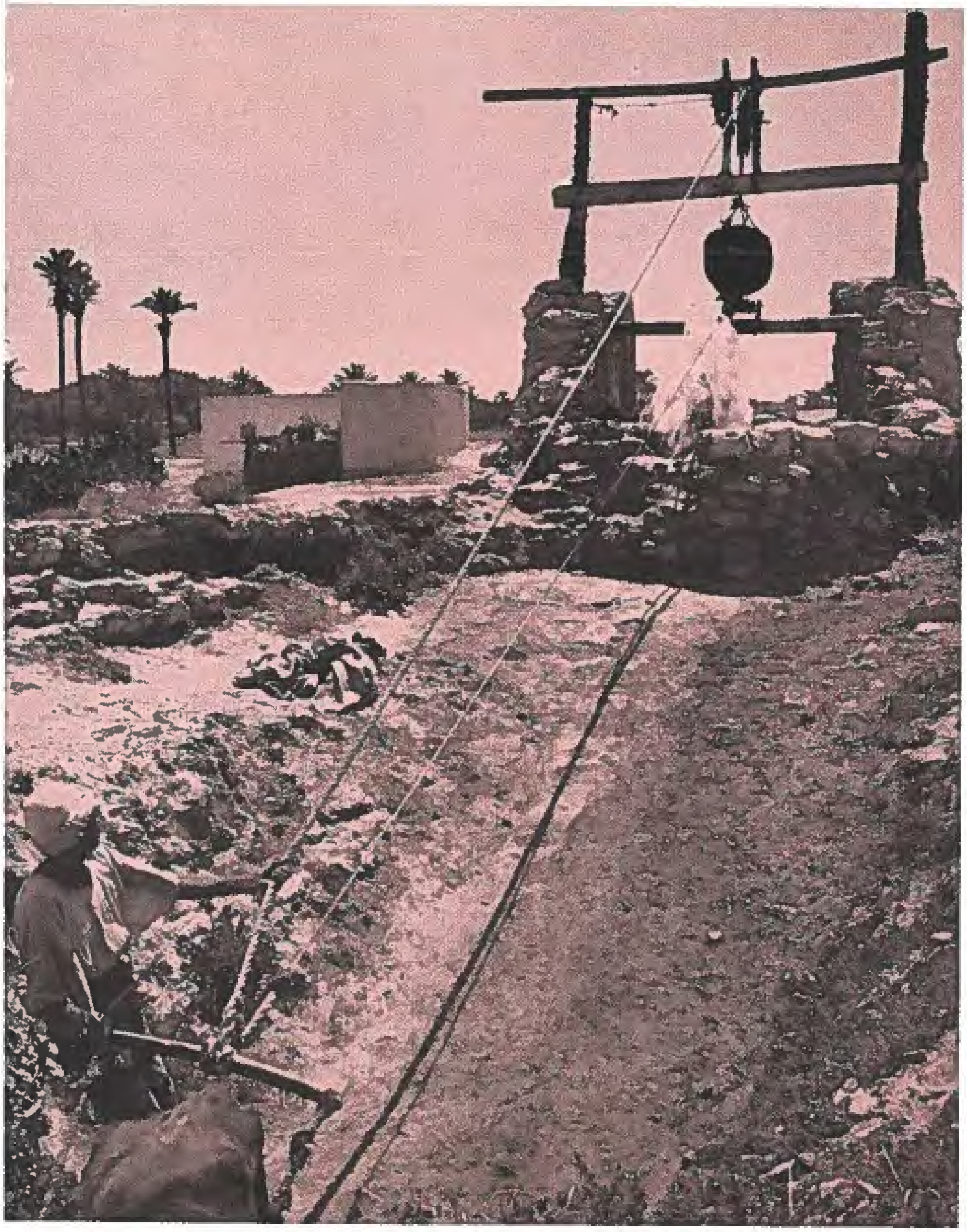
In the agricultural sector, water resource problems are particularly important and the $205 million allocated includes strictly commercial contracts, and bilateral and multilateral aid projects through such bodies as the United Nations Development Program. The forest industry could also provide some interesting possibilities in reforestation, conservation, logging and processing.

A number of studies are already being considered for virtually all sectors of the Algerian transportation system: civil aviation, roads and railways, ports, national shipping corporation, and urban areas such as the city of Algiers. Some updating and expansion of existing telecommunication facilities are planned, and several projects in electrical generation, transmission and rural electrification are on the books. A major expansion of the tourist industry calling for an investment of $100 million is also a part of the Four Year Plan.

The centralized planning of a socialist economy such as Algeria requires a special approach by engineers and consultants. Although the 1970-1973 Four Year Plan is a good guide to the type of projects being undertaken and therefore an indicator of what will happen beyond 1973, the plan is well into its second full year, and most of the projects are already committed to companies or foreign aid donors. To ensure future Canadian participation in Algerian development, interested companies and all Canadian government agencies involved must co-operate in the identification of projects of special interest to Canada, and approach Algerian officials with a view to having these included in the next Four Year Plan, or if already included, earmarked for Canadian involvement.

Canadian government commercial representation in Algeria is handled through the Commercial Division of the Canadian Embassy in Paris. Current planning calls for an extensive business visit to Algeria of an officer from Paris every three months. Recently, Canada announced that it would shortly open an Embassy in Algeria. This will simplify contact with the responsible Canadian government officials and improve the services available to Canadian businessmen. A Canadian Trade Commissioner attached to the Mission will be able to facilitate sales of both goods and services. Companies wishing to explore possibilities in Algeria should, until further notice, write to: Minister-Counsellor (Commercial), Canadian Embassy, 35 avenue Montaigne, Paris 8e, France.

Algeria Tries Reforestation



This picture illustrates a primitive method of irrigating dry land, and shows also how arid the Maghreb countries are—one reason for restoring the forest cover.

Every summer the city of Algiers, with a population of nearly one million, suffers from a shortage of water. This, of course, is not a unique situation for a city of this size and there are probably many reasons for it. One of them, however, is certainly Algeria's diminishing forest areas. At one time the country had extensive cedar forests, but this species has been exploited since classical times and there are few places left where it grows in any quantity. Until recently the Algerians had not attempted forest conservation and erosion has become a major problem.

At the present time, there are approximately 12,000 square miles of forest in a country covering about 900,000 square miles. Less than a sixth of this can be called densely wooded. The main species are Aleppo pine, cork oak and evergreen oak, which grow mostly in the higher, wetter and more isolated regions. The lower and dryer slopes are more eroded and support juniper and drought-resistant shrubs.

The Government, however, is fully aware of the situation and is taking steps to preserve the areas that are left and to reforest as much land as possible. Preservation of course means, among other things, keeping the forests from being burned over. And this is where the Quebec City consulting engineering firm of Gauthier, Poulin, Thériault Ltée. comes in.

Under a grant from the Canadian International Development Agency, the Quebec firm, which has had extensive experience in forestry projects in other parts of Africa (Kenya, Tanzania, Malawi, Cameroon) is carrying out a pilot project in the Annaba (formerly Bône) Department in the northeast part of the country. This project stems from the Chevrier Mission to Francophone Africa in 1968 that visited these countries and investigated their needs. Primarily it consists of setting up a forest fire protection organization in the district—an organization that will be a model for other districts in Algeria. The firm is also advising the Algerian Government on forest rehabilitation and management policies, and on the type of equipment needed for the proper functioning of the fire protection service. When representatives of the firm arrived in Algeria in November 1969 there was almost no proper fire-fighting equipment, but in November last year the country received a $600,000 interest-free loan from CIDA for the purchase of such equipment.

Algerians have had little experience in modern forest fire-fighting techniques, and training local personnel is an important part of the Quebec firm's contract. Three forestry engineers have been sent out from Quebec to do this training; two of them are stationed in Annaba and one in Algiers. The man in Algiers also advises the Government on drawing up regulations covering protection from forest fires.

The three Canadians are training about 20 Algerians, most of them junior engineers who were educated in forestry in France. The others are local technicians who have had some experience in forest management. Because of the lack of equipment, most of the training so far has necessarily been theoretical, but the emphasis will change as the equipment arrives from Canada. These men will eventually become the management side of the Algerian fire protection service. As a further stage of the project, CIDA is offering practical training in fire fighting for six Algerians. If the offer is accepted—it was extended last year also, but accepted too late in the season for it to be of any use—the six will spend the summer in Quebec forests. This offer comes under CIDA's scholarship program.

Georges Thériault, one of the principals of the firm, says that experience in African forestry projects is essential if one is to be successful in competing for other projects there. One of the best ways, possibly the only way, to get this experience is to team up on a project with a firm that has already worked in Africa. The ability to speak French is an obvious asset on any project in Francophone Africa, but Mr. Thériault says that more than this is needed to win contracts—things like ability, experience, and price.

In competing against European consultants, Mr. Thériault finds that Canada's affluent society has its drawbacks. Canadian wage scales are generally higher than those in Europe, which means that Canadian productivity also must be higher. Despite this, however, Canadian consultants continue to be successful in international competition, particularly when they offer expertise in fields where they have special competence, such as forestry.

Libya

CLAUDE RENAUD, Commercial Secretary, Rome

Development projects, especially those that involve new industries, sharpen the demand for trained technicians. This young man is learning how to turn metal in a chuck at a training center in Tripoli, set up by UNESCO and the ILO jointly.

Hard currency began to flow into Libya ten years ago when crude oil was first exported. In 1970, Libya's oil royalties reached $1,700 million. Sixty per cent of this is set aside for development projects, separate from the general operating budget, expenditures on defence and Arab support, and contingencies. Although the Libyan population is less than two million, this is a market with great potential, both for goods and services.

In spite of this, only two relatively small government contracts have been awarded to Canadian companies so far, for geophysical and forestry surveys. Considering the outstanding reputation of Canadian engineers in many fields, it may seem surprising that no more contracts have come our way. But there are difficulties confronting Canadian engineering companies and some of these are outlined below. Canadians could be most competitive, we believe, in projects with a high technological content, such as electronics and airport equipment.

Consultants—Since October 1970, new rules have applied to consultants. The main changes are:

1. Consultants may be used when a three-man inter-Ministerial committee determines that the services needed are not available within the Government.

2. Consultants may be used only for projects in the Development Plan.

3. All contracts are to be made directly with the consultant and not through a Libyan representative.

4. Each Ministry must prepare a register of firms from which the committee can draw. Invitations to compete will be issued to at least three and not more than five firms and final selection made on the basis of competence, and not through tenders. (For more sophisticated projects, international calls for tender are issued.)

Consulting firms should register with relevant Ministries as soon as possible, providing documents on personnel qualifications, copies of notarized articles of incorporation, and a statement on membership in professional societies and past history and achievements.

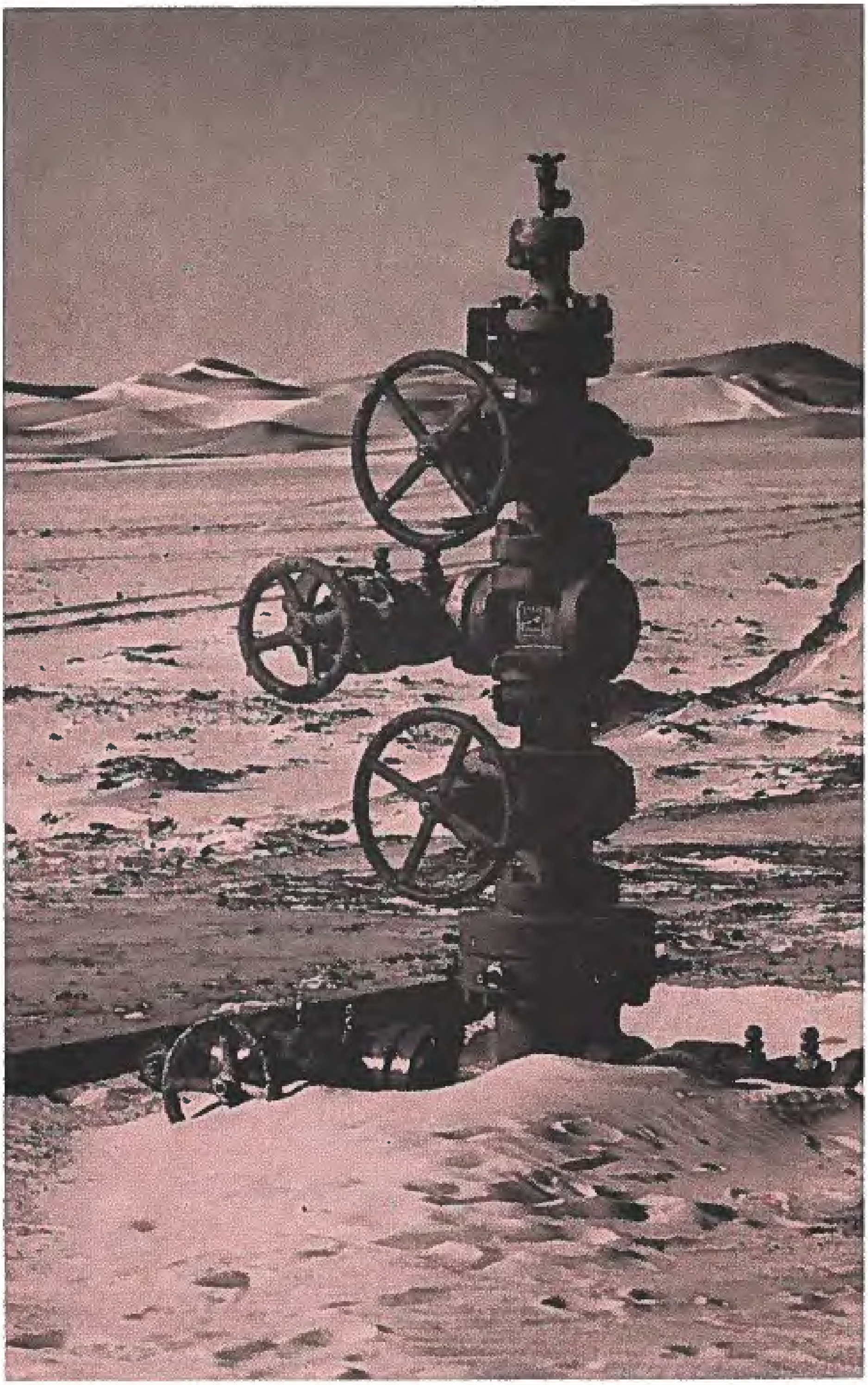
Since September 1969, Libya has been led by a group of young army officers, politicians, and bureaucrats. Now is the time for experienced Canadian firms to get to know the officials in their fields of interest, in order to identify the projects for which they might compete and to make a specific submission. Knowing which official is responsible for a particular development is often complicated by the frequent changes of Ministers and senior civil servants. The Commercial Division of the Canadian Embassy in Rome tries to maintain an up-to-date list and it is available to Canadian companies on request.

A useful ally is one of the resident experts under the United Nations Development Program. These experts work in Libya under contract for one to three years in such fields as economic planning, public administration, health, manpower, and statistics. In October 1970, there were 95 UN experts in Libya. It is possible to get in touch with them through UNDP headquarters in Tripoli, or through a personal visit to the country.

Even though contracts are sometimes negotiated directly with a foreign firm, Canadian companies will find that a local representative is almost indispensable. First, he can act as an interpreter for his principal, and ensure continuity of contact and service after the latter departs. One of his chief functions is to receive and send to the company advance notice of calls for tender, because by the time these are published—always in Arabic first and sometimes only in that language—translated, and sent to Canada, it is often too late to take any action on them. Most foreign companies, in fact, end by asking for an extension of the deadline. The representative can also secure a book of specifications, which can only be bought in Libya; these specifications are not based on North American standards.

Libyan companies must be involved as much as possible. It is the policy to favor employment of Libyans whenever possible, and even if you are selling equipment or "turnkey" projects, training of local personnel should be included in the package. Some equity participation by the Canadian company is also a plus. In the construction field, local contractors are excellent contacts because of their experience in dealing with government officials.

The Government is aware of the acute shortage of qualified labor, accentuated by the departure of most non-Arab



A "Christmas tree" out in the Libyan desert marks an oil well that is ready for production. Sixty per cent of the country's oil royalties—some $1,700 million in 1970—go toward financing development projects. These cover agriculture, the setting-up of new industries, communications, transportation, and education. For realizing nearly all of these, foreign expertise and equipment are needed.

foreigners in the last year. It therefore intends to put more pressure on foreign companies in Libya to hire and train Libyan personnel. It is also encouraging more joint ventures with foreign companies which could provide training. Administratively, it is often easier to import needed supplies when one has a Libyan associate.

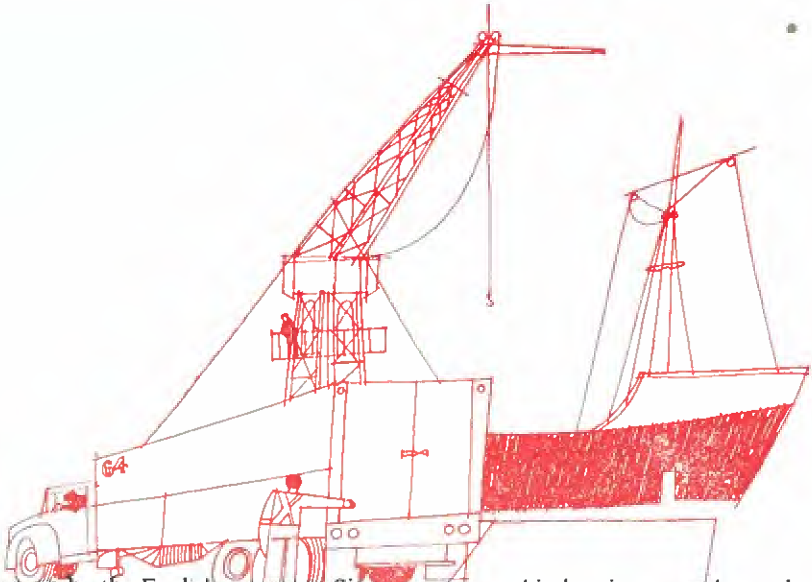
Development Plan—The key to future Libyan projects of international interest is the yearly Development Plan. At the time of writing, it has not yet been published for the current year but there are indications about some of the priorities. The emphasis will be production rather than infrastructure. Libya imports three times more than it produces, and the proposed remedy is to provide more money to develop agriculture and industry in order to cut down imports and build a self-sustaining, Libyan-owned and -operated economy.

Agriculture has top priority, with a development budget of $150 million in this fiscal year, almost double the allocation of the previous year. Projects range from the construction of dams on the wadis in the desert to financial assistance to farmers, and from the expansion of experimental farms to resettlement schemes. All these projects will be carried on by Libyans but foreign expertise and equipment will be required, especially in the fields of irrigation, dry farming, and cattle breeding and raising. For example, there is talk of Agroplan Association Ltd. creating an integrated complex for rural development.

In other areas, several projects have been agreed upon.

1. Harbor Improvement—The Ports and Lights Corporation will further improve and expand the harbors, principally those of Tripoli and Benghazi. This includes the erection of grain silos and new offloading facilities, and deepening the harbors. The development budget for ports and shipping is $40 million.

2. Airports—The Civil Aviation Branch of the Ministry of Communication issued in January an international call for tenders for the construction of a new airport in Tripoli. There has been no mention of the airport in Benghazi, for which similar plans have been



drawn up by the English company, Sir Alexander Gibb and Partners. These plans call for the construction of a new airport terminal, runways and large parking areas. Interested Canadian companies should contact the Commercial Division of the Canadian Embassy in Rome or the Libyan Government official most concerned, Syd. Faisal UR QUAB, Director General of the Ports and Lights Corporation. Tripoli, Libya.

3. Microwave Network—Tenders have already been received for a microwave network along the coast from Tunisia to the United Arab Republic and for another section from the coast to the south at Sabbah. Cost of these two projects is approximately $30 million.

4. Highways—Libya is also building and paving more roads than any other African or Middle East country, and has budgeted $50 million for this sector.

5. Education—A total of $34 million has been allocated to education, and 2,300 classrooms and boarding accommodation for 5,700 students will be built in the present fiscal year. However, the emphasis is on staffing and equipping the many new schools already built. Technical training is getting more attention, and new schools for this will be needed. Canadian expertise in this area should help.

6. Industrialization—The Ministry of Industry has a development budget of $60 million, of which $18 million is for the establishment of industries. Particularly favored are those that take advantage of Libya's petroleum resources and industries to produce substitutes for imported goods. These projects are carried out as much as possible as joint ventures between foreign companies and the Libyan Government. Some examples of these joint ventures are:

A joint venture of LINOCO (Libyan National Oil Company) and the American company Ashland for carbon black, methanol and ammonia plants.

A brick plant with a capacity of 10 million bricks per day by the British company Sutcliffe Speakman.

A sugar refinery by the British company Tate & Lyle Enterprises.

A LINOCO project of building a plant for the production of ammonia in Benghazi.

A tire plant with an annual capacity of 200,000 to 300,000 tires.

The Organization for Industrialization has recently awarded several contracts for turnkey plants such as a fish canning plant at Ganzour, a shoe factory, and two dairy plants, and is planning several others, such as the enlargement of the Homs cement plant to produce 1,000 tons of cement daily.

To help Canadian businessmen further, we in the Commercial Section of the Embassy at Rome have prepared a market booklet on Libya containing some basic facts and useful hints. It is available on request from the Minister-Counsellor (Commercial), Canadian Embassy, via G. B. DeRossi 27. 00161 Rome, Italy.

Morocco

G. M. WANSBROUGH, Assistant Commercial Secretary, Madrid

Morocco has well-defined priorities for development. This French-speaking Arab country has a population of 15.4 million, with a per capita income of only $150 per year. It has, however, the potential for development and there are opportunities for Canadian consulting engineers and equipment suppliers to participate in this development.

The Moroccan Five Year Plan (1968-1972) emphasizes particularly four sectors: agriculture, education, tourism, and mining, in that order of priority.

Agriculture—Agriculture supports almost 80 per cent of the population, but much of the arable land is marginal at best and crop failures are a problem. The Moroccan Government channels over half of its capital expenditures into agriculture. In addition, agricultural projects are being financed by a number of international organizations and foreign countries, including Canada.

Canada is currently active in two agricultural aid projects—the Derro project and the national cadastral survey.

The Derro project is an extensive rural development program in the western Rif Mountains. Canada and Quebec are co-operating to provide experts to carry out a five-year study and to supply a $500,000 loan for purchases

These are ore cars at the port of Casablanca in Morocco, filled with phosphate mined in the country and waiting to be loaded on a freighter. Minerals accounted for 31 per cent of Moroccan exports last year and phosphate was well in the lead. It may become even more important as other mineral deposits are depleted. Canadians are helping today with the task of prospecting for new sources of mineral wealth.

of technical equipment in Canada. The UNDP, Germany, France and Belgium have also made sizable financial and technical contributions to this project.

Two Canadian companies have joined forces to carry out an extensive survey of the ownership and use of 630,000 hectares of land, under a CIDA grant of $4,385,000. (See the article on page 16.)

At the moment, the United Nations is contributing to two other major agricultural development schemes—the Souss Basin and the Sibon River projects.

The United States, France, Germany and Belgium earmark much of their foreign aid to Morocco for the agricultural sector. In addition, Morocco has received agricultural development loans of $24 million from the Kuwait Development Bank and $16 million from Iran.

Education—Here the Moroccan Government's primary objective is to develop a supply of technically skilled people in the priority areas. The plan calls for emphasis on quality rather than quantity, with the result that curricula are being improved and programs set up for professional retraining and upgrading of skills.

A large number of countries, the UNDP, and the World Bank are involved in providing aid to finance teachers and administrators and provide scholarships, plus financing for school construction. Canada maintains a continuing teacher and scholarship aid program.

From time to time international tenders are called for the construction of schools and the supply of educational equipment.

Tourism—The tourist industry is Morocco's fastest growing economic sector. The number of visitors doubled between 1963 and 1969, when they reached 716,000, and yielded over U.S.$100 million in foreign exchange earnings. There are currently 29,000 hotel beds throughout Morocco, and the Government plans to make another 20,000 available before the end of the current five-year plan in 1972. In addition to hotel construction, other necessary tourist infrastructure—airport facilities, roads, and utilities—are planned.

An important program in the tourist sector is a World Bank loan of $10 million to the Credit Immobilier et Hotelier of Morocco, "to finance the construction, expansion and modernization of tourist hotels". Canadian suppliers of all types of hotel materials and equipment have an opportunity to make sales here. The rapid expansion of hotel facilities is also creating opportunities for hotel management firms.

Because of the profitable return on investment in tourist facilities, the Moroccan Government expects that much of the investment will come from the private sector.

Minerals—Minerals accounted for more than 31 per cent of Moroccan exports last year, and World Bank projections are for a growth rate of 6 per cent for mineral exports in the years to 1976. However, export growth depends almost entirely on phosphates. Exports of other minerals may decline as deposits are exhausted. Faced with the prospect of mine closures and the resulting unemployment, the Moroccan Government and international organizations are actively trying to improve existing mining operations and find new and economically promising sites.

Canada's contribution in the mining sector has been to provide experts in the fields of mineral exploration and ore treatment. Other countries, including France, Germany and the Soviet Union, are carrying out geological surveys or providing technical assistance.

A Canadian company (Wright Engineers Limited, Vancouver) has designed and is currently supervising the construction of a pelletizing plant for a low-grade iron ore mining operation administered by La Société des Exploitation des Mines du Rif. (See page 15.)

The UNDP is also involved in mineral exploration and has recently announced a mineral survey (DP/SF/R.11/Add. 70) of some 17,500 square kilometers in the Anti-Atlas Mountains. The UNDP Governing Council has earmarked $1,081,500 for the project and the Moroccan Government will contribute the equivalent of $1,241,000.

How can Canadian engineers and consultants participate in Moroccan projects?

First, they should establish good channels of communication and register with the executing agency (see *Foreign Trade*, February 13, 1971, p. 11) for each of the UNDP projects in which they have a capability.

Second, advise the line branch in the Department of Industry, Trade and Commerce, Ottawa, that is responsible for your company's field of expertise of your capabilities and your geographical areas of interest.

Third, make your company known to the Permanent Mission of Canada to the United Nations. The Mission sends details of UNDP projects to Canadian companies with the known capabilities. The United Nations also publishes a "project descriptions" bulletin, available directly at a cost of $65.00 a year.

If you want to participate in Moroccan Government projects, including those financed through the World Bank, or in private projects in Morocco, you should first contact the Commercial Division of the Canadian Embassy in Madrid, in whose territory Morocco lies. We can then give you as much assistance as possible.

It is imperative that your firm establish a working relationship with a Moroccan counterpart. The Moroccan partner can provide the local knowledge and contacts that are necessary to a successful bid. Tendering documents for Moroccan government or private contracts are available only to residents of the country, and have very limited circulation outside. Submission deadlines usually leave little lead-time and require fast footwork—two telling arguments in favor of a local partner. It is possible to bid on UN projects without a local agent, though we feel personally that the agent's local knowledge is necessary even under these circumstances.

Your competition? It's tough! Canadians must compete with European companies, particularly French firms, many of whom have been operating in Morocco for years and are well entrenched. Firms with a capability in French may find that they have a competitive advantage.

Morocco Gets Pelletizing Plant

"How do we get new work? We go out and dig it up ourselves," says Len Wright, vice-president of Wright Engineers Limited, a well-known Vancouver consulting engineering firm. The verb "dig" is well chosen because the firm has acquired special expertise and an international reputation in the field of metallurgical engineering and mining plant design. Originally the company worked largely in Canada but of recent years it has also put its services at the disposal of overseas clients in many countries, including a number in Francophone Africa.

One example is Morocco. There Wright Engineers is in the midst of supervising the construction of an iron ore plant to its design. Near Nador in northern Morocco, in a one-time Spanish possession that only recently has become part of the Kingdom of Morocco, the Mines du Rif had been operated for many years by a Spanish company. Today they are run by La Société des Exploitation des Mines du Rif, responsible to the Ministry of Mines. Nearby is a sintering plant but the mine had been losing its customers because modern processors prefer to use pelletized iron. Current contracts run out in September 1971.

It is in this area that Vancouver engineers are supervising the building of an iron ore pelletizing plant that they also designed. In the foreground is the coarse ore tunnel and in the middle of the picture one sees the pellet storage area.

The question confronting the mine operators—and ultimately the Moroccan Government—was whether it would be feasible and economic to put up a new pelletizing plant near the mine site. The answers had to come from experts. Wright Engineers had already done for a United States firm a study and later the design of a lead-zinc processing plant near Meknes, also in Morocco. In addition, it had carried out a mineral study in nearby Mauritania. On the basis of its local experience, therefore, the Government of Morocco asked the Vancouver engineers in 1968 to undertake studies for a proposed pelletizing plant.

These studies took about a year and were largely carried out by two or three engineers, who did the site investigations with support from staff consultants expert in specific fields. The engineers investigated the economic as well as the technical side of the operation, estimated the cost of the needed equipment and of putting the plant into operation, and worked out flow sheets. How the product would be marketed was not their problem. "The Moroccans told us where they thought they could sell the product," says Mr. Hughes, the project manager for Wright Engineers, "and we told them how much it would cost to produce it in pellet form and what world market prices might be."

This feasibility study was completed and presented to the Moroccan Government in February 1969. The Moroccans then analyzed and discussed it and by August were ready to give the go-ahead signal. At that time the Government and Wright Engineers signed a "protocol of intent" to proceed with the design and construction of the pelletizing plant. Some outside financing was forthcoming: a government-to-government loan from France and some assistance from the Export-Import Bank of the United States.

Actual work on the project—the first government-sponsored assignment that Wright Engineers had ever undertaken—began at the Vancouver office in the fall of 1969. In February 1970 a five-man field team went out to the site in Morocco and will remain there until the plant is in operation. Its services will be supplemented from Canada as needed. The Canadians are being assisted by accounting, recording and survey teams made up of Moroccan and Spanish personnel.

Morocco, say the Wright staff members who have been working there, has a good supply of well-trained engineers and several of them are working with the project teams. Others are representing the client. The real shortage in Morocco, says the project manager, is of skilled tradesmen, such as machine fitters and electricians. Labor employed at the site presents no problems: as workers they are, says Mr. Hughes, indistinguishable from Canadians.

By this time, the plant is actually going up and orders have been placed for much of the equipment. This involved a certain number of procedural problems as more than one party is concerned in the selection of sources, because of the financing provided. Sometimes it means that the specifications have to be modified. A good deal of the equipment will be coming from France.

Part of Wright Engineers' obligations under the contract is to see that the Moroccans who will eventually operate the plant are sent where they can obtain the needed training. A number of them will be placed in similar plants, largely in North America, to receive training. (The only plant of the type in Europe is in Sweden.)

The firm's project manager, Mr. Hughes, flies over to Morocco every three to four months to check on progress — more often if the situation warrants it. In fact, the firm reckons that since the project started, 20 to 25 man-trips have been made from Vancouver to Morocco. This, says Mr. Hughes, is "an unusual rate because the project is developing along unusual lines". But no serious difficulties have arisen; the Moroccans have accepted the field decisions made by the engineers "almost without question". Wright men working in Morocco have, on their part, taken care to comply exactly with government regulations and to follow the proper paperwork procedures.

This Vancouver firm believes that, in general, foreign assignments add to the engineer's experience by teaching him how to work under unusual conditions. One of the project manager's problems, made more difficult by distance, is co-ordinating the input of head office and the input of those in the field. The gears must mesh for smooth operation.

By 1972 the pelletizing plant will be completed and in operation. Are other projects in Francophone Africa in the offing? Wright Engineers are not saying, but they keep their eyes open and give the impression that more business will be forthcoming.

Who Owns It?

The Kingdom of Morocco covers about 172,000 square miles, stretching from the Atlantic and Mediterranean coasts back to the Atlas Mountains and the Algerian border. The 1967 population figure was 14.14 million. Today Morocco is engaged in the vital task of conducting a nationwide territorial survey calling for a complete inventory of all landed properties and implementing a land-registration system; the current one is a five-year plan covering key regions. And in this cadastral project, Morocco's National Cadastral Plan, Canadian professional land surveyors and geometers are playing a part.

The teams of land surveyors that are interviewing every person who owns land in five different regions of Morocco travel in these white station wagons that hold both staff and equipment. Altogether they will be covering some 2,500 square miles in 26 communes; to complete work in one commune alone is expected to take seven months.

Months ago the Government of Morocco, with this plan in mind, sought Canadian aid in assessing the possibility of carrying out this survey, in advising on the best techniques to be used, and in estimating the cost. Canada sent out a mission composed of people drawn from the Government, the universities, and the land surveying profession. To represent the latter, it chose a Quebec firm with broad experience in geodesy and land surveying work, Gendron and Lefebvre, of Laval. The mission carried out its job and made its report, and on the basis of this, the Moroccans decided to go ahead with a nationwide survey after experimenting in a pilot region. Canada thereupon offered a $4.3 million long-term loan, on condition that Canadian land surveyors take on the responsibility for the project.

When the project was blueprinted, Gendron and Lefebvre was given the job of surveying five different regions (2,500 square miles) in the provinces of Agadir, Marrakech, Beni-Mellal, and Kenitra. The area includes 26 communes; in Morocco a commune is an administrative unit under the direction of a Caid and his secretary, the Moccadem. Although it has never been proved in practice, the estimate is that it will take seven months to survey one commune, mainly because land ownership is fragmented, with one man often owning small and widely separated parcels, perhaps of one acre or less. Up to now, exact land registration has been difficult to determine and ownership is therefore not easy to prove.

The first task of the Gendron and Lefebvre group was to obtain aerial photographs of two of the five regions. At the same time, ground brigades arrived to set up the ground control and to do geodetic investigations. Each consisted of three land surveyors, three technicians, and one calculator. Their work was completed by the end of October and, using the aerial photographs and the data gathered on the ground, the work of compiling orthophotographic maps went forward at the Laval head office. These are, in simple terms, aerial photographs of the terrain but done to scale, using a special technique, and showing the boundary markings. Only two of the five regions were photographed from the air at this time because it will take four years to cover the allotted territory and the photography cannot be done too far in advance.

Phase two of the survey began on January 1, 1971, when a ground team moved into one of the 26 communes. The team consists of six Moroccans, supervised and directed by a Gendron and Lefebvre land surveyor. Each land surveyor detailed for

Here an interview with a Moroccan proprietor, accompanied by his son (or grandson?) gets under way. He is answering the questions put by one of the surveying teams—questions that cover the number of persons in the farmer's family, the crops that he raises, the type of soil, and so on. Each of the teams consists of six Moroccans, most of whom have had some experience in surveying, with supervision and direction given by one of the Gendron & Lefebvre engineers (seen at the right of the picture). Each supervisor has charge of the work in two of the communes. This is a painstaking task and cannot be hurried, but when it is finished by the end of 1974 there will be a complete record of land ownership and use in Morocco.

this assignment is responsible for the planning, supervision and control of the work in two communes. The project manager operates from the firm's headquarters in Rabat. The Moroccans chosen preferably have had two years' experience in land surveying.

One of the main jobs of the team is to interview every landholder. In villages the newcomer who asks questions is often regarded with suspicion. To prevent any hostility, three months before a team comes into an area, posters in French and Arabic announcing their arrival and the purpose of the survey are put up. In the text, the Minister of the Interior makes clear that this land survey comes under a law, "dahir", and that everyone must co-operate. The team then sets to work to discover who owns each piece of land, his marital status and the number of his children, what use he makes of his property, the type of soil, the crops grown, and its potential. Those supervising the work must have some knowledge of the Arab mentality and of the religion of Islam, which affects the laws of inheritance. The painstaking coverage is one of the reasons why the assignment covering the 26 communes will not be completed until March 1974.

Eventually the land surveyors working on this project, in co-operation with the staff at the Laval head office, will compile cadastral maps. On these, each parcel of land will be numbered and the boundaries shown; the accompanying "cadastral matrix" will give full information about the owner and the ways in which his land is being used.

Gendron and Lefebvre is also creating for the Government of Morocco a data bank of cadastral information. This is being set up in Canada, using computers, and eventually will be transferred to Morocco. Built into the system will be procedures for amending the information and for adding new data on land ownership. The Moroccans will, as a start, make use of the computer in Casablanca maintained by IBM (France), but eventually may consider installing a computer of their own.

The end result of the survey and of four years' work by the Canadians and other teams in other regions? It should be more efficient use of the arable land, including irrigation projects to bring additional acres into production, direction to landowners about making better use of their particular land parcels, and consolidation of scattered holdings. Equally important, it will be reasonably simple to keep information current, as development proceeds and land use changes.

Tunisia

HOWARD E. CAMPBELL
Commercial Counsellor, Berne

What kind of a life will this child have when she grows up and lives in the city of Tunis, pictured below? She is getting a good start at a pediatric institute where Canadian doctors and nurses serve. Ambitious development plans, many of them financed by foreign aid, should mean a better education for her and a more secure, longer, and happier life as economic development moves ahead.

Tunisia is basically an agricultural country; approximately 65 per cent of its 5 million people depend on the land for their livelihood. Their fellow countrymen get their paychecks from the mining industry (mainly phosphate), oil, and consumer industries—in that order of importance. But historically the country has been under-developed and even today its population subsists on an average income of less than $229 per year.

Over a period of years, however, the World Bank, the United Nations, and developed countries have been allocating aid funds to Tunisia to give thrust to its economy. These funds are the financial backbone of most new developments. There are few other opportunities to market engineering services and equipment in Tunisia now, unless you are able to offer very favorable financing, because the purchase abroad of services and equipment for most projects is usually tied to the source of aid funds financing them.

More significant than the aid funds provided by such international agencies as the World Bank and the United Nations are those supplied to Tunisia by countries such as France, the United States, Canada, Britain, Germany, Italy, Sweden, the Soviet Union, and Yugoslavia. Of the total aid Tunisia received last year, more than three-fourths was bilateral, made available as outright grants or long-term loans.

The lion's share of aid funds is allocated for agricultural projects. Tourism comes next, because it brings in $50 million in foreign exchange annually. International and bilateral aid also goes to educational projects, meteorological development, water and sewerage programs, highway projects and the rehabilitation and modernization of the railroads.

How and where can Canadian engineering firms fit into Tunisian aid projects? Canadian firms registered with international agencies such as WHO, FAO, and UNESCO are automatically invited by these agencies to bid on projects programmed for Tunisia. Competition for such contracts is international and any proposals must be carefully prepared. On Tunisian projects financed by Canadian aid funds, Canadian engineering firms are in a favored position to tender. Firms registered with the Canadian Commercial Corporation, 70 Lyon Street, Ottawa 4, which is the procurement arm of CIDA, will automatically receive invitations to bid on projects that CIDA is financing in developing countries. On Tunisian projects financed by other countries, however, chances of Canadian engineering firms obtaining a share of the business are almost nil.

For 1971-72 Canada has allocated approximately $10.69* million in aid funds to Tunisia, of which $2.2 million has been earmarked for Canadian engineering services and equipment. Some of these funds are being used at the present time for the Tunis-Korba power transmission line. The engineering contract for this project has been awarded to TECSULT International Ltd. of Montreal.

For 1971, the World Bank and the United Nations have authorized a variety of projects that will require a wide range of engineering services and equipment that Canadian firms can supply. These are listed below.

Projects to be Financed by the World Bank and IDA

1. Repair of farm machinery; $8.7 million from World Bank, $3.3 million IDA.

2. Investigation of pelagic fish in Tunisian waters and best methods of catching them. Office National des Peches may request $727,000 credit from World Bank.

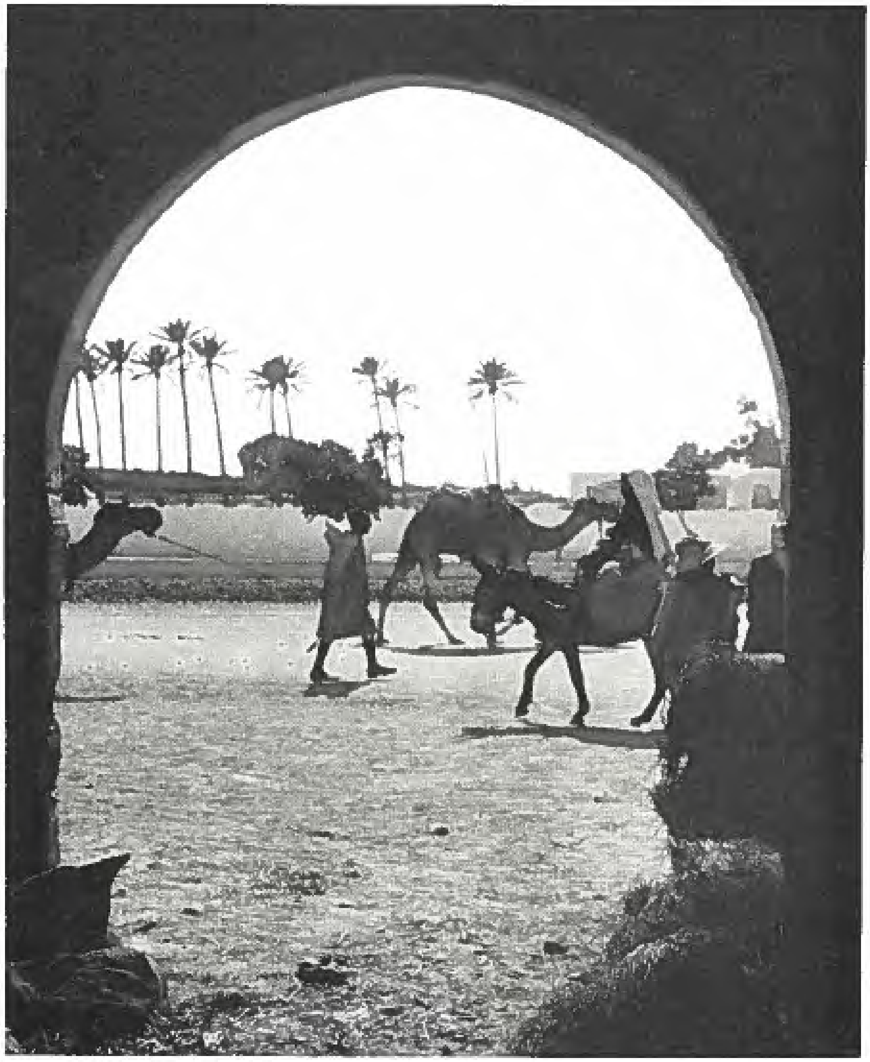
3. Development of educational facilities—$13 million credit from World Bank to Ministère de l'Education Nationale, Tunis.

4. Study of infrastructure for the tourist industry—IDA credit may be forthcoming.

5. Gas pipeline between El Borma and Rhannouch; World Bank $7.5 million credit. Kuwait Fund for Arab Development also providing $2.5 million. Invitations to bid on the piping have been issued. Société Tunisienne de l'Electricité et du Gaz (STEG), 38 rue de Besancon, Tunis, is organizing construction.

6. Road engineering and construction—$1 million credit being considered by the World Bank. Would be used to complete engineering and construction of high-priority roads. Contact: Sadek Bouraoui, Chief Engineer, Highway Department, Ministry of Public Works, Cité Jardins, Tunis.

7. Rehabilitation and modernization of the Tunisian Railways; World Bank loan of $8.5 million; IDA credit $8.5 million. Railways were included in a survey of transport sector done by Italian consultant, with financial aid from the UNDP. Project will lay



This picture of a rural area in Tunisia has a never-changing quality about it, with peasants going about their business on camels or donkeys and palm trees in the background. But things are changing as modern technology comes in and as the standard of living rises—even in the countryside, where the old ways are discarded much more slowly.

*Plus carryover of $2.16 million from 1970-71 foundation for future expansion; includes track renewal, acquisition of locomotives and rollingstock; equipment for maintenance and workshops, and consulting services. Scheduled for completion at end of 1972 for total cost of $29.2 million. Local costs financed by Government and Société Nationale des Chemins de Fer Tunisiens.

8. Review of existing studies of water resources in northern Tunisia and drawing up of master water plan for northern Tunisia; $10.5 million technical assistance grant from World Bank; $3.5 million from Swedish International Development Authority. Most of the engineering work expected to go to the European firm which helped to initiate the national water supply program in 1969. Société Nationale d'Exploitation et de Distribution des Eaux (SONEDE), 23 rue du Docteur Braquehaye, Tunis, was set up in 1968 to oversee the development of potable water supplies and is responsible for retaining engineering consultants to help execute the development program.

Tunisian Engineering Firms

Technical Consultants (Structural and Civil Engineers)

SO.TU.E.TEC., 114, rue de Yougoslavie, Tunis

S.O.G.E.T.H.A., 57, avenue de la Liberté, Tunis

Naccache, Robert, Avenue Docteur Conseil, Tunis

S.C.E.T., 122, rue de Yougoslavie, Tunis

Architectural, Engineering and Town Planning Consultants

Henderson Associates (D. R. Henderson, A.R.I.B.A., A.A. DIPL.) 5, rue du Cameroun, Tunis

Architects

Cacoub, Olivier, D.P.L.G., le Colisee, 46, avenue Habib Bourguiba, Tunis

Kyriacopoulous, Jason, D.P.L.G., 9, rue Kemal Ataturk, Tunis

Haddad Taieb, D.E.S.A., 55, rue Oum Kalthoum, Tunis

Krieff Aime Gaston, D.P.L.G., 14. rue Ali Bach Hamba, Tunis

Building Contractors (Engineering and Public Works)

Société Tunisienne des Grands Travaux de l'Est, Avenue Barthou Prolongée, Tunis

Société E.T.R.A.P.H.-S.A., 5, rue Ghandi, Tunis

Entreprise Ali Mheni, 12 Bis, rue de Russie, Tunis

Entreprise de Travaux Publics et Hydrauliques, Taieb

Hachicha, 1, rue de Flandre, Tunis

Entreprise S.O.C.E.A. (Eau et Assainissement), 88, avenue Mohamed V, Tunis

Entreprise Providente, 2, rue de Grèce, Bizerte

Projects to be Financed by UNDP/ Special Fund

1. Preservation of historic sites and monuments in the Tunis-Carthage regions; $1 million from the UNDP and rest from the Government of Tunisia. Purpose of the project is orderly planning for and preservation of Medina, the old city of Tunisia, and of the Carthage region. Executing agency is UNESCO. Funds are to be spent as follows: experts $593,000; training $100,000; equipment $185,000; miscellaneous $34,100.

2. Strengthening of the national meteorological service. UNDP to provide $1.1 million and the Tunisian Government the remainder. Total cost $4.4 million. Purpose is to expand the meteorological and seismological observation network, replace obsolete equipment, improve data processing and applied research, and provide advanced training for technical personnel. WMO in Geneva and UNESCO are executing this project. Funds will be spent as follows: experts and consultants $287,000; training $100,600; equipment $625,000; miscellaneous $17,100. Among the equipment needed is meteorological equipment, such as automatic climatological stations and spare parts; hydrometeorological equipment, including replacement of items destroyed by 1969 floods; radiotelephone and salinity-measurement equipment; equipment for one principal and three secondary seismological stations; data processing equipment, including a calculating unit; office, printing and copying equipment.

3. Further investigations of groundwater resources in northern Sahara and framing of policy for the exploitation of these resources. Governments of Tunisia and Algeria are collaborating on this $1.3 million project; UNDP is providing $616,500. UNESCO is the executing agency. Funds are to be spent as follows: experts (including consulting services in hydrology, hydrodynamics, geophysics, geochemistry, well techniques, documentation and models, services of a panel of high-level consultants) $370,000; equipment $58,500; subcontracts $81,900; miscellaneous $42,300.

4. Fishery survey and development project. UNDP/Special Fund supplying $841,600 out of a total of $1.9 million. FAO, Rome, is executing agency. Funds are being spent as follows: experts (project manager, consulting services, etc.) $554,400; training component (fellowships totalling three man-years) $17,400; equipment (remodelling of exploratory fishing vessels, electronic equipment, fishing gear) $150,000; miscellaneous $33,300.

5. A $360,000 survey of the Gafsa Basin phosphate industry. Of the total funds available, $233,400 is to be provided under the UNDP program; the United Nations itself will be the executing agency. Funds will be used as follows: experts (project manager, expert in ore beneficiation, hydrogeologist, consultants to advise on mining, beneficiation and marketing of phosphate, as well as on calamine and clay technology) $132,000; equipment (vehicles, drafting and topographic equipment) $26,000; subcontracts (rock mechanics tests, beneficiation tests and calcination tests) $37,000; miscellaneous $7,900.

6. Improvement of irrigation and drainage techniques, $3 million, with $1.1 million provided under the UNDP. FAO is the executing agency. Funds will be used as follows: experts (project manager; experts in land tenure and farm organization, sociology, extension and training, irrigation and drainage methods and agronomy, consultant services in soil analysis, agronomy, drainage and economics) $887,600; training component (six fellowships of one year each for further training of supervisory personnel) $34,800; equipment (transport equipment, equipment for gravity and sprinkler irrigation, agricultural equipment, tools and scientific instruments, office equipment, teaching materials and audio-visual aids, fertilizers and pesticides) $256,000; miscellaneous $41,300.

In December 1970, a joint company called Compagnie Financière et Touristique (COFITUR) issued an invitation to Canadian firms to participate in almost any manner in Tunisian tourist ventures. COFITUR, which is capitalized at $10 million, is backed by the International Finance Corporation, European and American banks and investment institutions, as well as Tunisian government agencies and private individuals. It should give momentum to the Tunisian drive for a major share of Mediterranian tourist business, already given some thrust by the new U.S.-backed $6 million airport.

Although dwarfed by aid funds, private investment does play a role in Tunisia. For example, senior officers of the Société Nationale de Cellulose, 6 avenue Habib Bourguiba, Tunis, are thinking of building a paper mill in northern Tunisia capable of producing the country's entire kraft paper requirements, and would be interested in entering into a joint venture with a Canadian company. The Government itself also invests in projects it considers important to the growth of the economy.

Canadian engineering firms might find that associating with an engineering firm in Tunisia would open up opportunities for participation in privately financed ventures, as well as those backed by the Tunisian Government. A partial list of such firms is attached. Interested Canadian engineers should write directly to the Tunisian firms best equipped to help them gain an entrée. All correspondence and trade literature must be in French, as few businessmen in Tunisia understand English.

Purebred Cattle Find Widespread Markets

These Holstein Friesians, sticking close for comfort on their arrival in a strange country, have just disembarked in Lisbon after a voyage from Canada. Portugal is one of the 29 countries to which Canadian purebred cattle were sold last year. The United States, once the only major market, accounted for 54 per cent of shipments in 1970 and "other countries" for 46 per cent. Of the 46,703 head, valued at $23,053,000, shipped to foreign buyers last year, 84 per cent were dairy cattle and the majority of these were the popular Holstein Friesians.

Selling to the Australian Defence Forces

Are you selling your products to the defence forces of foreign countries? Is Australia one of them? If it isn't, this article may encourage you to enter this market.

WILLIAM E. MAGEE
Assistant Commercial Secretary,
Canberra

Australia, like most countries, purchases equipment for its defence forces from both overseas and domestic sources. The amounts spent on these purchases over the past five years are shown in Table 1.

The greater portion of the money that Australia spends overseas on defence equipment goes to the United States and Britain. Although Canada has not been a major source of such equipment for Australia, Canadian companies have made significant sales. Twenty-eight de Havilland of Canada Caribous since 1965, Computing Devices of Canada navigation equipment for the RAAF Mirage fighter planes, variable depth sonar systems, and communications equipment from various companies were prominent among them.

The Australian Government realizes that its defence forces must be organized, equipped, and trained for the direct defence of Australia and for effective deployment in the region of which Australia is a part. This concept requires Australian forces to be versatile and capable of operating in a wide range of situations. This, in turn, means that they will need to be more self-contained, with a high degree of strategic and tactical mobility. Coupled with these objectives is the need for an offensive capability that would be an effective deterrent and for developing an infrastructure adequate to support the operations of Australian forces wherever they may be deployed, and aimed at increasing the effectiveness of Australian logistics and maintenance.

Russell Offices, divided by the Australian-American War Memorial, is the headquarters of the Departments of Defence, Army, Navy and Air. Defence purchases from North America, however, are made through the Australian Embassy in Washington. Australia plans to spend A$408 million on defence projects.

The major equipment and infrastructure projects announced over the last 12 months and shown in Table 2 are in keeping with this concept.

This A.$400 million program is merely the spearhead of a much bigger procurement effort that should give the Australian Forces substantial all-round capability by the end of this decade. Among the major projects being considered are the following:

The Navy—in addition to the $73 million program already announced for Navy support vessels, the preliminary design of new light destroyers is currently under way. The Australian Navy is also expected to determine shortly the future of naval fixed-wing flying. This could possibly lead to the selection of a new generation of VTOL-STOL aircraft.

The Army—A major procurement decision now pending for the Army is the selection of a modern computerized fire-control system. The Army is also faced with deciding on a new anti-aircraft system employing mobile missiles.

Air Force—The RAAF is expected to make a decision soon on a replace-

Since 1965 Australia has bought 28 Canadian de Havilland Caribou aircraft like the one shown here. Canadian goods come under Commonwealth preference but stand a better chance in Australia if they are already in use by United States forces.

ment for the Mirage III aircraft. The main contenders are probably the French Mirage I, the upcoming joint European MRCA, and the United States F-15.

The foregoing suggests that Canadian manufacturers can find opportunities in Australia to sell their equipment, particularly if they are currently selling to the United States. Through participation in the Canadian Forces DDH-280 destroyer program and support vessel program, Canadian companies are in an advantageous position to compete for business in the upcoming Australian Navy's ship programs. Canadian firms should also find business in the communications, avionics and aircraft components areas.

Companies wishing to increase their business in Australia are strongly urged to obtain a representative who can combine marketing ability with after-sales support facilities. To derive full benefit, the Canadian principal should support his representative to the fullest possible extent by updating product information, advising on new developments, and answering queries promptly.

Canadian companies should be aware of the effect on their sales activities of the Australian Government policy relating to the procurement of defence equipment. This policy is designed to maximize Australian participation in the production and supply of defence equipment for the Australian services and to encourage industrial development. The former Minister for Defence, the Honourable Malcolm Fraser, has stated: "In essence we will manufacture equipment locally for our forces wherever this is economically feasible. Where it is not practical to manufacture the complete equipment within Australia we will be examining co-production possibilities. Also, it is our intention to maintain ourselves, to the greatest extent possible, any equipment purchased whether it has come from local or overseas sources."

Table 1 clearly shows that much of the equipment required by the Australian forces will, for technical and economic reasons, continue to be obtained overseas. When overseas purchases are considered, the Australian Government examines carefully the

TABLE 1

AUSTRALIAN DEFENCE EQUIPMENT SPENDING 1965-1971

Purchases A.$ million	**Financial year July 1-June 30 '65-'66**	**'66-'67**	**'67-'68**	**'68-'69**	**'69-'70**	**'70-'71**
Overseas	130.5	191	279	297	204	186
Domestic	136.5	167	176	141	130	130
Total	**267.0**	**358**	**455**	**438**	**334**	**316**

possibilities of either purchases of Australian equipment of approximately equal technical sophistication by the overseas supplier to offset the Australian purchase, and/or incorporating some degree of local content into the product. Canadian companies would be well advised to keep these factors in mind because they are becoming essential aspects of selling defence equipment to Australia.

Australian defence purchasing overseas is done through purchasing officers in the appropriate Australian diplomatic missions. Procurements from North America are made through the Australian Embassy in Washington and from Britain and the European continent through the Australian High Commission in London. Part of the job of service attachés in each of these missions is taking part in considering purchases of supplies overseas. Australian service evaluation teams are sent overseas to study possible major procurements. Actual purchases are carried out by officials with a background in government purchasing attached to the relevant diplomatic mission. Canadian companies should ensure that their products are well known to the Australian service attachés in Washington, D.C.

The Department of Supply is responsible for purchasing within Australia goods and services needed by the Australian defence forces. To undertake this function, it maintains District Contract Boards in each of the State capitals. The Contract Boards issue tender documents to industry and, in conjunction with the appropriate military service, evaluate the bids received to determine to whom contracts will be awarded.

The Department of Supply is also the agency responsible for carrying out government policy of maximizing Australian participation. When major contracts are offered, the Department engages in negotiating offset orders or subcontracts whenever Australian industry is not considered capable of supplying the whole contract.

The application of national duties in tender evaluation will undoubtedly interest Canadian companies. Although Departments or agencies of the Australian Commonwealth Government do not pay import duties, these are applied to overseas equipment for comparison purposes. Equipment from Canada, with equipment from Britain, because of Commonwealth preferences usually has a comparative advantage over equipment from non-preferential sources, including the United States. This margin of preference as a rule is not less than 7½ per cent and in some instances it is significantly greater, depending upon the applicable rates of duty. To give an example, communications equipment manufactured in Canada is dutiable at 27½ per cent; similar United States equipment must pay a duty of 45 per cent.

Past experience has shown that Canadian equipment stands a reasonable chance of being sold to the Australian defence forces if most of the following conditions can be fulfilled:

1. Adoption of Canadian equipment by United States forces.

2. Canada is the sole North American source.

3. The company is able to provide some offset purchasing arrangement for orders placed in Canada.

4. The Canadian company can incorporate some degree of local content into equipment being offered to Australia.

5. The Canadian firm has active Australian representation.

If your firm wishes to start marketing its equipment to the Australian defence forces, we suggest you proceed in the following manner:

1. Discuss either personally or by letter your interest and intent with the Overseas Market Development Division, International Defence Programs Branch, Department of Industry, Trade and Commerce, Ottawa. This Division will be happy to provide you with information about the Australian marketplace and will assist you in developing a marketing strategy.

2. Provide all details about your products by sending, or preferably by taking with you personally, descriptive literature to the Australian Army, Air Force, Navy and Defence Supply Attachés, Australian Embassy, 1601

TABLE 2

MAJOR AUSTRALIAN EQUIPMENT PROJECTS

	A. $ million
Maritime Capability	
Two Oberon submarines	37.2
Long-range sonar for submarines	2.9
Modernized gun mounts for Guided missile destroyers	8.4
Light destroyers, preliminary design	0.9
Light destroyers, detailed design	5.0
Fast combat support ship	42.0
Oceanographic ship	16.7
Hydrographic ship	4.1
Manus Island facility improvements	1.1
Naval communication station, Darwin	3.8
Strategic Mobility	
Logistic cargo ship	10.0
Tactical Mobility	
72 six-ton tactical carriers (M548)	3.2
12 medium-lift helicopters (Boeing CH-47C)	37.7
42 utility helicopters	31.6
11 armed helicopters	13.2
84 light observation helicopters	24.0
Eight landing craft	7.1
Offensive Capability	
24 F4E Phantom aircraft—lease	30.0
Ten Skyhawk aircraft	20.0
Radio relay terminals (MRC-127)	5.5
Manpack transceiver radio sets (PRC-F-1)	2.1
Air Defence	
Six low-cover radars	6.0
Training	
Ten Maachi aircraft	7.6
Two support and training aircraft (HS 748)	8.0
Submarine command team trainer	3.2
Research and Development	
Project 'N' Stol aircraft prototype development	3.2
Turana jet-propelled target drone development	2.7
Infrastructure	
Learmonth Airfield development	12.5
Cockburn Sound causeway	9.0
Oakey Army Aviation center	8.0
Total	**408.5**

Massachusetts Avenue, Washington, D.C. 20036. As previously explained, these Australian representatives are responsible for keeping their headquarters in Australia informed about developments in Canada. At the same time, send descriptive literature to the Commercial Division, Office of the High Commissioner for Canada, Commonwealth Avenue, Canberra, A.C.T. 2600, Australia, and we will be pleased to discuss your product with local officials to determine the extent of interest. If we receive any encouragement we will be happy to follow up on your behalf.

3. If the Australian Services show interest in your products, the next step is to appoint a good representative so that this interest can be developed and brought to the point of making a sale. We can also assist you here by suggesting possible representatives.

4. Finally, you may wish to consider making a personal visit to Australia to ensure that all officials involved in selecting equipment are fully aware of the virtues of your products. During your visit, you will probably want to investigate potential Australian subcontractors and/or look for possible offset purchases. Again, we can assist by advising on companies to be visited and Australian products that might be of interest to you.

We invite you to give the Australian defence market a try. The competition is tough but Canadian products have some advantages and sales are possible. The officers of the International Defence Programs Branch, Ottawa, and the Commercial Division, Office of the High Commissioner for Canada, Canberra, will be happy to assist you in your efforts.

Foreign Tariffs and Trade Regulations

New Zealand

A statement of the New Zealand policy for the 1971-72 importing year was received April 8, 1971.

Basic licences in the 1971-72 Schedule will, in most cases, be issued at 107½ per cent of the 1970-71 level, with provision for a further increase in allocations under the token licence scheme.

The purpose of this scheme is to issue licences for small or "token" amounts of goods subject to import restrictions in order to keep a selection of imported goods before the public and to enable manufacturers to stay abreast of overseas trends in production and style.

Further information may be obtained from the Pacific Division, Pacific, Asia and Africa Affairs Branch, Office of Area Relations, Ottawa, Ontario.

Spain

Spain announces a series of new taxes on selected products, whether produced in Spain or imported. Among the items of interest to Canadian exporters are the following:

Furs—10 per cent

Spirits bottled and branded—

(1) 20 per cent when cost price is over 120 Ptas/litre

(2) 14 per cent when cost price is equal to or more than 40 Ptas/litre but does not exceed 120 Ptas.

(3) 10 per cent when cost price is under 40 Ptas/litre

Spirits in bulk—10 per cent

Lumber in round, cost exceeding 4,000 Ptas/m3 net and sawn lumber, cost exceeding 6,000 Ptas/m3—10 per cent

On imported goods, the tax shall be collected when the goods are imported. The tax must be calculated on the c.i.f. value, plus duty, plus compensation tax. The decree is effective on April 1, 1971.

United States

Cast iron soil pipe and fittings encompassed in the definition pipes, iron or steel, and pipe fittings of cast or malleable iron, imported into the United States after the expiration of 90 days from March 24, 1971, shall be marked in a conspicuous place as legibly, indelibly and permanently as the nature of the article will permit, in such manner as to indicate to an ultimate purchaser in the United States the English name of the country of origin of the article. The Bureau of Customs, as indicated in the United States *Federal Register* of March 24, 1971, considers that such pipes and fittings are large enough to be readily marked to indicate the country of origin without unusual difficulties.

Beyond the Snowmobile

The age of leisure has brought the popularity of the motorized recreational vehicle—ATV's, trail bikes, Hovercraft and the rest—and an estimate puts a value of $200-$250 billion a year by 1975 on the United States leisure market. Sound interesting?

J. S. A. SOTVEDT, Consul and Assistant Trade Commissioner, Detroit

What has six wheels—or two, three or four—can go anywhere, and makes more noise than a swarm of angry hornets? The answer is "an ATV" (acronym for All-Terrain Vehicle). This, of course, is only one of the many types of vehicles in pursuit of the successor's mantle to the snowmobile (all-weather division). This article surveys the newer developments in recreational vehicles, but let's start with snowmobiles in order to outline the size of this beckoning market.

During the 1970-71 season, more than 500,000 snowmobiles will have been purchased in North America. The most startling aspect is that the industry has reached this point from a standing start in just 12 years. Wall Street predictions are that production will level out at a million units a year in 1973.

There are, of course, many reasons for this phenomenal growth. Some of the more important are:

1. The postwar population increase among the lower-age groups.

2. The increase in leisure time.

3. Much greater available income in the last few years.

4. The change in North American life styles, bringing more family-oriented outdoor sports.

Skiing led the way in family winter sports. Snowmobiling followed almost naturally because the necessary skills are much more easily acquired than in skiing and excellence comes much earlier in the game.

The enormous financial success of the snowmobile has not gone unnoticed. This success is particularly intriguing because sales are necessarily limited to the snow-belt areas of Canada and the northern United States, where the season usually is relatively short.

The snowmobile business in the 1969-70 season exceeded $550 million at retail prices. This year it is expected to see a gain of about 20 per cent over that—pretty convincing proof of the North American acceptance of family-oriented motor sports.

As one would expect, the snowmobile manufacturers maintain extensive dealerships throughout the snow-belt areas and most are now seeing the need to use their networks for year-round promotions. Bombardier, the world's largest snowmobile producer, will this year introduce a line of mini-bikes throughout its dealer network. Dealers also are searching for warm-weather lines to complement their winter ones, and many are carrying ATV products. Probably these factors will combine to accelerate the trend to vehicle recreation.

The ATV is, like the snowmobile, a Canadian invention. These vehicles come equipped with four, six or eight wheels—the most popular version with six. They generally weigh between 300 and 800 pounds, have fiberglass or plastic bodies, two-cycle engines, and carry from two to five people in varying degrees of comfort. The most easily distinguishable feature of these machines is their balloon-type low-pressure tires, called appropriately "fat-cats".

As the name suggests, ATV's are designed to operate virtually everywhere. Most claim speeds of 30 to 35 miles per hour on land and ice and two to four miles per hour on water. Many will take a small outboard motor to increase their water speed.

Mini-bikes and trail bikes appear to have an unlimited future. The market this year is expected to be worth nearly $500 million, with sales of more than 600,000 units. Here a machine made by Turchan Industries, Ltd., Windsor, Ontario, zooms up a slope.

Skimming over shallows and protruding rocks on a cushion of air, a small Hovercraft made by MHV Industries of Ottawa shows its paces. This type of ATV is a relative newcomer to the consumer market—and the noisiest one. Visitors to EXPO 67 saw several bigger passenger-carrying models skimming the waterways and some even rode in them.

Like the snowmobile, the ATV was first popularized by such people as ranchers, hydro linesmen and policemen. The public soon caught on and the boom began. But ATV's, like the snowmobile, are coming under increasing public pressure from environmentalists. It is undoubtedly true that the ATV can harm the terrain in which it operates, but public and private preserves with well-marked trails are being set up, as they are for snowmobiles.

The potential for these amphibians is intriguing. ATV's are adaptable to any country, regardless of climate and terrain, and are being sold from north to south in Canada and the United States. But so far manufacturers have not been as successful as one might expect, probably because of poor promotion, lack of industry organization, and poor merchandising and dealer servicing. Serious marketing began three years ago, and continental sales in 1970 probably exceeded 20,000 units. With the industry gathering steam, projections of 100,000 units or more a year in the 1970's do not seem far-fetched.

The ATV industry has not yet reached the stage of consolidation that snowmobile producers are now experiencing. There are about 12 major manufacturers in the United States and, according to the ATV Association, about 130 in some stage of planning production. ATV's retail from $700 to $2,000 and the potential market has been estimated at between $200 million and $400 million—not a market to be ignored.

Slightly more expensive, and even noisier, are the newcomers to the recreational vehicle group—the Hovercraft. Skimming on a shallow cushion of air, Hovercraft offer high-speed thrills on water, ice and flat land. The industry as yet is still feeling its way but the market, particularly among cottage owners, shows great promise.

Unusual driving conditions, certainly, but the driver needn't have looked so worried. Perhaps he just wasn't used to what these machines on their "fat-cat" tires can do. This amphibious ATV is another Canadian product, made by Otaco of Orillia. The North American market for ATV's has been estimated at between $200 and $400 million a year.

Mini-bikes and trail bikes have already found a huge market. These bikes for the most part are designed for off-highway use. Most have two low-pressure tires, although there are now tricycle types, as well as at least one model with twin in-line rear wheels. One of the principal attractions of these mini-bikes is the cost—prices begin at under $100. These machines can be operated by the whole family because no driver's licence is required for off-highway use.

The outlook for mini-bikes and trail bikes is rosy, especially since they can be used in conjunction with other outdoor activities. Campers and boat-owners, even owners of private planes, are potential bikers. Estimates put 1969 sales at 425,000 units and 1971 sales well in excess of 600,000.

Unfortunately, the statistics on motor bikes of all types are not reliable and are almost impossible to break down into components—mini-bikes, trail bikes, motorcycles, etc. The most popular figures used are motorcycle registrations, but these do not take into account the large volume of off-highway and non-licensed mini-bikes that are not registered.

What is certain is that the industry is growing by leaps and bounds. The 1971 market will approximate $500 million, including original equipment, related parts and accessories. The mini-bike also has the distinct advantage of being the least maligned of the MRV's, which, together with strong and careful organization, should strengthen future prospects.

One issue that looms large over any discussion of motor vehicle recreation is ecology. Almost everywhere politicians at the behest of concerned citizens are pressing for regulatory legislation. But, even though there is a widely recognized need for regulation, action in this field need not cast any great shadow over the future of these vehicles. Industry and consumer associations, particularly in the snowmobile and bike fields, have for some time now been urging the establishment of recreation areas and enforceable regulations for their sports. Their efforts are now bearing fruit, to the benefit of both the sportsman and society.

The motorized recreational vehicle seems to be with us to stay. Well-informed sources within and without the industry today predict a sustainable volume of about 700,000 snowmobile units a year by 1974. Mini-bikes and trail bikes may well exceed that figure, but probably not before the mid-1970's or later. ATV's will probably reach an eventual continuing market of more than 100,000 units a year. Viable manufacturers in the ATV, mini-bike and trail bike fields still have their maximum growth periods in front of them, and, particularly for ATV's, the prospects seem bright.

Component suppliers in Canada will also find green fields south of the border. The Consulate in Detroit will be pleased to help vehicle manufacturers to evaluate the market and obtain distributors in Michigan and Indiana, and will identify markets for component suppliers.

A United States industry association official recently predicted that by 1975, $200 to $250 billion a year will be spent in the pursuit of leisure in that country. Now is the time to stake your claim in this recreation revolution.

Peru Seeks Mining Equipment

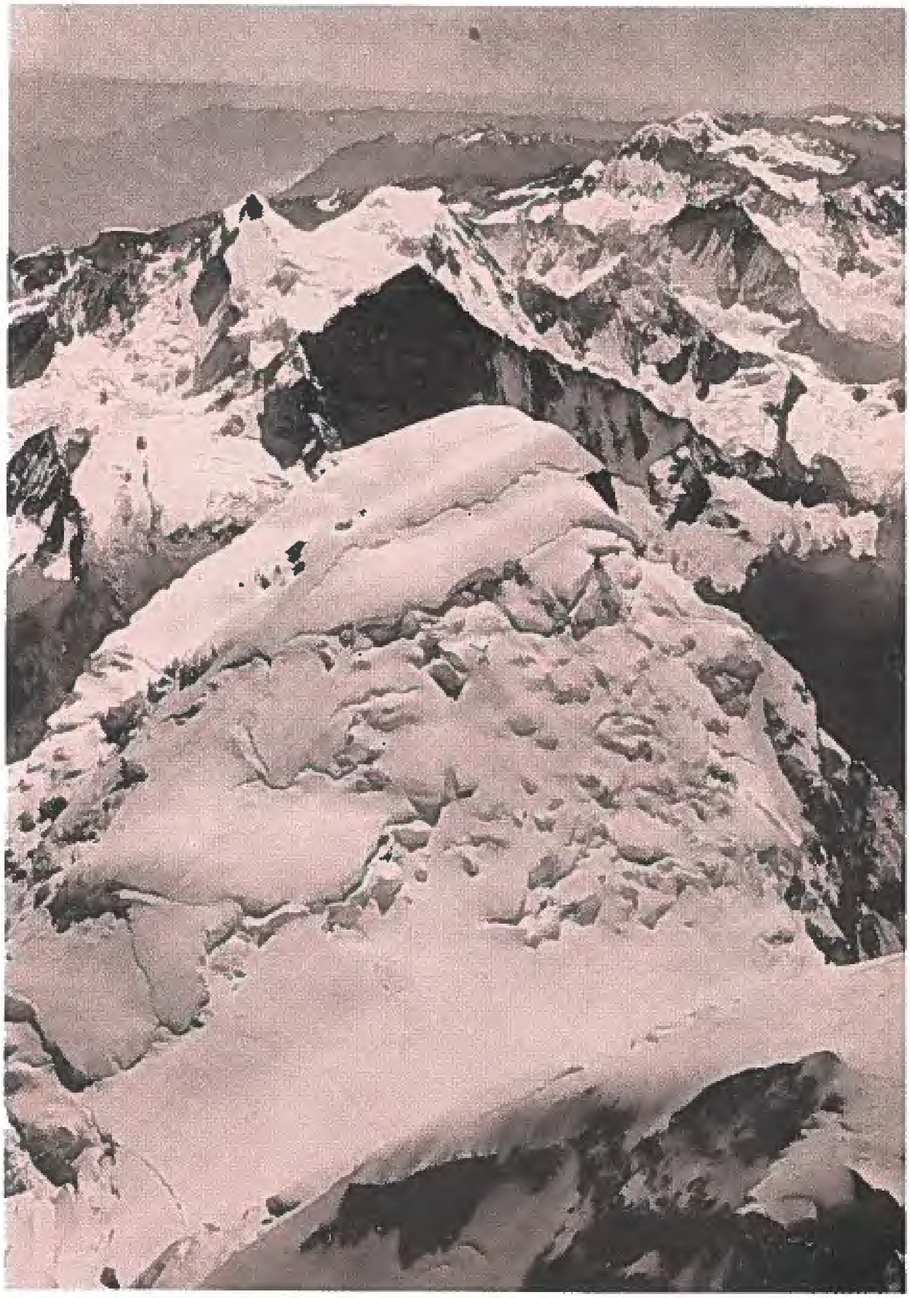
Newly created state mining enterprise is directing mineral development; several large projects under way heighten demand for many types of mining machinery and equipment that Canadian companies can supply.

LUCIO G. POMA, Commercial Officer, Lima

Total investment in the Peruvian mining industry at the end of 1969 was estimated at U.S.$580 million, of which $520 million came from foreign and $60 million from domestic sources. Investment in petroleum totalled U.S.$237 million, with $180 million consisting of foreign expropriated investment, $35 million of foreign investment unexpropriated, and $22 million domestic.

Numerous development projects, some already approved by the Peruvian Government and others with applications being processed, call for new foreign investment of some U.S.$400 million up to 1975. Additional mining claims already surveyed may bring further investment totalling U.S.$665 million during the 1975/83 period, provided the business climate and taxation are still propitious for long-term foreign capital investment in this activity. The rights to these latter claims have recently reverted to the state and have subsequently been transferred to Minero-Peru. This is a newly created state enterprise with an authorized capital of U.S.$250 million (to be totally underwritten by the Peruvian Government) and empowered to engage in all types of mining operations, from prospecting to refining and marketing abroad. In fact, Minero-Peru is scheduled to take over by next October all export sales of mineral ores, concentrates and refined products on a monopoly basis.

Most of these projects involve the development of copper deposits, followed by phosphates, iron, silver, lead and zinc. So far, the largest potential project has been approved by a contract between the Peruvian Government and American Smelting and Refining



This photo shows the Cordillera Blanca Range in Peru, with the highest peak—Mt. Huascaran, 22,206 feet. Mountainous areas of Peru often yield mineral deposits.

Corporation, calling for an investment of U.S.$355 million over the next five years. Work has already commenced on its Cuajone deposit in southern Peru.

The outcome of any future negotiations with private groups will largely depend on the implementation of a recent piece of legislation that has strengthened the principle of public domain over mining and refining rights to the point of converting the traditional concessions into service contracts with the Government. Under these, taxation rates are established to keep net earnings at a set level and it is made obligatory for the company to comply with schedules of immediate investment and production. The depletion allowance has been cancelled and the state reserves to itself the refining of copper through government enterprises to be created in the near future. Mixed capital mining companies are to be fostered by the state and they will be granted more favorable conditions than their strictly private counterparts. Detailed regulations covering these general provisions are still to be enacted, as well as the Organic Mining Law, and these will determine the climate for future investment.

Mineral production amounted to U.S. $430 million and petroleum production to U.S.$55 million in 1969, accounting for 16.4 per cent of GNP. Other yardsticks for measuring the importance and input capacity of this industry are:

1. Total mineral exports for 1969: 13.5 million metric tons worth U.S. $865.6 million, f.o.b.

2. Total personnel engaged in metallic mining, refining and services—44,635.

3. Input of grinding balls—1968: 609 metric tons imported, 20,052 metric tons domestic. Imports came from West Germany, the United States, Italy, and Japan.

4. Input of grinding rods—1968: 7,770 metric tons.

5. Input of steel plate—1968: 3,463 metric tons.

6. Input of reagents—1968: 60,610 metric tons.

7. Input of explosives—1968: U.S. $8.5 million.

8. Input of lumber—1968: U.S. $600,000 imported, U.S.$2.6 million domestic.

9. Refining plants in operation in 1969 totalled 99 with total capacity of 109,200 metric tons a day.

10. Four smelting plants in operation in 1969 had a total capacity of 3,120 metric tons a day.

The current and possible future sales of Canadian goods and services to this industry are subject to a number of conditions. The present size of the market warrants a frontal attack to increase Canadian participation, even if substantial new investment is not forthcoming. This should be directed to the following commodity areas where most requirements are imported and Canada appears able to supply competitively: prospecting and drilling equipment; core barrels, bits and drill rods; ore cars; stationary engines, generators and hoists; large trucks, loaders and excavators; compressors; pumps and water-treatment plants; ventilation equipment; steel cables, electrical supplies and hand tools; chemicals for refining; explosives (ammonium nitrate); mechanical parts and accessories; crushing, grinding and screening equipment; ore-dressing equipment.

Competition from European and United States suppliers is encountered in practically every item being sold or with sales potential in Peru. Recently some LAFTA countries, such as Brazil and Argentina, have also entered the market, although to a lesser degree. As the LAFTA and Andean Pact agreements are progressively implemented, some Canadian products may be excluded from this market unless steps are taken over the next few years to obtain a foothold by means of licensing agreements, assembly and service operations, or production through local subsidiaries. A typical case is that of the Miner Company Limited, manufacturers of the Black Diamond waterproof clothing for miners, which was shut off from substantial sales to Cerro de Pasco Corporation when local production started. Similarly, the Vulcano drills from Brazil have displaced several North American and European suppliers because of the LAFTA preferential tariff, although there is some comfort in the fact that The Steel Company of Canada Limited is the major supplier of drill steel to Vulcano. Some foreign companies—such as Atlas Copco AG and Denver Equipment Company—have made great inroads by establishing local manufacturing facilities.

Mining operations in Peru enjoy a blanket exemption from specific duties and reductions in the ordinary ad valorem rates, which apply exclusively to imports made directly by the officially registered mining companies. The average over-all combined rate for mining equipment and supplies adds up to 67 per cent on f.o.b. values and the minimum rate works out as follows:

Ad valorem duty on f.o.b. value, 12.5 per cent.

Import surtax, 10 per cent.

Incidence of above duty and surtax on the blanket 20 per cent officially added to f.o.b. values as freight and insurance to reach the taxable c.i.f. value, 4.5 per cent.

Foreign exchange differential, 2.2 per cent.

Minimum rate is therefore 29.2 per cent.

An agent or distributor importing for his own account must reckon with the ordinary tariff and consequently the 20 to 60 per cent markup would price his goods out of the market. Therefore, the only economic alternative for him is to work as an indent agent and perhaps maintain a spare parts inventory for emergencies. Some agents keep single pieces of equipment that are in steady demand and have been imported under the ordinary tariff, so that they can supply a client with any urgent requirement. The agent then places an order immediately for the same piece to replace the delivery.

Aggressiveness on the part of the agent is essential, as well as an intimate knowledge of the practices and habits of the Peruvian miner and the conditions that prevail in the particular mining camp. It goes without saying that the agent must also be familiar with his merchandise, the competitive alternatives, and how to allow for changes and modifications to make it fit the local requirements. He has to make frequent tours of the mines—at least four times a year—as the purchasing decision is made or heavily influenced by the mine superintendent or chief engineer, who is usually well aware of the performance, quality and specifications of similar competitive products. Price is usually the factor that carries weight with the manager or procurement officer. The agent must also have good rapport with the field mechanic to instruct him on the best way to make unorthodox repairs when necessary, or, alternatively, must be in a position to supply service or provide a reliable repairman on short notice. Canadian mining equipment and supplies have generally a reputation for high quality and durability under adverse conditions.

All the major companies and most of the medium-sized ones are good credit risks. Manufacturer's credit and insurance by the Export Development Corporation should be available in most cases.

The two largest companies in Peru source their requirements from abroad through procurement offices in the United States, without reference to any particular manufacturer in the purchase order that originates in Peru. Therefore, offers and inquiries from Canadian exporters should be channelled to the addresses below. The two companies, Cerro de Pasco Corporation and Southern Peru Copper Corporation, are by far the largest buyers in Peru and often set the pace for new products and methods that smaller companies follow.

John P. Adams
Director of Purchasing
Cerro Sales Corporation
300 Park Avenue
New York, N.Y. 10022

F. S. Merwin
Traffic Department Manager
Southern Peru Copper Corporation
120 Broadway
New York, N.Y. 10005

Minero-Peru is on its way to becoming a large operating company and has already succeeded in securing a U.S. $69 million line of credit from a Belgian consortium, chiefly for the purchase of equipment to develop Cerro Verde, a 149.1 million metric ton copper deposit with 1.09 per cent average grade ore, to be developed as an open pit mine. Inquiries should be directed to Julio Escuza, Purchasing Manager, Minero-Peru, Apartado 4332, Lima, Peru.

All other major and medium-sized companies make their purchases through local agents of foreign manufacturers. This is the area where efforts should be concentrated. Small miners buy their requirements from regional distributors, warehouses of the larger mines, and the supply service of the Banco Minero del Peru (Peruvian Mining Bank).

The major oil company, Petroleos del Peru S.A., a state enterprise, and most of the smaller ones operating in Peru source their requirements through headquarters in Lima, but field engineers' recommendations are usually followed.

The Peruvian mining and petroleum industries are entering a stage of substantial expansion, posing a definite challenge to local and foreign suppliers. Canada should find a way to play a major role in this development.

Export and Import Permit Regulations

Recent amendments to General Export Permits have been issued under the Export and Import Permits Act, and are as follows:

General Export Permit No. Ex. 2

1. Subitem (1) of item 1 of the Schedule to *General Export Permit No. Ex. 2* is revoked and the following substituted:

"(1) Animals, live, *except* animals described in Item 1003 of the *Export Control List*"

2. Subitem (21) of item 1 of the Schedule to the said Permit is revoked and the following substituted therefor:

"(21) Seeds of vegetables, forage and grass, and oil seeds, *except* rapeseed of which the oil contains not more than 5 per cent of erucic acid"

3. Subitem (31) of item 10 of the Schedule to the said Permit is revoked and the following substituted therefor:

"(31) Toys, games and athletic and sporting goods, *except* sporting firearms and parts and ammunition therefor".

The amendments were officially promulgated in the *Canada Gazette*, Part II, of April 28, 1971.

General Export Permit No. Ex. 3

"A revised permit has been issued, as follows:

Short Title

1. "This Permit may be cited as *General Export Permit No. Ex. 3.*"

Interpretation

2. "In this Permit, 'consumable stores' includes fuel oils, lubricants, provisions and supplies required for a voyage or flight and medical and surgical supplies.

General

3. "Subject to section 15 of the *Export and Import Permits Act*, any person may supply from Canada to vessels and aircraft departing from Canada usual and reasonable quantities of consumable stores where such stores are intended for use by or on the vessels and aircraft taking them on board.

4. "Where completion and validation of a customs entry form is required with respect to any consumable stores that are exported under the authority of this Permit, that form shall be endorsed 'exported under the authority of *General Export Permit No. Ex. 3*'".

The new permit was officially promulgated in the *Canada Gazette*, Part II, of April 28, 1971.

The Chips Are Down

A Vancouver company that offers the forest products industry a unique sawmilling machine and backs a good product with good service has found markets in many countries.

W. H. BRAY, General Sales Manager,
Canadian Car (Pacific)
as told to O. Mary Hill

"We reversed the usual pattern," says W. H. Bray, General Sales Manager for Canadian Car (Pacific), a division of Hawker Siddeley Canada Ltd. "Canadian firms quite often produce something that has been developed in the United States, but we took an American idea and developed it for production in Canada."

"One day our President heard that a man down in the State of Washington had invented a machine for sawmills that worked on a new principle and turned out both lumber and chips at the same time. He went down with the company's Chief Engineer to investigate, was impressed with what he saw, and bought the patent rights. Then the company spent about $600,000 on refining the design and producing a saleable commercial model.

"By 1963 we had a machine—we called it the Chip-n-Saw—ready to try out, and it was set up for test purposes at the Eburne Saw Mills in Vancouver. It proved efficient and was purchased by J. Ernst Lumber of Quesnel, B.C. where it is still giving excellent satisfaction.

"By this time, we were ready to look about for export markets. One of the big selling points of the machine is that it can handle efficiently small logs from 4 inches to 20 inches in diameter. We realized that it had an appeal for United States operators, not only because they were nearby but also because it would meet the needs of mills processing southern pine.

"So our first step in export was to look for a good firm to represent us in the United States—a firm with an understanding of, and good contacts with, the sawmilling industry. Eventually we chose as our distributor Irvington Machine Works in Portland, Oregon, a firm already selling equipment for sawmills, and ready to add our machine to its line. Irvington has the exclusive distribution rights for the United States and to make the arrangement work efficiently, it stores parts not only in Portland, Oregon, but also in Memphis, Tennessee, and in Jacksonville, Florida. This is important because, when a machine in a mill breaks down, repairs must be made immediately or precious production time is lost. Irvington, by its contract, is committed to providing quick servicing. We on our part took over the handling of the Irvington product line in Eastern Canada.

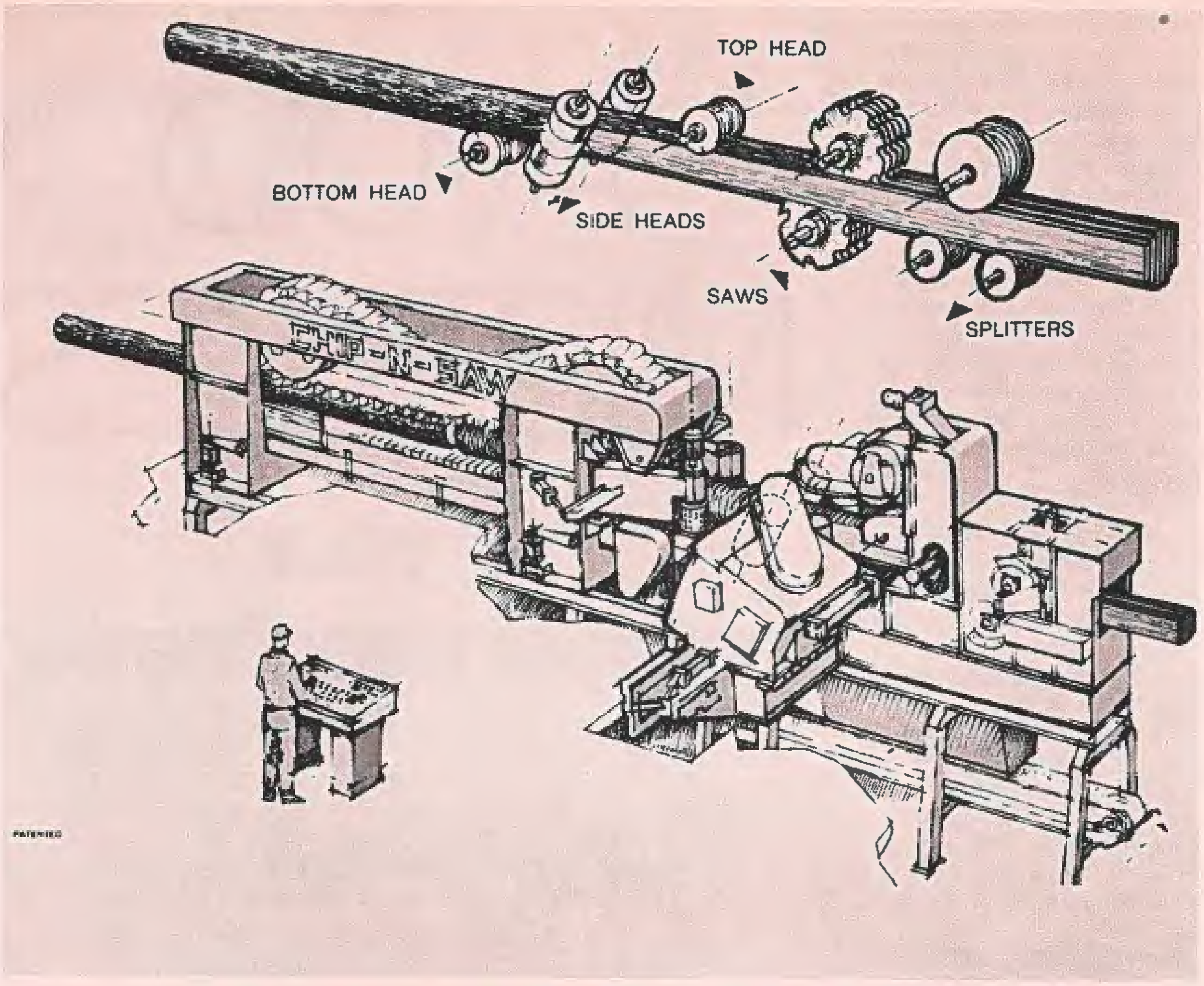
"The United States market proved to be a good one for us right from the start. In 1965 we sold ten of the Chip-n-Saw machines, in 1966 about 17, and by this time there are about 100 of them in operation across the border. compared with about 35 in Canada.

"We have always kept in mind that our success depends on our ability not only to supply but also to service the equipment and we believe that sales should not outstrip production or service facilities. So it was not until we were well established in the United States market that we began thinking of going after orders in other parts of the world. Making contacts was simpler than we had expected. We have twice entered the second largest forest equipment exhibition in the world—the Southern Pine Machinery Show, in New Orleans. It usually draws about 8,000 people and many of them come from outside the United States. Usually our practice is to sell a machine to a United States customer, ship it down to, and exhibit it at, the show, and then send it on to its destination.

"At this show we met a representative of C. H. E. Johanson A.B., of Nora, Sweden, who encouraged us to go and take a look at the Scandinavian market. As a result, I went over to Sweden with the company's Chief Engineer, Bob Chapman, and visited Stockholm and then Uppsala, headquarters for the firm that eventually bought one of our machines. Later we came to an arrangement with Johanson whereby it represents us in Scandinavia.

"Probably the most difficult market that we have entered—difficult because the selling procedures and negotiation of a contract are different—is the Soviet Union. We made our first contact with the Russians several years ago, when the Department of Trade and Commerce brought a number of them out to Canada on a Pulp and Paper Trade Mission, to see what Canadian industry was doing in this field. The mission consisted of representatives of the state trading corporation concerned with this industrial area, V/O Machinoimport, plus some engineers. In the course of their Vancouver tour, they were brought to see the Chip-n-Saw and climbed all over the machine, examining it thoroughly. So interested were they that they asked for a quotation on a machine to meet their special needs—and they outlined for us briefly the type of lumber or logs on which it would be used, the power available, the size of logs, etc.

"This, we discovered, was just stage one in the eventual sale. Next, we



One operator controls the entire operation of this Chip-n-Saw machine from a command-post console. The machine can turn out 200 lineal feet per minute, and has proved its value in sawmills in Canada, the United States, and a number of other countries. Invented by an American, it was perfected by a Vancouver company.

were invited to come to the U.S.S.R., determine their needs exactly, and discuss price. We stayed in Moscow for one week, negotiating with them for one hour in the morning and one hour in the afternoon. After seven days, we went off to Stockholm and left the Canadian Trade Commissioner in Moscow to carry on for us. One of the problems in getting the contract worked out was price. The Russians wanted us to quote f.o.b. Montreal, but it is our practice to quote f.o.b. Vancouver. And we held out on this point. It took about three-and-a-half months to settle it but the Russians finally agreed to pay the freight costs to Montreal and beyond. Eventually the contract was sent to us in Vancouver and from then on, there were few problems. The machine was ready for shipping in three months. The terms were payment in full thirty days after it was loaded on board ship in Montreal. It went by sea to Leningrad and then by truck to its final destination, a sawmill in Arkangelsk on the water's edge.

"In dealing with prospects and customers overseas, we try whenever possible to offer them sales literature about the machine and a training film in their own language. We found someone at the University of British Columbia to translate our product brochures into Russian and to provide Russian titles for the film. When it came to the service manual, with its technical language, the Russians preferred to do the translation themselves. The one exception to the practice of translating our brochures is Sweden, which accepts them in English, but we do have them also in French and in German. In addition to translating written copy, we also convert all measurements into the metric system for countries in which it is in use.

"We are still in the process of expanding our markets, and sometimes this takes us far away from North America. Actually, the second distributor with whom we came to an agreement was in New Zealand, Charles Palmer and Co. Ltd. in Auckland. Recently we sold an Edge-Chipper there. In Australia we use the services of an allied company, Hawker Siddeley Brush, in Melbourne. Through the Southern Pine show we acquired a distributor in South Africa—one recommended to us by C. H. E. Johanson in Sweden, who also holds the agency for the Johanson line.

"Then there is Europe. Not long ago, we met a man who operates out of Liechtenstein and who would like to try selling our machines to Bulgaria and other Eastern European countries. Germany too appears to offer good prospects and in April we are going into the Hannover Fair for the first time. We are shipping over a model of the Chip-n-Saw and expect to generate a good deal of interest in it. To follow up, we shall send over a representative to be stationed in Belgium and to cultivate the European market. He will begin, of course, by circulating technical information about our machines and what they can do and by visiting potential users.

"In all our operations—finding and consolidating new markets or supplying existing ones—we keep in mind the importance of providing the customer with service whenever he needs it. That is why our sales philosophy is to go slowly, never outrunning our capacity to provide first class service. Recently, for instance, we sent a man down to New Zealand to make sure that the Edge-Chipper we had sold there was being properly used. The buyer had run into trouble and it is our responsibility to set things right.

"Shipping? Not really a problem. As I said before, we sell f.o.b. Vancouver. The machine goes down to customers in the United States loaded on two semi-trailers; for other markets it is crated and sent by sea, and we figure the cost of the crate in the price.

"Competition? Not too much yet, because other machines made domestically and across the border don't have the chipping headrig and therefore the operators can't get both chips and lumber from one in-line operation. One man can operate our machine and three men can operate a whole sawmill. Of course the Chip-n-Saw is protected by patents and we have occasionally had to take action on patent infringement.

"So that's our secret—a unique product, well promoted, well serviced, and sold by distributors with a solid reputation for dependability, who know the machine and can advise and assist their customers. And our sales figures prove that, when the chips are down, we're the winner."

Export Opportunities

The inquiries listed below come from several sources, including various Branches of the Department in Ottawa and the Trade Commissioner Service posts abroad. Exporters should correspond directly with the companies or agencies mentioned, using the addresses given. The Department of Industry, Trade and Commerce cannot assume any responsibility for trade negotiations that exporters may enter into with these firms, nor can it vouch for their commercial standing.

Iron Ore

TURKEY—Turkish iron and steel producers are interested in obtaining up to 200,000 tons of iron ore a year on a three- to five-year contract. Prices must be competitive with those of Brazil. Contact: Commercial Secretary, Canadian Embassy, Vali Dr. Resit Caddesi 52, Cankaya, Ankara, Turkey; telex 69 (DOMCAN ANKARA).

Non-Ferrous Metals

HONG KONG—Pak Hing Loong Co., Ltd., is interested in importing non-ferrous metals, alloys and semi-finished metallic products. Interested Canadian suppliers should contact the Senior Canadian Government Trade Commissioner, P.O. Box 126, P & O Building, 11th Floor, 21-23 Des Voeux Road, Central Hong Kong, Hong Kong.

Poultry Products, Seafood, Paper Products

HONG KONG—Yuen Kee Hong Company wishes to develop further Canadian sources of supply for poultry products, frozen and canned seafood, and animal offal such as beef and pork stomachs, poultry gizzards and livers, and chicken parts. Company is also interested in paper products, particularly for converting papers. Contact: Senior Canadian Government Trade Commissioner, P.O. Box 126, P & O Building, 11th Floor, 21-23 Des Voeux Road, Central Hong Kong, Hong Kong.

Stabilizers, Waxes for Plastics Manufacture

SWITZERLAND—Zurich firm wants lead stabilizers and waxes for use in manufacturing plastics. Contact: Dr. Rudolf Streul; AG, Zurich, Switzerland, with copies of correspondence to Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, 3000 Berne, Switzerland.

Synthetic Fibers, Paper and Leather Products

HONG KONG—Tsun Yip Trading Company wants Canadian sources for supply for synthetic fibers, piecegoods, optical glass, leather and suede, woven piecegoods and high-class men's wear. Contact: Senior Canadian Government Trade Commissioner, P.O. Box 126, P & O Building, 11th floor, 21-23 Des Voeux Road, Central Hong Kong, Hong Kong.

Wood Furniture, Doors, Panels, etc.

SWEDEN—Importer seeks Canadian sources of supply of wood furniture, lamps, doors, panels and related equipment suitable for private homes, restaurants, cafeterias. It is also interested in pictures, weapons and other forms of decoration. Contact: Ingemar Nelin, General Manager, Inrednings AB Luminator, Pinjegatan 6, 213 63 Malmo, Sweden, with copies of correspondence to Commercial Counsellor, Canadian Embassy, P.O. Box 14042, Kunsgatan 24, S-104 40 Stockholm, Sweden.

Agencies Wanted

Air-Conditioning Equipment

SOUTH AFRICA—Durban firm is interested in representing manufacturers of package and split-system air-conditioners up to 20 hp. Systems up to 3 hp. must be 230 volts, 50 cycle, single phase; above 3 hp., 380 volts, 50 cycle, three phase. Airmail descriptive literature and prices to: D. N. Du Plessis, Managing Director, Electrical Construction Company (Pty) Ltd., P.O. Box 1295, Durban, South Africa, with copy to Canadian Government Trade Commissioner, P.O. Box 61619 Marshalltown, 78 Fox Street, Johannesburg.

Chemicals

ISRAEL—Firm specializing in transportation, storage and trade of liquid bulk chemicals wishes to increase range of materials and seeks Canadian sources of supply. Contact: J. Navot, Johananoff Staples and Specialties Ltd., 1 Jaffa Road, Tel Aviv, with copies of correspondence to Commercial Secretary, Canadian Embassy, P.O. Box 20140, 84 Hahashmoniam Street, Tel Aviv, Israel.

Coal, Natural Gas Equipment, Stainless Steel, Aluminum

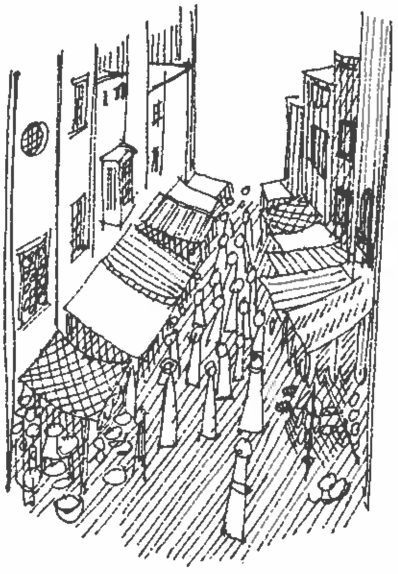
FINLAND—Large importer and commission agent in Helsinki seeks Canadian suppliers of coal suitable for the steel industry. The company also wants Canadian suppliers of machinery and equipment for distribution and use of natural gas in heavy industry (regulating valves, pumps, etc.), sources of stainless steel sheets and rolled products, and aluminum sheet, strip and rolled products. Contact: Pertti Kantela, c/o G.H.H. AB, Hitsaajankatu 12, Herttoniemi, Helsinki, Finland, with copies of correspondence to Commercial Counsellor, Canadian Embassy, P.O. Box 14042, Kungsgatan 24, S-104 40 Stockholm, Sweden.

Construction and Heavy Equipment

KUWAIT—Abdulmajeed Al-Gharabally and Company is interested in representing Canadian construction companies and manufacturers of heavy equipment such as cables, transformers, turbines and switchgear. Will also advise companies for which it acts of impending projects and large tenders issued by oil companies or Ministries. Contact the firm at the Chamber of Commerce Building, P.O. Box 101 Kuwait, Kuwait, with copies of correspondence to Commercial Counsellor, Canadian Embassy, P.O. Box 2300, Beirut, Lebanon.

Hospital and Laboratory Equipment

SWEDEN—Importer selling mainly direct to industry seeks Canadian manufacturers of instruments for chemical analysis, photometric measuring instruments and thermoblocks. Contact; K. Nilsson, c/o Tecnora AB, Albinsrogatan 5A, 214 67 Malmo, Sweden, with copies of correspondence to Commercial Counsellor, Canadian Embassy, P.O. Box 14042, Kungsgatan 24, S-104 40 Stockholm.



Trade Lines

Belgian TV manufacturer boosts output

CBRT—Compagnie Belge de Radio et de Television, Belgium's leading producer of TV sets—will spend the equivalent of Cdn.$19 million to treble production of television sets. More than half of the production will be shipped abroad. The company is now controlled by the Philips Eindhoven group, since the recent takeover of its other main shareholder, the Ateliers de Constructions Electriques de Charleroi, by the Westinghouse Electric Corp. of Pittsburgh—Brussels

Saudi Arabia expects budget deficit

Saudi Arabian imports of consumer goods and capital equipment are continuing to increase at roughly the same rate as over-all economic growth (about 9 per cent), but defence-related imports are rising much faster. Increased earnings expected from the oil sector should permit the Government to come close to balancing its current budget of $1.33 billion, but the Kingdom has had to draw on its reserves to meet its obligations and heavy defence commitments which amount to about 42 per cent of total government revenues. Its annual commitment for providing assistance to the U.A.R. and Jordan alone is about $125 million. There will probably be a small budgetary deficit this year and this could have a slight inflationary impact. The gold and foreign exchange reserves totalled $686 million at the end of July 1970, a fall of $19 million from a year ago —Beirut

Peru restructures IADB colonization loan

Peru has signed a contract with the IADB (Inter-American Development Bank) restructuring a loan covering the colonization project for the zone of Tingo Maria-Tocache-Campanilla. Under the new terms of this U.S. $37 million loan, about U.S.$12.5 million will be allocated to completion of the La Morada-Puerto Pizarro-Campanilla road. This will make possible the inclusion of an additional 270,000 acres in the colonization projection and open up new zones to the activities of government agrarian reform and colonization programs. Construction must end no later than September 30, 1972—Lima

Singapore plans wharf extensions

The Port of Singapore Authority is seeking a World Bank loan to extend its container wharves by an additional 1,000 feet when the $25.39 million complex is completed by 1972. The extension will provide 3,250 feet of berths long enough to accommodate three big third-generation container ships. The port's first container berth for feeder vessels in the East Lagoon was opened recently—Singapore

Colombia electrifies rural areas

Colombia has recently received a $25 million loan from the Inter-American Development Bank to install 1,600 kilometers of sub-transmission lines (66, 44, 33 and 13.2 kv.) and to construct 17 substations in small cities and rural areas—Bogota

Michigan to boost power output

The Detroit Edison Company intends to spend more money on new construction during the first five years of the 70's than it has spent in its 67-year history. Approximately $2.8 billion will be spent on new facilities through 1975. Edison's energy production totalled 28 billion kwh. in 1969 and sales of electric power rose to $29.5 billion in 1970, a 7.4 per cent increase. Projected energy requirements for 1975 are 45 billion kwh.—Detroit

Michigan exports increase

According to a state-by-state survey of exports made by the United States Department of Commerce in 1969, Michigan has moved from fifth to second place among the leading exporting states since the previous survey in 1966. During 1969, Michigan exported manufactured goods valued at $2.6 billion, up from $1.6 billion in 1966. On a per capita basis, foreign sales of Michigan products totalled approximately $300, the highest in the country—Detroit

Mexico exports aluminum

Another 150 metric tons of aluminum ingot were exported recently to Argentina by Aluminio S.A. of Mexico, as part of a 3,200-metric-ton contract valued at over $2.02 million. The company plans to increase its exports this year, especially to other LAFTA countries—Mexico, D.F.

IDA helps Guyana cattle industry

The International Development Association (IDA), an affiliate of the World Bank, has granted a credit of United States $2.2 million to help Guyana to develop a modern and efficient beef cattle industry. The IDA credit will be used to develop 27 large ranches, encompassing about one million acres and having 60,000 head of cattle—Port-of-Spain

Malaysia strengthens rubber industry

Rubber continues to be Malaysia's most important industry and the Government is making every effort to strengthen its competitive position in world markets. Technically specified rubbers under the Standard Malaysian Rubber (SMR) Scheme, with their consistently high quality, will make up about 17 per cent of total production in 1970, compared with 15 per cent in 1969. The Government is launching a program to establish plants for processing rubber tapped by smallholders for SMR, and so increase the proportion of SMR to total production. The quantity of rubber produced per man-year of work increased from 1.25 to 2.27 tons from 1956 to 1968. Greater volume and better harvesting and processing should help to keep rubber competitive and reasonably profitable—Kuala Lumpur

Marcona increases Peruvian investment

The Marcona Mining Company, under a recent contract with the Peruvian Government, has undertaken to invest the equivalent of about Cdn.$23.2 million in its Peruvian operations. The investment will cover the construction of new facilities and the purchase of new machinery and equipment to increase iron ore production from 8,775,000 metric tons a year to 10,500,000. The company will also expand housing, medical and educational facilities for its workers. Marcona has also contracted to purchase all its electricity requirements from the state-owned Corporacion Electrica de Mantaro and to ship all exports from its mining operations in Peruvian ships—Lima

Finnish and Swedish firms join forces

A Finnish company and a Swedish company, Oy Nokia AB, of Helsinki, and Skandinaviska Aluminum Profiler AB, of Vetlanda, have set up a 50-50 joint venture, Nordalex NV, to produce aluminum extrusions at a new plant being built at Hoogezand. The plant will have an annual capacity of 4,000 metric tons by 1975, and will market the extrusions in Europe—The Hague

Antigua gets new desalination plant

A U.S.$6 million power generation and water desalination plant was officially opened at Crabbs Peninsula, Antigua, late last year. The desalting plant will produce 1.2 million gallons of water daily, and the power plant has a capacity of 8.2 megawatts. The plant came from sources in the United States—Port-of-Spain

Ecuador seeks bids on fisheries projects

Ecuador is seeking to modernize its fishing industry and is calling tenders for a development project that will include technical assistance and training for fisheries personnel, the construction of a shipyard, and the building of fish-processing plants. Companies submitting offers will be required to supply financing from the vendor country—Bogota

Trade Commissioners on Tour

In Territory

Businessmen who would like Trade Commissioners to undertake assignments for them should write to the post as soon as possible.

Algeria

D. P. Lindores, Assistant Commercial Secretary in Paris, France, will visit Algeria June 7-12.

Bahamas

An officer from the Kingston, Jamaica, office will visit Nassau May 3-12 and Freeport May 13-14.

Brazil

P. A. Théberge, Consul and Trade Commissioner in Sao Paulo, will visit the states of Parana, Santa Catarina and Rio Grande do Sul early in May.

Bulgaria, Hungary, Romania

Trade Commissioners in the Vienna, Austria, office make frequent visits to these countries, but often there is not time to publish their itineraries in advance. Therefore, Canadian businessmen who would like the Trade Commissioners to undertake assignments for them in these East European countries are advised to write to the Vienna office immediately.

Cyprus

An officer from the Tel Aviv, Israel, office visits Cyprus every month for at least three days, usually in the second half of the month.

Dominican Republic, Haiti, Virgin Islands

Trade Commissioners from San Juan regularly visit the Dominican Republic, Haiti and the Virgin Islands. Canadian businessmen who would like officers to undertake assignments for them in these countries are invited to write to the Consulate in San Juan.

Finland

A Trade Commissioner from the Stockholm, Sweden, office visits Helsinki once a month for about a week, except during July and August.

Ireland

R. A. Bull, Commercial Counsellor in Dublin, will visit Cork May 24-26, and Galway and Sligo June 14-16.

South Korea

Trade Commissioners from the Tokyo, Japan, office visit the Republic of Korea (South Korea) approximately every two months for a week.

Turkey

Trade Commissioners in Ankara visit Istanbul frequently. Canadian businessmen who would like the officers to undertake assignments for them in that city are invited to write to the Commercial Division, Canadian Embassy, Vali Dr. Resit Caddesi 52, Cankaya, Ankara, Turkey.

Foreign Exchange Rates

These nominal quotations may help exporters in checking prices, but they should consult their banks before making any firm commitments. When more than one rate is shown, the one to be used depends on the commodity traded. Information on the rate for any specific commodity may be obtained from the Office of Area Relations, Department of Industry, Trade and Commerce, Ottawa.

The mid market rates only are quoted, except when buying and selling rates are specified. The buying rate is that at which banks purchase exchange from exporters; the selling rate is that at which banks sell exchange to importers.

Rates used exclusively in non-merchandise trading are *not* included in this table.

For conversion of column one to the U.S. dollar equivalent *multiply* by .99. **To convert column two, *divide* by .99.**

Country and Currency	Value of foreign currency unit in Canadian dollars at April 22	Value of Canadian dollar in foreign currency units
Algeria Dinar	.2053	4.87
Argentina Peso (free)	.2500	4.00
Australia Dollar	1.1372	.87
Austria Schilling	.0390	25.00
Bahamas Dollar	1.0075	.99
Belgium and Luxembourg Franc	.0203	49.26
Bermuda Dollar	1.0075	.99
Bolivia Peso	.0846	11.82
Brazil Cruzeiro (official free)	.1977	5.06
Britain Pound	2.4370	.41
British Honduras Dollar	.6078	1.64
Burma Kyat	.2116	4.73
Ceylon Rupee	.1693	5.91
Chile Escudo (bank rate) (free)	.0852 .0702	11.74 14.25
China, People's Republic of Renminbi	.4125	2.42
Colombia Peso (fixed)	.0514	19.45
Congo (Kinshasa) Zaire	2.144	.46
Costa Rica Colon	.1521	6.57
Cuba[1] Peso	....	....
Czechoslovakia Koruna	.1399	7.15
Denmark Krone	.1346	7.43
Dominican Republic Peso	1.0075	.99
Ecuador Sucre (official)	.0403	24.81
El Salvador Colon	.4030	2.48
Fiji Dollar	1.1631	.86
Finland Markka	.2399	4.17
France, Monaco, etc.[2] Franc	.1827	5.47
Franco-African Republics[3] Franc	.0036	277.78
French Pacific[4] Franc	.0100	100.0
Germany D Mark	.2771	3.61
Ghana New Cedi	.9874	1.01
Greece Drachma	.0335	29.85
Guatemala Quetzal	1.0075	.99
Guyana Dollar	.5884	1.69
Haiti Gourde	.2015	4.96
Honduras Lempira	.5038	1.98
Hong Kong Dollar	.1662	6.02
Hungary Forint (official)	.0921	10.85
Iceland Krona (official)	.0114	87.72
India Rupee	.1348	7.42
Indonesia[5] Rupiah	.0027	374.22
Iran Rial	.0131	76.41

Country and Currency	Value of foreign currency unit in Canadian dollars at April 22	Value of Canadian dollar in foreign currency units
Iraq Dinar	2.8210	.35
Ireland Pound	2.4370	.41
Israel Pound	.2879	3.45
Italy Lira	.0016	617.66
Jamaica Dollar	1.2185	.82
Japan Yen	.0028	354.73
Kenya Shilling	.1412	7.08
Korea, Republic of Won	.0032	317.08
Lebanon Pound (free)	.3123	3.20
Malaysia Dollar	.3291	3.04
Mexico Peso	.0806	12.41
Morocco Dirham	.2024	4.94
Netherlands Florin	.2799	3.57
Netherlands Antilles Florin	.5342	1.87
New Zealand Dollar	1.1405	.87
Nicaragua Cordoba	.1439	6.95
Nigeria Pound	2.8376	.35
Norway Krone	.1414	7.07
Pakistan Rupee	.2116	4.73
Panama Balboa	1.0075	.99
Paraguay Guarani (free)	.0081	123.46
Peru Sol (free)	.0232	43.08
Philippines[6] Peso (free)	.1569	6.37
Poland Zloty (fixed basic rate)	.2537	4.01
Portugal & Colonies[7] Escudo	.0350	28.53
Saudi Arabia Riyal	.2062	4.84
Sierra Leone Leone	1.508	.66
Singapore Dollar	.3273	3.05
South Africa Rand	1.4235	.70
Spain & Dependencies Peseta	.0145	68.97
Sweden Krona	.1952	5.12
Switzerland Franc	.2344	4.27
Syria Pound (free)	.2819	3.55
Thailand Baht (free)	.0488	20.49
Trinidad & Tobago[8] Dollar	.5038	1.98
Tunisia Dinar	1.9191	.52
Turkey Lira	.0671	14.90
United Arab Republic Pound (official)	2.3173	.43
United States Dollar	1.0075	.99
Uruguay Peso (free)	.0040	248.13
Venezuela Bolivar (official free)	.2244	4.46
Yugoslavia Dinar (official)	.0671	14.90

1. There is no trading in Cuban pesos in U.S. or Canadian banks at present.

2. Franc is also used in French Guiana, Guadeloupe and Martinique.

3. Chad, Central African Republic, Congo (Brazzaville), Dahomey, Gabon, Ivory Coast, Islamic Republic of Mauretania, Niger, Senegal, Upper Volta, Cameroon, Togoland, and Malagasy. Also Reunion, Comoro Islands, St. Pierre and Miquelon.

4. New Caledonia, New Hebrides, French Polynesia.

5. Exchange rate at December 9, 1970.

6. Exchange rate in Philippines on floating basis with daily quotations by banks.

7. Approximately same rate for Portuguese territories in Africa.

8. Also used in Barbados, Leeward and Windward Islands.

Canada Gets Its Feet Wet

Canada made a big splash at Oceanexpo 71 in Bordeaux, France, in March, with its display of oceanological equipment. The only national stand in this exhibition of underwater and marine technology, the Canadian display drew wide interest, including the close attention of Jacques Cousteau, the world-famous oceanologist.

Commandant Cousteau spent the better part of a day at the Canadian stand and showed particular interest in exhibits relating to diving technology, several of which were on display. Other important visitors included the Prime Minister of France, M. Jacques Chaban-Delmas, who toured the exhibits displayed by the 22 Canadian companies that participated. About 1,800 visitors from all over the world attended the week-long show, including a delegation of observers from the People's Republic of China. The exhibition was not open to the general public.

This was the first time that Canada had been officially represented at an oceanology trade fair. Many countries see the ocean as a new resource frontier and are striving to develop the tools needed to exploit it and to keep it clean. The aim of the Department of Industry, Trade and Commerce is to orient Canadian companies toward fields where there is still a lack of perfected equipment and to expose their growing expertise to the rest of the world. Canada has already gained an international reputation in some specific types of underwater equipment, such as submersibles, and in equipment to clean up oil slicks. Products in this area were displayed at Bordeaux, as well as equipment ranging from deep-sea drilling systems, digital current recorders and shallow-water habitats to towing cables and winches.

The founding meeting of the International Engineering Committee on Oceanic Resources was held during Oceanexpo, with Martin J. Colpitts, president of the Canadian Society of Oceanology and Chief of the Marine Division of the Department of Industry, Trade and Commerce, attending as a member.

Apart from a better knowledge of Canada's expertise in oceanology, Commandant Jacques Cousteau took away with him a book on Canada presented to him by the Canadian exhibitors at Oceanexpo 71. In the photo above he receives the book from Pierre Dumas, Canada's Consul General in Bordeaux. (Left to right) Colonel Jean Gaathier of Information Canada Exhibition Commission in Paris; M. Damas; M. Cousteau; Martin J. Colpitts of Canada's Department of Industry, Trade and Commerce, Ottawa; and Arthur Perron, Assistant Commercial Secretary at the Canadian Embassy in Paris. In the photo below, Prime Minister Jacques Chaban-Delmas of France is welcomed to the Canadian stand by M. and Mme. Dumas.

A deep-sea buoy that automatically moors itself at any desired depth up to 550 meters is being lowered from a ship. Manufactured by Hermes Electronics Limited of Dartmouth, Nova Scotia, the buoy can transmit a continuous radio signal for navigation purposes and, using remote data collection by ship or shore station through a radio link, can transmit data on water conditions and thus replace weather ships.

Swimming towards the camera in his diving suit is Joe MacInnis of the MacInnis Foundation in Toronto. Designer of the Sublimnos, an inexpensive shallow-water habitat displayed at Oceanexpo, the Foundation acts as catalyst for Canadian "man-in-sea" technology. It uses the Sublimnos as an underwater platform and testing place for equipment and as a medium to train divers. Sublimnos has room for two divers.

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Canada displays its growing ocean technology at Oceanexpo 71, Bordeaux, France