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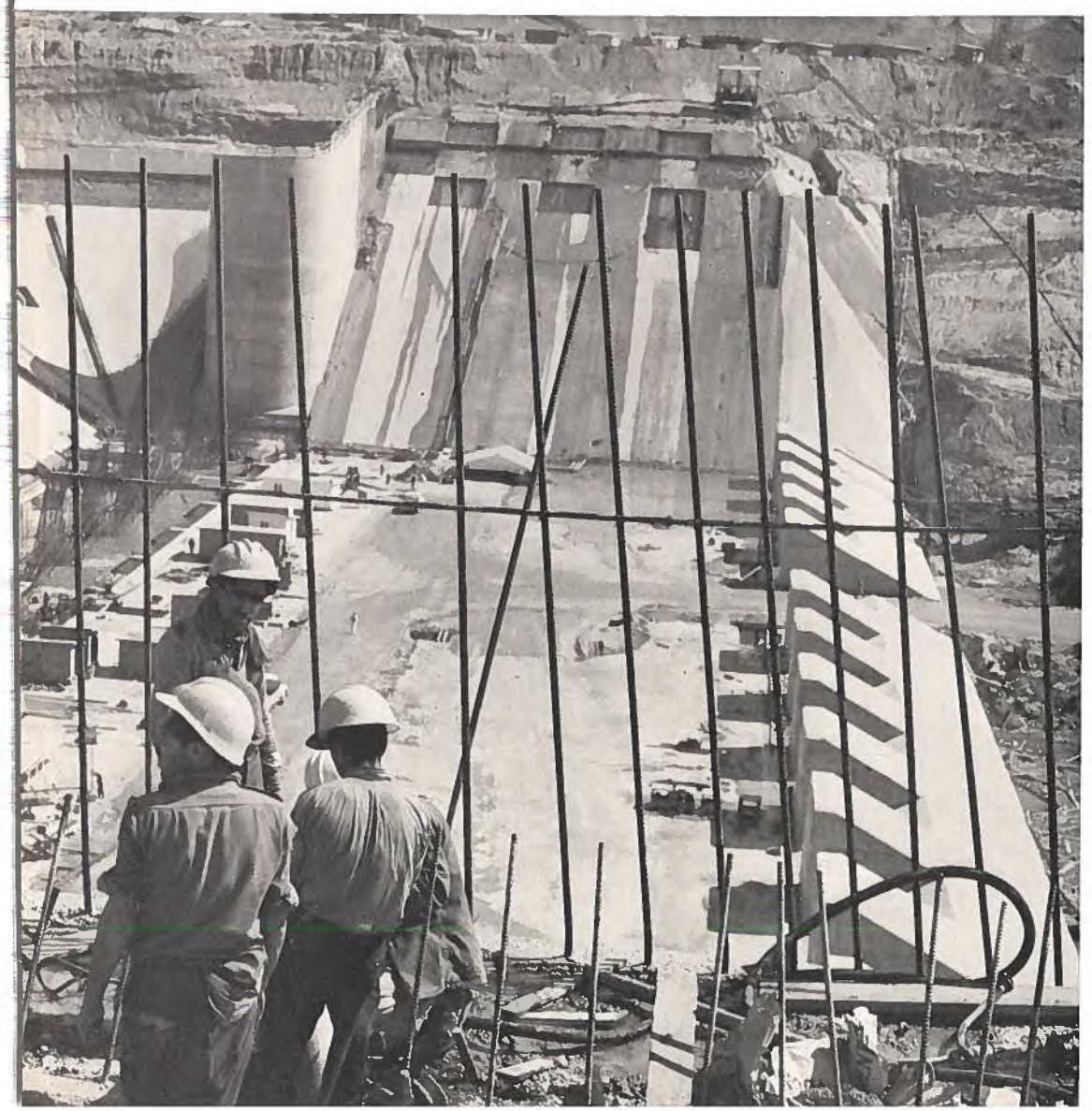
FOREIGN TRADE

DEPARTMENT OF TRADE AND COMMERCE, OTTAWA



Obtaining World Business through International Financing Organizations

FOREIGN TRADE

NOVEMBER 26, 1966 Vol. 126 No. 11

COVER: Typical of the many engineering projects carried out in developing countries is this earth-fill dam across the Jhelum River in West Pakistan. It's part of the great Indus Basin irrigation scheme financed partially by the World Bank and the IDA, two of the international financing organizations covered in this special issue.

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Obtaining World Business through International Financing Organizations

THE IMPORTANCE of the International financing organizations in generating opportunities for Canadian companies to sell goods and services abroad needs no emphasis. The funds that they provide, especially for the developing countries, make possible projects studied, designed and supervised by Canadian consulting engineers or surveys carried out by our aerial survey companies. And hundreds of Canadian manufacturers provide capital goods and equipment, industrial raw materials and components to foreign customers who are using international loans to quicken the pace of development or provide for urgent needs.

As an example, from July 1, 1965, to June 30, 1966, disbursements in Canada under World Bank loans totalled $7.2 million. More than 55 different companies shared in this business—companies making agricultural equipment, machinery used in industry, equipment for power stations and power transmission, communications equipment and other commodities, and those providing engineering services. Procurement under International Development Association loans in Canada reached $3.7 million in the same 12 months and some 50 Canadian companies shared in it, shipping out, among other things, diesel locomotives, construction materials, aluminum cables, irrigation and communications equipment. And we could give similar examples of business generated by the UN Development Program, the Inter-American Development Bank, and other agencies, quite apart from Canada's own aid program.

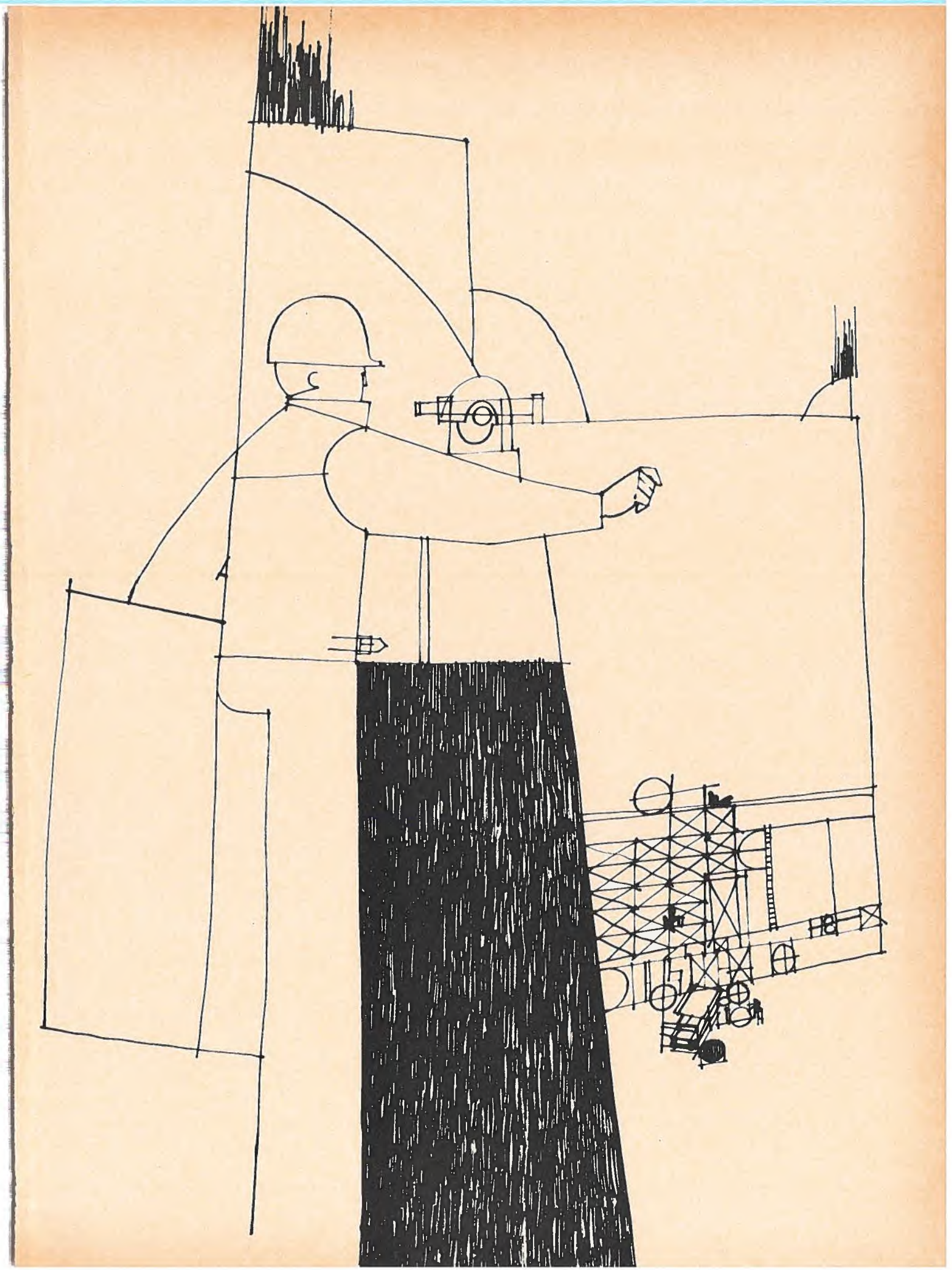
Three years ago, *Foreign Trade* published an issue devoted to telling Canadian exporters how these international financing organizations operate, the types of projects that they help to finance in the developing countries, and how to obtain some of the resulting business. Since then there have been a number of developments in this field. Two new regional development banks have been set up in Asia and in Africa and will soon be functioning. The UN Special Fund and the UN Technical Assistance Program have merged to become the UN Development Program. Canadian aid funds have been made available for Latin America through the Inter-American Development Bank, and ECIC Section 21A financing up to $15 million has been provided for Canadian capital equipment and engineering services to be used in IADB-sponsored development projects.

These developments have enhanced the opportunities for selling Canadian equipment, materials and services in the countries where needs are greatest. But, as in the commercial world, these opportunities must be followed up diligently and in the right way if they are to result in orders or contracts for individual Canadian firms. It is the company which creates in the ultimate customer a desire to use its particular product or service that wins the business.

To point out the opportunities that these international financing organizations make possible and to explain the procurement process, *Foreign Trade* has once again prepared a special issue. This contains articles on all the main organizations in this field, plus an important speech by the Minister for External Affairs on how the business community can share in Canada's expanded aid program. And as a further encouragement, we have included case histories of a number of engineering firms that are at work on aid-financed projects in a number of countries.

In preparing this special feature, the *Foreign Trade* staff has had the co-operation of the Department's Financing and Aid Division and Mechanical Equipment and Engineering Division and the assistance of the New York, Paris, Rome, Tel Aviv, Accra and Manila offices of the Trade Commissioner Service.

It is our hope that the articles and case histories brought together here will serve the purpose for which the issue was planned—encouraging more Canadian firms to seek out this type of business abroad.●



The World Bank Group

LARRY H. BROWN, *Financing and Aid Division.*

- **World Bank has just celebrated its 20th birthday; in two decades, has extended loans of over U.S.$9.5 billion.**
- **IDA, born in 1960, has loaned over $1.3 billion to developing countries.**
- **IFC, set up in 1956, makes loans to promote private sector in developing countries.**
- **Canadians have obtained and can obtain business on projects financed by the Group.**

THE International Bank for Reconstruction and Development, frequently called the World Bank, has just celebrated its twentieth birthday. With the International Finance Corporation (IFC) and the International Development Association (IDA), the International Bank for Reconstruction and Development (IBRD) forms the World Bank Group, which for the fourth year out of the past five has committed over a billion dollars annually to finance international development. Disbursements from loans made by the Group increased last year to U.S.$957 million from U.S. $844 million in the previous Bank year.

World Bank

Founded at the Bretton Woods Conference in 1944 to help finance postwar reconstruction, the International Bank for Reconstruction and Development's primary role is now to assist the growth of the developing countries. Since it began operations in 1946, it has extended loans of over U.S.$9.5 billion.

To finance its operations, the Bank has a subscribed capitalization of $22,606,800,000 of which 10 per cent has been paid in and 90 per cent is callable. With a membership of 103, virtually all countries outside the Sino-Soviet Bloc are members. Canada is one of the Bank's charter members and has subscribed U.S.$792 million, or 3.33 per cent of the Bank's authorized capital of $24 billion. Like other Bank members, Canada has paid in 10 per cent (U.S.$79.2 million) of its subscription and the remainder, or U.S.$675 million, is callable as a guarantee for the Bank's borrowing operations. To augment its paid-in resources the World Bank borrows widely in world markets and has placed five bond issues in Canada. The latest of these was a Can.$20 million issue floated last February.

The IBRD offers long-term financing (generally 15 to 25 years) for capital projects at commercial rates of interest. It is not intended to compete with private capital and will not participate in projects for which financing is available from other sources at reasonable rates of interest. The interest rate for the Bank's loans to developing countries is now 6 per cent per annum and for loans to countries able to raise most of their own capital needs from market sources the Bank charges up to 7 per cent.

International Development Association

Loans on concessionary terms are provided by the IBRD's affiliate organization, the International Development Association, which was created in 1960 to make development capital available to member countries unable to raise all their external financing requirements on conventional terms and interest rates. The International Development Association provides 50-year loans which are interest-free and which carry only a ¾ of 1 per cent service charge. As of June 30, 1966, it had extended over $1.3 billion on concessional terms to less developed countries.

Since the IDA's inception in 1960, Canada has undertaken commitments to contribute U.S.$75.7 million to its resources, of which U.S.$32.2 million has been paid in as of October 3, 1966. Total membership of the IDA, of which Canada is a charter member, now includes 96 developed and developing nations.

Types of Project Financed

The use of IDA development credits is governed primarily by the balance-of-payments situation of the recipient country and the Association provides credits for essentially the same type of projects as the IBRD finances. Recently, to enable fuller utilization of existing production capacity in countries such as India and Pakistan, the IDA has begun to extend credits to finance the import of components and raw materials. Both the IDA and the IBRD also participate in joint financing ventures. An example of this is the recent arrangement under which the IBRD lent the Federal Electricity Commission of Mexico $110 million to help finance a national power expansion program while a number of countries, including Canada, agreed to make additional bilateral export credit financing available to finance part of any export orders for the project their suppliers won under international competitive bidding.

Over the years the majority of all IBRD loans and IDA credits have been for basic projects in the electric power, transportation, agricultural

and industrial fields, principally in Asia and the Middle East, Latin America and Africa. The transportation sector received more Bank loans and IDA credits last year than did any other; second place was shared by the electric power and industry sectors. Lending for agriculture and educational projects also increased. (For details see table.)

International Finance Corporation

Funds for industrial development may come from any member of the World Bank Group, but the International Finance Corporation acts for the whole group in the technical and financial appraisal of all proposals for industrial financing.

The International Finance Corporation was established in 1956 to promote the growth of the private sector, particularly in less developed countries. The Corporation has 81 members and a paid-in capital of $99 million. Canada, as a member, has subscribed $3.6 million to the Corporation's capital stock. The IFC obtains additional resources from the sale of investments and recently the World Bank has agreed to lend it up to $400 million.

The Corporation provides loan and equity capital for productive private ventures on commercial terms without the requirement of a government guarantee. In its ten years of operations it has undertaken commitments amounting to $173 million in 100 enterprises in 34 countries. Most of its commitments to date have been to enterprises which contribute to economic development in the iron and steel, pulp and paper, textiles, cement and fertilizer fields. It also provides support for private development finance companies.

Canadians Obtain Business

Canadian firms have obtained a substantial number of contracts for engineering services and capital equipment under IBRD and IDA financing in the past. These were to provide a wide variety of items, ranging from industrial raw materials to engineering and consultant services and from diesel locomotives to agricultural equipment and cattle. The main fields for which Canadian goods and services were provided include agriculture, engineering and civil works,

BANK LOANS AND IDA CREDITS 1965-66 BY PURPOSE

	Bank	IDA	Total
	(in millions of U.S.$)		
Transportation			
Basutoland—Roads	.....	4.10	4.10
Finland—Roads	20.00	.....	20.00
India—Railways	.....	68.00	68.00
Japan—Roads	25.00	.....	25.00
Kenya, Tanzania & Uganda-Rlys—East African Common Services Authority	38.00	.....	38.00
Liberia—Roads	1.00	.....	1.00
New Zealand—Railways	42.00	.....	42.00
Nigeria—Roads	32.00	.....	32.00
Paraguay—Roads	2.10	.....	2.10
Paraguay—Ports	2.75	.....	2.75
Peru—Roads	33.00	.....	33.00
Peru—Ports	9.10	.....	9.10
Spain—Ports	40.00	.....	40.00
Sudan—Railways	31.00	.....	31.00
Thailand—Roads	36.00	.....	36.00
	311.95	72.10	384.05
Electric Power			
Brazil	49.00	.....	49.00
Jamaica	22.00	.....	22.00
Mexico	110.00	.....	110.00
New Zealand	20.50	.....	20.50
Portugal	30.00	.....	30.00
India—Indus Basin	.....	23.00	23.00
	231.50	23.00	254.50
Industry			
Colombia—Development Finance Company	25.00	.....	25.00
India—Industrial imports	.....	100.00	100.00
Iran—Development Finance Company	10.00	.....	10.00
Israel—Development Finance Company	20.00	.....	20.00
Morocco—Development Finance Company	17.50	.....	17.50
Pakistan—Development Finance Company	30.00	.....	30.00
Pakistan—Industrial imports	.....	25.00	25.00
Tunisia—Development Finance Company	5.00	.....	5.00
	107.50	125.00	232.50
Telecommunications			
Ethiopia	4.80	.....	4.80
Venezuela	37.00	.....	37.00
	41.80	.....	41.80
Agriculture			
Colombia—Livestock development	16.70	.....	16.70
Malaysia—Irrigation	45.00	.....	45.00
Mexico—Agricultural credit	25.00	.....	25.00
Mexico—Irrigation	19.00	.....	19.00
Morocco—Agricultural credit	10.00	.....	10.00
Pakistan—Grain storage	.....	19.20	19.20
Paraguay—Livestock development	.....	7.50	7.50
Philippines—Agricultural credit	5.00	.....	5.00
Tanzania—Agricultural credit	.....	5.00	5.00
	120.70	31.70	152.40
Education			
Chile	2.75	.....	2.75
Ethiopia	.....	7.20	7.20
Morocco	.....	11.00	11.00
Pakistan	.....	13.00	13.00
	2.75	31.20	33.95
Water Supply			
Burundi—Bujumbura water system	.....	1.10	1.10
Venezuela—Caracas water system	21.30	.....	21.30
	21.30	1.10	22.40
Engineering Study			
Guinea	1.70	.....	1.70
Total	**839.20**	**284.10**	**1,123.30**

More Power for Bolivia

CANADIAN technology and experience in the hydroelectric power field are being used in solving power problems in many countries. One example is Bolivia, where the Montreal Engineering Company Limited has just finished one project and completes a second this month. In both cases feasibility studies were finished some time ago and international financing is providing part of the funds. The first project was the Chururaqui power development on the Zongo River, where the first unit went into operation in January and the project was completed in October. The construction period was approximately three years and the output from the plant will supply power to the La Paz region. This project was financed in part by a loan of $5 million from the International Development Association.

The second project, on the Corani River, is intended to supply power to the Cochabamba region and the tin-mining area south of Oruro. This project is being carried out by the Government of Bolivia through its agency, Empresa Nacional de Electricidad, with $10 million supplied by IDA and $5 million by the Inter-American Development Bank.

Montreal Engineering's connection with Bolivia began many years ago when it commenced working for a Canadian-owned power company there. Early in the 1960's, MECO learned that the Bolivian Government was considering ways to supply the additional power requirements of the Cochabamba region. It made contact with the appropriate government agency, presented a proposal, and won the contract for a feasibility study. The subsequent investigation showed that power could be furnished most economically by developing the Corani River. The feasibility report was studied by the Inter-American Development Bank and several months later MECO was retained to carry out detailed site studies and to draw up specifications for the development, including transmission lines to Cochabamba. When this report was completed, it was submitted to international financing agencies to support Bolivia's request for aid.

Projects like these take time to jell and the eight-month pause that ensued was not unexpected. Then the Bolivian Government asked the Canadian company to do some supplementary studies to supply further details. Finally, about two years after the first feasibility study was presented, MECO won the contract to design and supervise the construction of the power project. Work actually began in June 1964; a U.S. firm won the main construction contract. It will be supplying power to Cochabamba this month.

On the Corani project, Montreal Engineering supplied a team of engineers who worked in close collaboration with Empresa Nacional de Electricidad and assisted them in developing an engineering group, as well as organizing a purchasing department and local expediters—this in addition to providing assistance in constructing the project. A group of local engineers has been trained to operate the system efficiently.

What were the factors that influenced the Bolivian Government to award the consulting engineering contract to MECO? First of all, according to a MECO engineer, the company was already known to many Bolivians because of the work it carried out for the Canadian-owned power company. Just as important, it was well and favourably known to the World Bank group (to which the International Development Association belongs) and also to the Inter-American Development Bank authorities. MECO points out that it is not enough to ensure that the External Aid Office in Canada is aware of your qualifications and experience; you yourself must make contact with the international financing agencies, keep in touch with their personnel, and make certain that they know what your firm has done and can do. Getting business is a "combination of knowing where the opportunities are best and taking advantage of them," says a MECO man. This means acting at once on the first hint of a project.

Montreal Engineering is probably best known in Latin America for its study, just completed, of the hydroelectric resources of South Central Brazil. This study, undertaken in concert with another Canadian and a U.S. firm, covered 483,000 square miles and was financed by the UN Special Fund. The World Bank was executing agency and work began in 1962. This study may be extended geographically; this would mean two more years' work for the company.

On the other side of the world, Montreal Engineering is carrying out a number of assignments under foreign aid and Export Credits Insurance financing, including the conventional engineering for the Rajasthan atomic power project in India. ●

Canadians Supervise Laotian Project

IN TINY LAOS, preliminary work is beginning on a $24 million hydroelectric project financed by an international consortium in which Canada participates. And it is a Canadian engineering firm—Acres International Limited of Niagara Falls—that has been selected to oversee the engineering and construction of the huge development. The World Bank administers the funds provided for it and it is the Bank that has selected Acres to supervise the job on its behalf and for the eventual owners, the Laotian Government.

The project will be built on the Nam Ngum River, a tributary of the Mekong, and will produce some 30,000 kw. of power initially and some 120,000 eventually. This will benefit not only Laos itself, but also neighbouring Thailand, which is providing a million dollars worth of cement as its contribution. At the moment, power in Laos comes from diesel generators only and the cost is high.

How did the Canadian company win this contract in the face of competition from firms in four other countries? Mr. R. Pillman, Acres International Limited's President, points out that his firm has carried out a number of assignments for the Bank and other international agencies during the last five years.

It has just finished one of these, the Los Esclavos Project in Guatemala. This assignment followed on from a study of the power resources and requirements of this country that Acres carried out for the World Bank in 1961-62. The need for the Los Esclavos Project was determined during the study. Acres was awarded the design. Financing was arranged by the IADB. (The major construction contracts for this project went to a Canadian construction firm.)

There is no doubt that Acres' continued close contacts with the World Bank personnel and the fact that the Bank has a high regard for Acres' work helped Acres to learn about the Nam Ngum Project and, eventually, to land it. Contacts in Bangkok with the Mekong Committee and ECAFE, who fostered the project, contributed also to Acres knowledge of the region and their preparedness for undertaking the work.

The Acres firm is acting as managers of the project, which will take up to five years to complete. It will also help set up a national organization to operate the power station and other facilities and will help train the staff. A resident engineer from Acres is already on site and three or four more Canadians will be joining him shortly. Detailed design and supervision of construction are being provided by a Japanese consulting firm under Acres' direction.

This is not Acres' only assignment in Asia. In Taiwan it is conducting a study of two river basins and developing schemes for providing water for irrigation and hydroelectric power. This project is financed by the UN Special Fund. The United Nations is the executing agency. The on-site work is finished and the report for the UN is now being prepared.

Recently, Acres has been engaged by Mexico to review power programs in that country. Again, the World Bank is involved in financing. ●

—IBRD photo

World Bank loans go primarily to finance projects that will furnish electric power or improve internal transportation. In Iran, for example, a $72 million IBRD loan was earmarked for improved roads, badly needed, as the picture proves.

electric power, communications, transportation and industrial equipment and materials.

Total IBRD-financed expenditures in Canada to June 30, 1966, amounted to $165 million, including interest payments on Bank borrowings in Canada. Of this, $7.2 million was spent in Canada during the past year. Identifiable direct IDA expenditures in Canada from its formation in 1960 to the end of August 1966 reached U.S.$14.8 million, including $3.7 million during the previous 12 months.

How to Obtain Business

Business financed by the World Bank Group is very similar to normal commercial business and the same sales promotion techniques apply. Contracts are open to international competition and Canadians are in all instances eligible to compete.

Contracts are let by the borrowing authority in the country receiving the loan and equipment contracts are awarded on the basis of competitive tender. Consulting engineers for projects financed by the World Bank Group are selected by the recipient through negotiation and contracts are awarded on the basis of experience, staff and capacity to handle the job. Although the Bank reviews all contract awards, the only contracts it awards are Bank-financed project and sector studies, and engineering studies administered by the Bank when acting as executing agency for the United Nations Development Program (UN Special Fund). (For further information on UN Development Program business see article on page 10.)

The staff of the World Bank has prepared guidelines on procurement under World Bank loans and IDA credits. The revised guidelines just published on *Uses of Consultants by the World Bank and Its Borrowers* are reproduced on page 8. Similar guidelines on equipment contracts are being revised and will be made available in *Foreign Trade* shortly.

Information on projects that the Bank has agreed to finance is provided through World Bank press releases. Interested Canadian firms should write to Bank headquarters in Washington to have their names put on the mailing list. It then becomes the company's responsibility to get in touch with the proper authority in the recipient country and obtain the necessary tender documents for any project in which it is interested.

Frequently, however, equipment and construction tenders are called before Bank financing has been authorized and this is also true of awards for engineering contracts. Consequently, firms should make themselves known in advance to the Canadian Trade Commissioners and local authorities in the areas in which they are interested and also to the Commodities and Industries Services of the Department of Trade and Commerce in Ottawa and to the Commercial Section of the Canadian Embassy in Washington, which maintains liaison with Bank headquarters. Consulting firms interested in these Bank-financed project and sector studies, and in UN Development Program studies administered by the Bank as executing agency, should also ensure that their credentials are on file at World Bank headquarters. ●

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How the World Bank and Its Borrowers Use Consultants*

BOTH individual consultants and consulting firms are employed by the Bank and its borrowers. The services required from them may take many forms, ranging from engineering, architecture, agriculture and agronomy to economics and management. A basic requirement, in addition to being fully competent for the task at hand, is that the selectee shall be from a member country of the Bank or from Switzerland.

Individual Consultants

Project appraisal and project supervision are responsibilities of the Projects Department of the Bank and are carried out normally by its regular staff. When unusual specialization is required or the work load is too great, consultants are employed as individuals, usually on a short-term basis. Such consultants are required, after termination of employment, to abstain from any subsequent work on the same project, except as agreed by the Bank. The work and responsibility of a consultant individually employed are comparable to that of a staff member of the Bank. His competence and experience must be known to the Bank before undertaking a field assignment.

Consulting Firms

For projects financed by Bank loans, consultants are chosen and employed by borrowers with Bank approval. Borrowers are required to employ consulting firms whenever their own technical resources are judged by the Bank to be inadequate for the task at hand. The employment of domestic firms is encouraged where such firms are found to be qualified, either alone or in combination with foreign firms.

The services of consulting organizations are utilized by the Bank in connection with technical assistance financed by the Bank and with studies for which it is the executing agency for the United Nations Development Program. The selection of firms for these purposes is made by the Bank, with concurrence of the beneficiary.

Selection Processes

The selection of a consulting firm for a particular assignment, whether by Bank or borrower, should begin with the preparation of a reasonably sized list of firms claiming expertise in the field. The list may then be shortened by detailed studies of each firm's experience and capabilities until four or five remain as comprising a final list to receive invitations for proposals. It is desirable that borrowers submit to the Bank the final list of consultants before invitations for proposals are sent out so that the Bank may satisfy itself that the firms are qualified to perform the work. Invitations should define the objectives of the undertaking and stipulate the conditions under which the work is to be performed. It should be clearly indicated that financial terms are not desired at this stage; that selection will be made entirely on the basis of qualifications to perform the work and not on price. Consultants should furnish, as a part of their proposals, estimates of the time required both in the field and the home office to comply with the terms of reference, as well as the names and qualifications of those who would comprise the team.

Proposals, when received, should be carefully analyzed and compared with respect to plans of approach, schedules, experience and capabilities of personnel to be assigned, the quality of supervisory leadership to be furnished, attention to be given by principals of the firm, facilities of the home office, and the assistance, if any, that may be available from others. Familiarity with the language and customs of the country in which the work is to be performed should be given due consideration. After selection has been made of a firm considered to be best qualified for the assignment, negotiations should be opened in order to agree upon the financial terms of the contract.

The firm selected should submit a statement of its estimated costs and proposed remuneration and be ready to justify the elements involved. If the proposed financial terms appear reasonable, a contract should be entered into. If the proposed charges appear too high, efforts should be made to reach a mutually satisfactory agreement. If this is not possible, negotiations should be terminated and opened with the firm next in line.

When the Bank makes the selection, the names of firms to be solicited for proposals are usually submitted to the beneficiary for comment and statement of any objections before the invitations are sent out.

Duties of Consulting Engineers Employed by Borrowers

Of the various kinds of consultants that borrowers may use in connection with projects financed by Bank loans, engineering firms are most frequently needed. Their functions fall generally into three ranges of activity:

(a) Preliminary investigations and reports concerning feasibility, economic and financial justification, general layout and design, and estimated cost of the project; the time required for its construction, etc.

(b) The preparation of detailed designs, specifications and contract documents, the analysis of bids and recommendations thereon, etc.

(c) Supervision of the execution of the project including sometimes its operation for an initial period.

The duties of consulting engineers in connection with a project financed by the Bank depend upon the circumstances in each case. They usually include all three of the categories listed above, but in some cases preliminary investigations and general designs may have been carried out in a satisfactory manner before the project is submitted to the Bank for consideration. The consulting engineer's work will then be limited to categories (b) and (c). It is normally essential that functions (b) and (c) shall be carried out by the same firm, and if a firm has already carried out functions (a), there are usually many advantages in appointing the same firm to carry out also functions (b) and (c).

A consulting firm whose terms of reference include the preparation of final designs and specifications is responsible for the accuracy and suitability of its work, and no modifications should be made without its consent. With regard to other matters, the consulting firm will ordinarily act as an adviser to the borrower on all technical problems, with authority to make final decisions within such limits as may be prescribed by the borrower. Should the consultant, however, feel strongly on a matter involving professional judgment, the firm should have the right to insist that the matter be raised for discussion with the Bank.

Categories of Consulting Engineer Firms

Consulting engineer firms fall generally into one of the following categories:

*References to the Bank, to Bank loans and to borrowers are applicable to IDA, IDA credits and beneficiaries. This information is reproduced by permission of the World Bank.

(a) Firms of independent consulting engineers.

(b) Firms which combine the functions of consulting engineers with those of contractors, or which are associated with, or affiliates of, or owned by contractors.

(c) Consulting engineering affiliates of manufacturers, or manufacturers with departments or design offices offering services as consulting engineers.

Firms in category (a) are acceptable, providing their qualifications are suitable for the work in question. Firms in categories (b) and (c), even though qualified, are acceptable only if they agree to limit their role to that of consulting engineer and will disqualify themselves and their associates for work in any other capacity on the same project. In the case of category (c) firms, it becomes doubly important to erect safeguards, not only to insure that affiliates will be disqualified from future bidding on any part of the project, but that specifications will be impartial and can meet with compliance on a competitive basis.

Responsibility of Borrowers to Prepare Own Lists of Firms for Consideration

Whether the need is for a consulting engineer firm or consultants of another category, it is the responsibility of a borrower to prepare his list from which to make a selection. The Bank will indicate its approval or disapproval of firms on such lists but will refrain from making specific nominations or suggestions, unless it should happen that the task to be performed is of such a unique character that only a few qualified firms may be found to accomplish it.

Sources of Information Available to Borrowers about Consultants

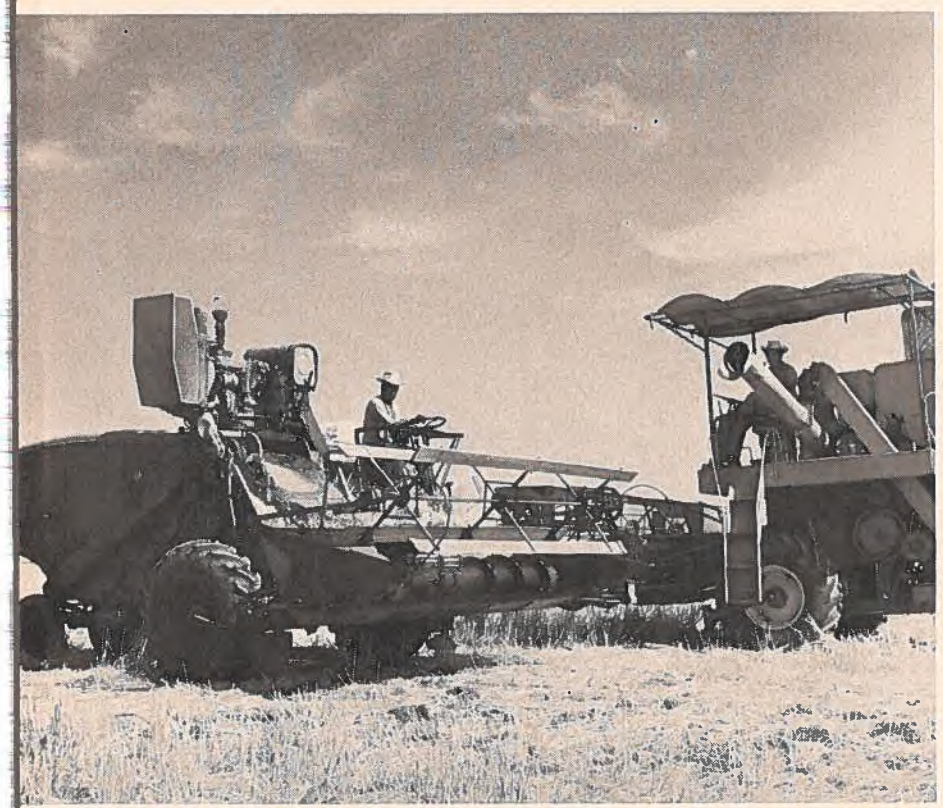
A borrower accustomed to using consulting engineers will ordinarily have no difficulty in choosing the particular firm he should employ, or in preparing a list of firms if he does not have a single candidate. A borrower without much experience in such matters may prepare a list from recommendations by qualified sources such as other employers or the various associations of consulting engineers. The diplomatic missions to the borrower's country will usually be pleased to furnish information about qualified consulting engineers in their countries, or the same information can be obtained through the borrower's own diplomatic missions. When the borrower has prepared his list, he should present it to the Bank in order that the Bank may inform him whether the firms on the list would be acceptable for consideration for the work proposed.

Bank Responsibility to Maintain Information on Consulting Engineers

In order that the Bank may be able to judge the acceptability of firms chosen or proposed by borrowers, it maintains information concerning the capabilities and experience of a large number of consultants. This information, which is generally supplied voluntarily, is kept only for consulting firms of member countries and Switzerland. The fact that the Bank has been supplied with information about a firm does not entitle that firm to any work connected with the Bank nor does it indicate that the Bank will approve its appointment for any specific project. In other words, the Bank has no list of approved consulting firms.

Responsibilities of Consulting Engineers

After a consulting firm satisfactory to the borrower and the Bank has been chosen, the Bank's primary interest is to see that the responsibilities of the consultant are clearly set out in his contract with the borrower and that he is fully utilized in carrying out those responsibilities. To achieve this, it is necessary in most cases to hold discussions with the borrower and his proposed consultant to agree on terms of reference for inclusion in the contract, and to insure not only that the consulting engineer is aware of the terms and conditions of his employment but also that the borrower is aware of the responsibilities and authority which the consulting engineer is going to bear on his behalf. During these discussions, the Bank should make clear any requirements which it may have in regard to the work, and satisfy itself that the borrower will give to the consulting engineers sufficient power and discretionary rights to exercise their responsibilities and carry out the terms of their contract.



—IBRD photo

Combines in Mexico's Yaqui Valley harvest one of the biggest wheat crops ever raised there. Irrigation projects financed by the World Bank made this improvement in yield possible and contributed to a sizable increase in the Mexican farm income.

The United Nations Development Program

A. A. LOMAS, *Consul and Trade Commissioner, New York.*

- **UN Special Fund and Technical Assistance Program merged this year into UNDP.**
- **Program has established guidelines for determining projects it will finance in the developing countries.**
- **Canadians should watch for opportunities to sell both consulting services and project equipment.**

"THE action of the General Assembly in establishing the UN Development Program as a dynamic and creative new partnership for progress serves the deepest, most abiding interests of all nations, developed and developing alike." Thus UN Secretary General U Thant marked the merger at the beginning of 1966 of two of the UN's largest and most successful development assistance operations—the Expanded Program of Technical Assistance and the UN Special Fund—into the new United Nations Development Program.

Since the establishment of the Expanded Program of Technical Assistance in 1950 the UN has steadily increased its commitment to the developing countries. The formation of the UN Special Fund in 1959 and its activities since that date have provided a major stimulus to UN-sponsored assistance.

Amalgamation of the two programs, while retaining their characteristic methods and proven techniques, now provides increased effectiveness through unified policy direction, management and field facilities. As

—UN photo

A Canadian drilling expert (left) and a Guatemalan geologist inspect core samples of rock from 500 feet underground as part of a power-project study financed by the UN Special Fund and carried out in Guatemala under the general supervision of the World Bank.

a result, the UNDP has become the world's largest program of multilateral pre-investment assistance.

For readers of *Foreign Trade* it is probably useful to examine the UNDP from two viewpoints: its organization, aims and operations, and the opportunities it offers to Canadian suppliers of equipment and engineering services.

The UNDP, it must be remembered, is a UN program established to serve the member nations. Contributions from member nations, each according to its ability, provide its financial resources and over-all control by the member governments is maintained by the 37-nation Governing Council, of which Canada is a member. Developed and developing countries thus share in policy formulation and in guiding the work of the Administrator and his permanent secretariat. In addition, each UNDP project includes a requirement for counterpart funds from each recipient country, ensuring that these countries have a definite involvement in the program.

Guidelines Set Out

Requests for assistance come to the UNDP from governments of the developing countries and it has set out certain guidelines to help in determining which projects may be favourably recommended.

In essence, these criteria require that projects be:

- Selected on the basis of the requesting government's priority needs.
- Capable of having a direct influence on the economic and social development of the country.
- Designed, where possible, for an early transfer to the recipient country.
- Integrated into over-all national development efforts.
- Co-ordinated, where appropriate, with other multilateral and bilateral programs.
- Free from political considerations of any kind.

Projects can cover many fields—surveys and feasibility studies, applied research, advisory and consultant services, centres for training and education, and fellowships for nationals

Executing Agencies for UNDP

The following organizations act as executing agencies for UNDP projects. Also shown is the address for contacts on sales of products and services and the location of the Canadian Trade Commissioner responsible for direct liaison with each agency.

AGENCY	LIAISON
FAO Director, Office of General Services Food and Agriculture Organization Viale delle Terme di Caracalla Rome, Italy	**FAO** Commercial Counsellor Canadian Embassy Via G. B. de Rossi 27 Rome, Italy
ILO Assistant Chief, General Services Branch International Labour Organization 154, Rue de Lausanne Geneva, Switzerland	**ILO, ITU, WHO, UPU, WMO** Commercial Counsellor Canadian Embassy Kirchenfeldstrasse 88 Berne, Switzerland
ITU Chief, Operations Division (Technical Co-operation) International Telecommunication Union Place des Nations Geneva, Switzerland	**UNESCO** Minister-Counsellor (Economic/Commercial) Canadian Embassy 35 Avenue Montaigne Paris 8e, France
WHO Chief of Supply World Health Organization Palais des Nations Geneva, Switzerland	**IBRD** Commercial Counsellor Canadian Embassy 1746 Massachusetts Avenue, N.W. Washington D.C. 20036
UPU Secretary, Technical Assistance Section Universal Postal Union Schosshaldenstrasse 46 Berne 15, Switzerland	**ICAO** Chief, Mechanical Equipment and Engineering Division Dept. of Trade & Commerce Wellington Street Ottawa, Ontario.
WMO Chief, Program Management World Meteorological Organization Avenue Giuseppe Motta Geneva, Switzerland	**IAEA** Minister-Counsellor (Commercial) Canadian Embassy P.O. Box 190 Vienna 1/8 Vienna II, Austria
UNESCO Chief, Field Equipment Division United Nations Educational, Scientific and Cultural Organization UNESCO House Place de Fontenoy Paris 7e, France	**UN** Consul and Trade Commissioner Canadian Consulate General 680 Fifth Avenue New York, N.Y., 10019
IBRD International Bank for Reconstruction and Development 1818 H Street N.W. Washington D.C. 20433	
ICAO International Civil Aviation Organization International Aviation Building 1080 University Street Montreal 3, Quebec.	
IAEA International Atomic Energy Agency Kaerntnerring 11 Vienna 1, Austria	
UN Chief, Purchase and Transportation Service Office of General Services United Nations New York, N.Y. 10017	

Transportation Study in Somalia

IN the spring of 1965, the International Bank for Reconstruction and Development requested proposals from various engineering firms in Europe and from L. G. Grimble & Associates Ltd. in Edmonton, Alberta, for two highway feasibility studies and an over-all transportation survey for the Government of Somalia. These studies were financed by the United Nations Special Fund with the World Bank acting as executing agency. The company is registered with the Bank as consulting engineers.

L. G. Grimble & Associates specializes in highway and bridge engineering and transportation surveys, but because the studies included a consideration of harbours, coastal shipping and resources, the firm of Project Planning Associates Ltd. of Toronto was included as part of a joint venture.

The terms of reference for the transportation survey also required a report outlining recommended procedures for a future comprehensive transportation survey for Somalia. To integrate fully the economic and engineering considerations in a future study, computers were considered essential, and this phase was carried out by Enelco Ltd. of Toronto.

The contract was signed in July 1965 and the engineering crews left Canada in late August. Headquarters was set up in Mogadiscio, the capital of Somalia, for liaison purposes and to carry out the major portion of the transportation survey. A field headquarters was set up in Hargeisa, Northern Somalia, to deal with the two highway feasibility studies and any of the transportation survey work which related to the Northern Region.

The field engineering crew consisted of 10 Canadian engineers and technicians. The company also hired additional specialists such as agriculturists, livestock experts, economists and industrial engineers. A total of 22 men including head office staff worked on the project.

The company's main difficulty was learning the capabilities of local contractors to help it make the best choice of staff. The engineers also had some trouble learning government procedure for processing accounts. Since the army of Somalia is exceptionally security-conscious, it was also difficult to obtain permission both to take pictures of roads, airports and harbours and to make charter flights.

Field work on both studies was completed at the end of February 1966 and the reports were prepared when the crews returned to Canada. The original intention had been to do a large part of the drafting and report writing in Somalia. After the study started, however, the company realized that for administrative reasons it was more efficient to do this part of the work in Canada.

The final report was produced in four volumes and the first draft was handed to the Bank last April. One volume dealt with the two highway feasibility studies. This outlined the alternative locations studied and their economic feasibility. A second volume contained the maps, drawings, profiles, bridge drawings and typical highway sections for the highways involved.

The transportation survey report required a separate volume and recommended a five year plan of capital expenditure. It dealt with the existing and future highway network in Somalia and selected high-priority road and bridge projects for inclusion in the five year plan. It also outlined a program for airport construction and improvement as well as recommendations for the operation of Somali Airlines. It also dealt with harbour construction and operation, the implementation of coastal shipping and of river transport. The transportation survey considered (in as much detail as was possible in the time available) the financial position of the country and its economic potential.

The fourth volume dealt with the procedure for a second, more comprehensive transportation survey. This report recommended the establishment of a data bank to collect the necessary information for a future study and allow retrieval of information quickly and in a form suitable for use in transportation planning as well as many other studies, or in day-by-day operation of the Government. To establish the procedure for the application of computers to this assignment, it was necessary to adapt programs which were being developed at the Harvard Research Centre. Trial computer runs were then carried out, using data obtained in the Somali transportation survey. The results indicated the merit of this approach, particularly for developing countries that have started a systematic collection of statistical data.

During the course of the work it was necessary to exchange information with European consulting engineering firms working in Somalia as well as U.S. firms working in other countries in Africa. On the basis of these exchanges it became apparent that Canadian highway engineering and construction practice is probably better suited to the conditions to be found in the developing countries of the world than the European or, in some instances, the U.S. procedures. ●

of developing countries. In turn, these projects can cover almost every area of social and economic endeavour, including resource development, industrial productivity, agriculture, public utilities, education, public health and social services.

In drawing up requests, many factors must be considered, much background information must be provided for examination, and much expert assistance from UN sources is made available. When requests are received in UNDP headquarters in New York, they are closely evaluated by the Administrator's staff and representatives of other UN specialized agencies. If accepted, they are recommended to one of the semi-annual meetings of the UNDP Governing Council, where they are subject to still further scrutiny before final approval or rejection. Governing Council meetings are normally held in January and June and information on new groups of projects becomes available to interested companies at these times.

Executing Agencies

Once approved, projects become the particular responsibility of their executing agencies for implementation. These agencies (listed in the attached box) normally undertake projects in their own special fields. They continue to work closely with the UNDP administration but share direct responsibility with the recipient countries. The first phase of implementation involves a three-way agreement between the three parties on a detailed Plan of Operation setting out the responsibilities of each and the methods for carrying forward the necessary work.

For companies interested in selling goods or services for project implementation, the executing agencies at this stage become the principal points of contact. Meanwhile the Department of Trade and Commerce in Ottawa and the Consulate General in New York are at work bringing projects to the notice of Canadian companies. As mentioned, at the time of the Governing Council meetings, the Department's Mechanical Equipment and Engineering Division forwards a summary of the new projects to all firms which have expressed interest in foreign work. This resumé includes information on the scope and finances available for each project, its loca-

tion, general nature, duration, executing agency, any subcontracts included, and the types of equipment to be purchased. From this, companies are invited to select projects which may fit their capabilities and to request from the Commercial Division of the Consulate General in New York a copy of the more detailed Administrator's Recommendation for each project. When, on the basis of this consideration, it is decided which projects should be actively pursued, firms are advised to write to the appropriate executing agencies offering their products or services. To ensure consideration, companies should make certain that they have completed the agencies' requirements for registration as subcontractors or suppliers and this information should be updated regularly.

Firms should also advise the Canadian Trade Commissioner in the recipient country and the Trade Commissioner responsible for liaison with the executing agency of their interest. Both of these offices may be able to support a company's request for consideration and can probably provide further background on the projects.

With the expansion of the Development Program, there has been increasing sophistication in the implementation procedures of the executing agencies. Procurement of goods and services has become steadily more efficient. The result is that a company's registration by the approved and standard forms is necessary for consideration as a supplier and the importance of supplying full information on products and services available cannot be over-emphasized. This standard registration, of course, should always be supplemented for given projects by additional pertinent information setting out the reasons why a particular company should be considered as a supplier.

Opportunities for Canadians

How important to Canadian business is the UNDP as a buyer of project equipment and consulting services? Recently a large U.S. bank devoted an issue of its International Newsletter to the question of business opportunities in the UN and reported that "consulting firms and equipment suppliers obtain contracts to carry out the surveys . . . Private firms often

Togo is Target for Spartan Air Services

ONE of Canada's top aerial survey companies, Spartan Air Services Ltd. of Ottawa, recently completed a geophysical survey of almost 50 per cent of the African country of Togo. Financed by the UN Special Fund, it was a United Nations' project and the first of its kind ever to be awarded to a Canadian company by the world organization.

Spartan Air Services started its successful bid for the contract by registering with the United Nations as an aerial survey company. This was done by sending a letter to the United Nations' purchasing agent outlining the firm's capabilities and former experience.

On June 6, 1963, with seven other survey organizations from Canada and other countries, the company was invited to submit a proposal for the surveying of about 20,000 linear kilometers (some 20,000 square kilometers at a line spacing of one kilometer). The survey was to be both magnetic and radiometric and was to be used as an aid in the search for minerals in Togo. The proposal itself was based on information obtained by a small group which went out to act as pathfinders. They were particularly interested in such details as hotel accommodation, living expenses, and aircraft refuelling and maintenance facilities. On many of these preliminary missions, Spartan has used the services of the Canadian Trade Commissioner stationed in the area; he can provide information on local conditions as easily and precisely as anybody. The UN accepted Spartan's proposal on September 16, 1963, with work to begin on November 1, 1963. The reasons given for the choice included the firm's proposed method of attack as well as its experience on similar jobs.

A Beechcraft D 18S aircraft was flown from Canada late in October 1963 but because of bad weather over the North Atlantic which forced it to remain in Greenland for one week, did not arrive in Lome, the capital of Togo, until the 6th of November. Unfortunately, the geophysical equipment which was to be installed in the aircraft was even further delayed in transit via commercial airlines and it did not reach Togo until November 10. It was then installed in the survey aircraft. After proper flight testing, the first survey flight was made on November 14.

Just before the actual survey began, the UN officials in charge of the survey decided to consolidate the original two areas totalling 20,000 square kilometers into one larger area totalling 26,000 square kilometers. With this change, it was necessary to fly the new portion using small-scale maps as a navigation aid rather than aerial photographs which had been acquired for the original areas. This made navigation very difficult and the situation was not helped by the early onset of the Harmattan winds which blow fine sand down from the deserts to the north and limit visibility to less than one mile. In spite of the difficulties of navigation, the entire area of 26,000 linear kilometers was completed on January 31, 1964, just two and a half months after the start and the aircraft left for Canada on February 4, 1964.

Among the operational difficulties encountered were the closing of the airport for several days in order to make necessary repairs to the runways, and a mercy flight which the Togolese Government requested Spartan to make to evacuate the victims of an automobile accident in Northern Togo to Abidjan, the capital of the Ivory Coast. The accident victims were part of an official Chinese delegation to Togo studying economic conditions in that country. In addition to the survey personnel, a geophysicist on Spartan's Canadian staff was sent to Togo to take samples of the various rock types and to measure their magnetic susceptibility. Well over a hundred samples were collected and measured as an aid to the final interpretation of the airborne magnetic data.

The final interpretation was made by one of Spartan's consultants, and the final maps, with the interpretive report and recommendations, were delivered to the United Nations on August 20, 1964, less than 11 months after the contract had been awarded. •

participate in the implementation phase also. Feasibility studies sometimes reveal attractive private investment opportunities . . . (and) infrastructure projects may yield major service, construction and supply contracts".*

Current UNDP activity includes some 2,000 projects ranging in cost from a few thousand to several million dollars each, and from a few weeks to many years in duration. At the June 1966 Governing Council meeting alone, 57 new projects with UNDP financing totalling U.S. $63.1 million were approved. Of this amount, U.S. $10 million will be spent on subcontracts for consulting and other services, including transport surveys, power studies, water supply and waste disposal investigations, airborne surveys, management studies, drilling work, etc. Another U.S. $11.4 million will be spent for equipment such as teaching aids, logging and lumbering machinery, fishing vessels and gear, farm machinery, vehicles, pumps, etc.

A number of important subcontracts have already been received by Canadian consulting engineers whose performance records have been excellent. The expansion of the program and the steady increase in the ratio of projects which include consulting subcontracts suggest important opportunities for additional Canadian consultants in the future. Canadian sales of project equipment have not reached comparable levels, however, and it is suggested that suppliers of any of the following general types of products should investigate business potential in the UNDP through the Department of Trade and Commerce:

Workshop, teaching and laboratory equipment

Drilling equipment

Agricultural machinery

Fishing gear

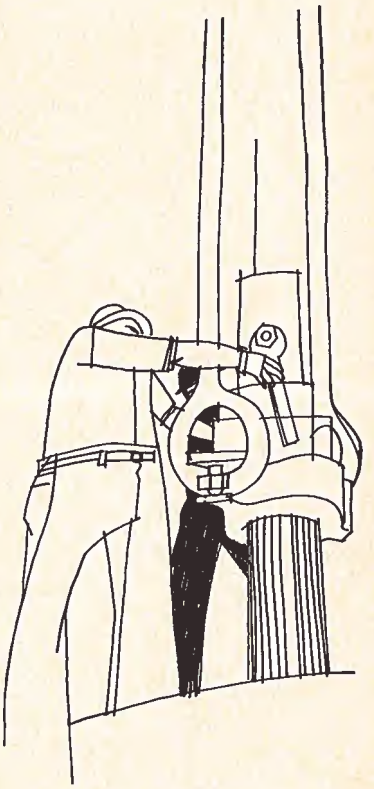
Vehicles

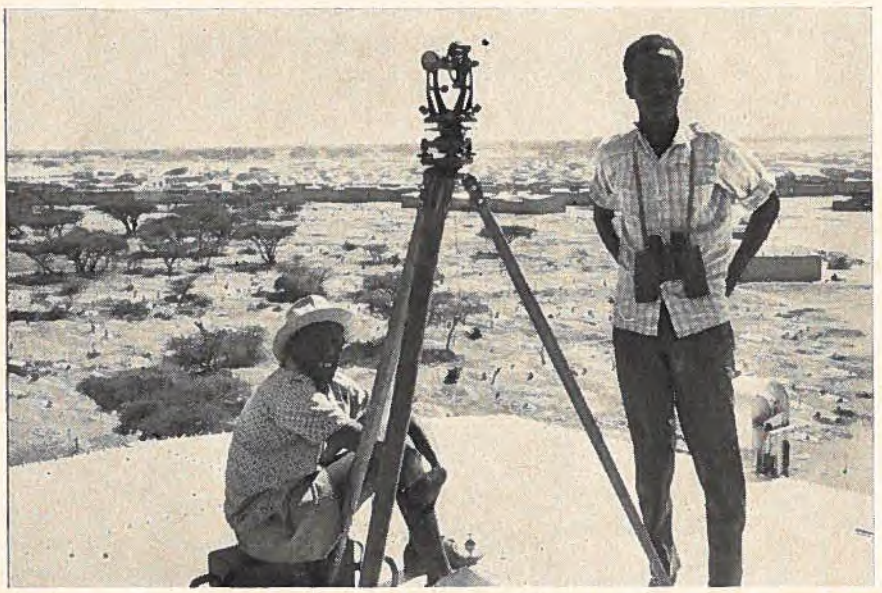
Logging and lumbering equipment

Communications equipment

*Irving Trust Company, International Letter, May 1965.

A list of the field offices of the UN Development Program and the Trade Commissioner post nearest each is available on request from "Foreign Trade."





These two Somalis formed part of the work crew for the highway feasibility and other transportation studies carried out in Somalia by an Edmonton consulting engineering firm. These men and their fellows worked under the direction of a party of ten Canadian engineers and technicians sent out from Grimble's head office.

The Food and Agriculture Organization

PETER FREYSENG, *Commercial Secretary, Rome.*

- **Aids developing countries by providing information and aid on agricultural, fisheries and forest development.**
- **Administers UNDP survey and pre-investment projects, financed by UN Special Fund.**
- **Will consider offers of Canadian consulting engineering and survey services if proper approach is made.**

WORLD FOOD SUPPLIES must treble by the turn of this century if the world's population, which will then exceed an estimated six billion, is to have enough to eat. At present up to one half of the present population of some three billion is undernourished.

To help meet this problem, the Food and Agriculture Organization of the United Nations (FAO), situated in Rome, Italy, stands ready to assist them. With its concern for the development and use of the world's farmlands, fisheries and forests, it has become one of the principal international bodies for channelling economic and technical aid to the developing nations. As such it offers growing opportunities for Canadian companies to provide consulting engineering and survey skills as well as specialized equipment for use in developing resources and production in many different parts of the world.

FAO and Special Fund

When FAO was first established by delegates from 42 countries meeting at Quebec City in 1945, it was seen as an agency for facilitating international consultation on agricultural problems, and for collecting, analyzing and disseminating information on all aspects of nutrition, food and agriculture, including fisheries and forestry development. This work, which still continues, emphasized the lack of technical knowledge in the developing countries and led to the creation of the UN Expanded Program of Technical Assistance in 1950. Under it, member countries made economic, agricultural and other experts available to more backward areas through UN agencies, of which the main one was FAO. This in turn led to the creation of the United Nations Special Fund in 1958, with cash contributions from many countries, including Canada, to finance the larger resource surveys, investment feasibility studies, pilot industries and training facilities which expert technical help suggested were necessary. In 1966 these two schemes were combined in the United Nations Development Program (UNDP) with headquarters in New York. (See article on page 10). The combined Program continues to use other UN organizations, particularly FAO, as executing agencies.

Growing Potential

It is FAO's role as administrator of about 40 per cent of the UNDP Special Fund survey and pre-investment projects which makes it worthwhile for Canadian companies to study and make contact with FAO. Its role in this field has expanded rapidly. The first meeting of the Governing Council of the Special Fund in 1959 allocated five projects and $11.0 million to FAO. By mid-1965 FAO had been assigned 210 Special Fund projects with a total Fund contribution of some $180 million and matching contributions worth roughly $220 million in counterpart funds from recipient countries. In 1966 FAO received over 50 more projects. These included subcontracting opportunities involving irrigation, harbour surveys, watershed feasibility studies, soil and water analyses, aerial photography and mapmaking, sawmill design and forest inventory, geophysical surveys and drilling. The projects will need equipment, including tractors, sawmill equipment, fishing vessels and gear, and survey and laboratory equipment.

The opportunities for Canadian firms fall into three main categories:

- Consulting engineering
- Aerial survey work
- Provision of equipment

Consulting Engineering

Once the UNDP has allocated funds for a project to FAO, FAO must draw up a plan of operations and negotiate a written agreement with the UNDP and the recipient government. This often takes months and sometimes years, particularly where regional projects involve more than one country. Under the written agreement, the responsibilities of FAO and the receiving country are defined for the project—with the former generally providing the expert help and equipment and the latter assuming responsibility for supporting staff, local transportation and buildings.

The main responsibility for drawing up the project plan of operations lies with the individual officers in the appropriate technical divisions of FAO. They are known as project supervisors. At present in drawing up the plan, the technical divisions take the basic decisions about whether a project should be undertaken by a

Assessing Thailand's Forest Resources

THE TROPICAL FORESTS OF Thailand have provided a Canadian company with a chance to make use of its expertise in gauging and planning the future of a developing nation's natural resources. Since May of this year, H. A. Simons (International) Ltd. of Vancouver has been hard at work on a comprehensive study of forest resources there and has just completed its report.

The study had been planned for some time. In November 1962 the Special Fund Governing Council of the United Nations approved a loan of $557,300 for the project and the Government of Thailand added a further $212,000. The study was to include the economic suitability of existing and potential sources of raw material for making pulp, paper and board; this involved surveys, feasibility studies and experiments, plus strengthening the country's Forest Department through the training of local staff. Also studied were the economic factors in setting up a paper and wallboard industry and experiments were carried out on the establishment and management of plantations of wood and bamboo species suitable for pulping. Aerial and ground surveys were used.

Word of the project and the invitation to tender came to the Canadians direct from the Food and Agriculture Organization of the UN. The company previously had taken care to register with FAO, the World Bank and other UN agencies, making sure that each of them was aware of its competence and abilities. Simons had, in fact, completed other feasibility studies in Chile and Pakistan under international aid programs. The company won the FAO contract over nine other firms: two from Canada, two from the United States, and five from various European countries. It did not feel that a visit to Thailand was necessary before tendering because it had personnel who were already familiar with conditions there. Word came early this year that Simons had been chosen for the job, probably because of past experience and proven ability.

The study involved 15 men, three of whom travelled to Thailand to make an on-the-spot survey of approximately six weeks. Their work, say company officials, was made easier by the excellent liaison between the UN agencies in the field and the engineers. One member of the firm returned to Thailand before the final report was presented to iron out any errors or misunderstandings; this is established policy with the company. ●

private firm of consultants (subcontracting) or be administered by individual experts hired by FAO for the duration of the project. In the past FAO has tended to favour the hiring of experts over subcontracting for two main reasons. First, many of the projects require skills which consulting firms do not provide (such as the creation of schools or laboratories). Second, consulting firms have not always proved willing or able to train local staff, which FAO feels is essential in any project. There are, however, signs of increasing interest in subcontracting. On the part of FAO there is a growing desire to shorten the time in planning projects and to execute those which will attract investment and bring quicker concrete results. Moreover, in some cases it is not always easy to find technical experts for single projects. These trends may encourage more use of consultants in project execution by FAO.

If a technical division of FAO has decided to subcontract, it prepares a list of the consulting firms that it wishes to be invited to tender. This list is submitted to an FAO steering committee and the recipient government for approval; once this is obtained, the invitations go out to the chosen firms. It is FAO policy to ask only a few, generally about four, firms to tender each time, so that inevitably many good companies interested in a project are bypassed. Naturally the FAO specialists tend to limit their invitations to companies which they know and trust. It is therefore those firms which not only have the necessary skills but which also visit Rome regularly and take the time to make these skills known to the experts which receive the invitations to tender.

Aerial Surveys

Unlike work for consultants, FAO does not limit the number of its invitations to tender when a project involves aerial survey work, but sends them to all aerial survey firms listed with it. As a result, the competition on these open tenders is keen. For small aerial survey jobs not worth the expense of full tendering procedure or the special dispatch of planes and equipment, FAO tries to use services and equipment near the project. For this reason it likes to receive every three months, as a matter of routine, information on the location and whereabouts of planes and equipment from survey firms it knows.

Supplying Equipment

The projects often involve the purchase by FAO of equipment and materials, both for direct use by its own experts and sometimes to be turned over to recipients. Current needs include agricultural machinery; logging and sawmill equipment; fishing vessels and gear; hydrological, oceanographic, and meteorological equipment; veterinary and dairy equipment; laboratory equipment, supplies, and chemicals; drilling equipment, and fertilizers, pesticides, and insecticides. FAO sometimes also has to provide goods for the personal use of experts and their families on project sites, such as prefabricated houses.

In the purchase of equipment, it is the field project manager of a particular project who draws up the general specifications for an item and makes the original request for it. The headquarters project supervisor will also give advice. On the basis of his knowledge of the product required and past experience, the chief of the purchasing and control section of FAO will then issue invitations to bid. The offers are received and a final decision made. For tenders over a value of $5,000 an internal FAO committee, the purchasing and contracts committee, makes the selection of firms to receive orders. The final decision on the selection of offers is based not only on price, but also on the technical suitability of the product, servicing and maintenance in the project area, and the standardization of equipment in a project area (the last two factors apply particularly to laboratory equipment, trucks and cameras). If FAO is not sure of the equipment which should be used, tender invitations may include job descriptions or consultants may be asked to draw up specifications before going to tender. When the types of equipment are so unique as to be handled by only one firm (such as sometimes occurs in the photogrammetry field), the tendering procedure is waived.

First Steps

Correspondence is the start. To introduce your firm you should:

—FAO photo

The two men (left) are checking soil depths and bamboo root structure in a Thai forest, part of an FAO survey to find material for a pulp and paper industry.

● Write to the Chief of the Purchasing and Control Section of the Department of Administration and Finance in the Food and Agriculture Organization, Viale delle Terme di Caracalla, Rome, Italy, expressing interest in FAO business.

● If your line is engineering or aerial surveys, request inclusion in the FAO Register of Consultants and Aerial Survey Firms. You will be sent a special registration questionnaire by FAO.

● For equipment, send prices and two copies of appropriate literature with the initial letter and request that the literature be drawn to the attention of the appropriate technical divisions in FAO.

● Write the Canadian Trade Commissioner in New York who will send you a list of the UN Special Fund projects assigned each six months to FAO for execution. Study this carefully and select those projects particularly suited to your firm's capabilities or equipment. The New York office can generally give an idea of the type of subcontracting or equipment needed for each project.

● Write separate letters again to the Purchasing and Control Branch of FAO about each project of interest, giving the UNDP reference numbers, stating the suitability of your firm's services, personnel or equipment for the project in question, and requesting that your letters be forwarded to the appropriate technical divisions for reply. Equipment suppliers should request that their literature be drawn to the attention of the field project managers as well. You should then hear from the technical divisions about the status of the project, whether it will be subcontracted, and what the equipment needs are. From the replies note the names of the divisions and officers —they are your future contacts for the projects in question.

● Send copies of your correspondence to the Commercial Counsellor, Canadian Embassy, Via G.B. de Rossi 27, Rome, Italy, for follow-up.

The information supplied to FAO should mention the following, if possible:

1. The appropriateness of the service or product offered for particular projects.

2. The availability of agents, maintenance facilities and spares in particular project areas.

3. Previous work done for, or equipment supplied to, other UN agencies (including the World Bank) or other government organizations engaged in aid projects.

4. Experience in countries abroad, particularly tropical countries.

5. Willingness to train local staff on project site, if appropriate.

6. Ability to work in any particular languages (the three official languages of FAO are English, French and Spanish).

Visits Advisable

Correspondence will register the interests of a firm and may produce some business, particularly for equipment suppliers if they are generally competitive and their products known. Aerial survey and engineering consulting firms, however, would be well advised to plan on coming to Rome at fairly regular intervals. Like customers everywhere, FAO executives and experts require cultivation and have to be sold on the services offered in a way that makes these stand out against those of competitors—often European firms near at hand with experience in ex-colonial territories. A stop in Rome, however, should not be too hard to arrange for Canadian companies which send personnel to Europe or with projects going in the Middle East or Africa. Rome is at the crossroads for many airlines. The Office of the Commercial Counsellor at the Canadian Embassy will be glad to arrange appointments for you.

The Future

FAO's work with UNDP Special Fund projects is growing as the Fund grows. FAO has also begun to work with the World and Regional Banks to identify and develop other projects in the agricultural, forestry and fisheries fields, which could involve bank investment. As FAO activities expand, so do the opportunities for Canadian firms. ●

UNESCO: Opportunities in Special Fields

F. M. WANKLYN, *Assistant Commercial Secretary, Paris.*

- **Acts as executing agency for a number of UN Development Program projects.**
- **Some 67 of these projects are currently under way, with $117 millon earmarked for them.**
- **Purchases also for own needs at Paris headquarters.**
- **Canadian firms have chance to participate; must make themselves known to UNESCO personnel.**

THE United Nations Educational, Scientific and Cultural Organization (UNESCO) with headquarters in Paris offers Canadian firms opportunities to bid for and obtain business in a specialized and growing market.

The opportunities are of two types. The first is UNESCO's purchasing program for its own headquarters housekeeping needs. The second is the much larger and more important program under which UNESCO acts as the executing agency for a number of UN Development Program projects.

UNESCO's two-year budget for purchasing goods and services for its own needs in Paris totalled $3.2 million for 1965 and 1966. In the main, this covered buying of office furniture, stationery and equipment.

The Procurement and Stores Division of UNESCO maintains its own lists of potential suppliers who may be asked to tender. When products are required for which it does not possess a list of possible suppliers, the Procurement and Stores Division solicits their names from government trade-promotion departments.

Canadian businessmen interested in bidding on UNESCO's own requirements should contact the Procurement and Stores Division, UNESCO, Place de Fontenoy (75), Paris 7ème, France. The Trade Commissioner's office in Paris would appreciate Canadian companies keeping it advised of inquiries and bids they submit.

UNESCO has been designated as the executing agency for 98 UN Special Fund projects (of which some 67 are currently in operation), for which funds totalling $117 million have been earmarked.

Equipment purchases for Special Fund projects under way are running at the rate of $3 million a year. Approximately 90 per cent of these purchases consist of machine tools, material testing equipment, heat-engine laboratory equipment, electrical, chemical and civil engineering laboratory equipment, and general laboratory equipment.

Again acting as an executing agency, UNESCO buys annually some $500,000 worth of educational equipment on behalf of other UN projects, the most important being UN technical assistance projects.

In addition to equipment purchases, certain UNESCO-executed projects require on occasion consulting engineering services. One example is a project involving water resources in the Chad Basin in Africa, in which Cameroun, Chad, Niger and Nigeria are interested. What is required is the scientific background for the completion of studies and surveys for an integrated land and water development of the area through the collection of all available hydrological data, preparation of a map of water resources, and construction and operation of an analogue model of the Basin.

How can Canadian businessmen participate in these projects?

1. Get in touch with the Mechanical Equipment and Engineering Division of the Department of Trade and Commerce. It can provide you with information about any UN Special Fund projects for which UNESCO is the executing agency.

2. Write to the Bureau of Relations with International Organizations and Programs, UNESCO, Place de Fontenoy (75), Paris 7ème, France, offering your services or requesting the opportunity to tender on requirements of equipment. Forward with your letter as many catalogues or descriptive brochures as you can and make an effort to provide data in both the metric and the English system of weights and measures.

3. If your firm has an agent in France, see that he keeps in touch with the people who do the purchasing at UNESCO.

4. Advise the Trade Commissioner's Office in Paris of tender submissions and offers of services and do not hesitate to use the Paris office for follow-up or representational work on your behalf.

Canadian firms should remember that the great majority of UNESCO-executed projects involve the development of training facilities for teachers and technicians, including testing laboratories and research institutes. Some equipment for vocational training is also included but generally speaking, UNESCO-executed projects begin at the secondary level.

Getting business from an international organization like UNESCO is often difficult, but there are Canadian manufacturers and consultants who have the expertise and experience to go after this type of business and a good chance of succeeding. ●

The Inter-American Development Bank: Co-operative Financing for the New World

- Membership is restricted to members of the Organization of American States.
- Canadian Government also participates through the Canadian Development Loan Trust Fund for Latin America and ECIC special credits.
- Capital development and expansion programs and infrastructure projects receive top priority.
- Canadians have won contracts under IADB financing.

LARRY H. BROWN,
Financing and Aid Division.

THE INTER-AMERICAN DEVELOPMENT BANK is the first and oldest of the regional development banks. It was established seven years ago to contribute to economic development in Latin American countries through the mobilization of additional financial resources for the region.

As its name indicates, the Bank is an outgrowth of the Organization of American States and membership is restricted to OAS countries. All 19 countries of Central and South America (excluding Cuba) and the United States are members.

The Bank provides financing from its own resources for a wide variety of projects in both the public and private sectors. In addition, it mobilizes funds for Latin America through both the sale of its bonds and participation in its loans, the arranging of parallel financing for projects, and the administration of bilateral funds.

Although Canada is not a member of the Bank, Canadians have obtained business from Bank-financed projects, and Canadian companies are eligible to compete for all IADB loans open to international procurement. In addition, Canada has participated with the Bank in parallel financing and the Bank administers Canadian bilateral funds available to Latin America under trust fund arrangements.

Ordinary Capital Resources

Projects financed by the Bank's Ordinary Capital Resources are open to world-wide (including Canadian) bids. The Bank's current subscribed Ordinary Capital Resources amount to approximately $1.8 billion, of which over $381 million has been paid in and about $1.4 billion is callable as a guarantee for borrowings made in international capital markets.

Over the years the majority of the projects financed from this source have been in the fields of industry and mining, agriculture, electric power, transportation, and water and sewage projects for industrial developments. The Bank has also made funds available for pre-investment studies and to help finance trade in capital goods among the Latin American countries. Of these loans, 17 per cent were extended directly to the private sector and 32 per cent were channelled to development banks for re-lending to small and medium-sized Latin American industries. The other 51 per cent were extended to governments or government organizations.

Projects to be financed from the Bank's Ordinary Capital Resources are evaluated on their economic and productive merits and commercial interest rates (generally 6 per cent) are charged, with repayment terms ranging from 9 to 20 years.

Fund for Special Operations

The Bank's second source of financing is the Fund for Special Operations. Its operations are similar to the World Bank's International Development Association. With this fund the IADB can take into account a recipient country's balance-of-payments difficulties and also provide financing for non-profit-making infrastructure projects. Interest rates during 1965 ranged from 2¼ per cent to 4 per cent (plus, when required, a service and/or commitment charge of up to ¾ of 1 per cent) with repayment periods of from 15 to 30 years on all loans except those for pre-investment studies, which had repayment periods from 5½ to 15 years.

Resources for the Fund for Special Operations are obtained through contributions from member countries. Before 1965 these amounted to $219 million. During 1965 and 1966, however, it was agreed to augment this by $900 million—$750 million contributed by the United States and the equivalent of $150 million by the Latin American member countries in their own currencies. At the same

Canadian Engineers Supervise Iron Ore Project in Brazil

AN IRON ORE PROJECT in Brazil has provided a Canadian engineering company, Foundation of Canada Engineering Corporation Ltd. (FENCO), with an excellent chance to expand its markets and enhance its reputation. The project, financed by the Inter-American Development Bank, will take the firm two years to complete and is its first project under the Bank's auspices.

How did FENCO come to be selected for the job? Its approach to this consulting assignment was essentially similar to its pursuit of any technical work. The company's officials were aware that the IADB was making loans to developing nations in Latin America on projects which would contribute to their economic welfare and that operations of the IADB were similar to those of the World Bank. These officials approached the IADB in Washington, D.C., personally, and informed representatives of the bank's Project Analysis Division of the services their firm was equipped to provide.

During their conversations in Washington, they found that there were specific areas under study for loans which fitted in with FENCO's particular capabilities. One such prospect was the iron ore development program in Brazil. This happened to be very similar to an assignment that the company was carrying out at the same time in Northern Ontario. They followed up the personal visit with letters and brochures containing technical articles prepared by the organization's senior engineers on both the company's general engineering and mining experience.

The initial submission was acknowledged by the IADB within a few months and was followed by a detailed explanation of the proposed project, with a letter asking if FENCO was interested in taking on the task.

The terms of reference for the assignment included engaging an engineering group to supervise an extensive expansion program for the Cia Vale do Rio Doce mining company, with the group acting as the field representative of the IADB. Its functions would include making sure that the program was adequately planned and co-ordinated by the mining company; that the plans, specifications and contracts were correctly drawn up; that all operations were carried out according to Brazilian law and that the company was meeting its financial obligations. The group was also to make recommendations to the Bank about disbursements, and provide it with monthly progress reports.

The specifications for the Brazilian project were sent out to a number of companies and the Bank sifted the replies on the basis of experience and other qualifications. A limited number of firms then were given the additional details needed to submit a complete proposal; FENCO was one of them.

The IADB's policy is to list the companies making proposals in order of merit and to negotiate with the first firm on the list for a definite contract. If no agreement is reached, negotiations are broken off and the second company is then approached.

In this instance, the Canadian company was at the top of the list, and the negotiations were successfully concluded. In order to meet the terms of reference, FENCO decided to team up with an engineering firm in Rio de Janeiro, Tecnometal S.A.; it made this choice following a personal visit to Brazil by its officers. The Canadians then outlined to the Bank their plan of action and this was incorporated into a contract for the job. The negotiations, from the initial contract to the final form, took approximately nine months and included several trips to Washington and one trip to Brazil.

FENCO is now well into the project (work was begun earlier this year), and it keeps one engineer in Brazil at all times who is responsible for heading the consulting team.

Company officers stress that although any Canadian consultant hoping for such a contract should expect long and costly negotiations, the effort is certainly worthwhile. A firm contemplating such an assignment in South America, they also emphasize, should make itself familar with living conditions, local tax laws—both personal and corporate—and the stability and convertibility of the country's currency. Last but not least, they recommend that Canadian companies contact the Trade Commissioner in the country in question. As one of the firm's officials said, "We have found these representatives extremely co-operative and their advice is not only helpful but essential." ●

Tackling Haiti's Water Problem

THE Inter-American Development Bank and a Toronto firm of engineers are teaming up to lend Haiti a helping hand with the water supply to Port-au-Prince and the nearby satellite town of Petionville. James F. MacLaren Ltd. of Toronto, through a wholly-owned subsidiary, MacLaren International Ltd., combined with a California firm, Engineering Services Inc., to answer a request from the Pan American Health Organization (an affiliate of the World Health Organization) to undertake the design of the works. The Canadians were, of course, registered with the two agencies and their qualifications and experience as engineering consultants were also well known to the World Bank personnel in Washington.

Financing for the project is coming from the Special Operations Fund of the IADB as a soft loan. It covers initially, the $2 million first phase of an $8 million improvement program. The group started work in the middle of 1965 and is now in the process of completing the final plans for the project.

The field work in Haiti was handled by a design group assembled in that country. It included three Canadian engineers, one U.S. engineer and 10 Haitians, six of whom were engineers. Tenders for the construction are to be called early next year and the company expects to have one or two of its engineers stationed in Haiti for the entire 18-month building period. ●

time, it was agreed to extend the activites of the fund to include those types of projects formerly financed by the United States Social Progress Trust Fund. Like the Social Progress Trust Fund, the Fund for Special Operations is not open to international procurement, except when this would result in substantial savings.

In the past its financing operations were concentrated mainly in agriculture, industry, mining, electric power, transportation and water supply. Under the new guidelines for the Fund special emphasis will be placed on activities of a social nature, and the Fund for Special Operations is now expanding its activities in the field of pre-investment studies and project preparation, agriculture and rural development, urban development, and technical and vocational education.

Social Progress Trust Fund

The Social Progress Trust Fund is administered by the IADB under an agreement signed with the United States in 1961. The U.S. Government established the Fund with an initial contribution of $394 million increased by a further $131 million in 1964. As virtually all resources have now been fully committed, the Social Progress Trust Fund's future operations are expected to be relatively small and will depend on repayments received from outstanding loans. Like the new resources of the Fund for Special Operations contributed by the United States Government, financing from the Social Progress Trust Fund was tied to procurement in the United States and Latin American member countries of the Bank.

Other Resources

To supplement the contributions of its members, the Bank also promotes and assists in providing development capital from non-member countries, including Canada, Germany, the Netherlands, Spain and Britain.

Two new projects financed from these resources were announced during the 1965 Bank year. These were a $1.3 million pre-investment study of the Guayas River basin in Ecuador and a $3.2 million port improvement loan for the expansion of the port of Acajutla in El Salvador. Both were provided from the Canadian Development Loan Fund which the Bank administers for Canada.

The Canadian Development Loan Fund for Latin America was established under an agreement signed between the Honourable Paul Martin, the Secretary of State for External Affairs, and the President of the Bank in December 1964. Initially, $10 million of Canada's bilateral development loan funds were earmarked for Latin America through the Inter-American Development Bank. This was increased to $20 million in September 1965 and a further $10 million was announced in August 1966. Under the terms of the agreement, the Bank has the primary responsibility for selecting, processing and recommending loan projects to Canada in accordance with the same criteria as the Bank applies to its own resources. These "soft loan" funds are to be used to finance the procurement in Canada of Canadian goods and services with a high Canadian content for economic, educational and technical projects requested by the government of the borrowing country through the IADB.

In addition to the Canadian soft loan funds, the Export Credits Insurance Corporation (under an exchange of letters between the President of the Corporation and the President of the Bank in June 1965) has agreed to make available up to $15 million in ECIC 21A "Special Credit" long-term financing, at a commercial interest rate, for Canadian capital equipment and related engineering services required for development projects sponsored by the Bank. This financing is in addition to ECIC's normal export financing in Latin America and is to be used either to provide financing for a portion of a large project being financed by the Bank from its own resources (parallel financing) or for complete projects proposed by the Bank for independent financing by ECIC under the Corporation's normal criteria.

An agreement similar to the one with the Export Credits Insurance Corporation was also concluded between the Bank and the Netherlands in September 1965 under which the Dutch Government has agreed to make $10 million available for financing projects in co-operation with IADB. Loan terms are expected to be similar to those extended under the Bank's ordinary capital resources and under the Canadian ECIC long-term financing. Like the ECIC $15 million "Special Credit", the Dutch financing is tied to procurement in the Netherlands and is to be used for parallel financing with the Bank or for the independent financing of projects proposed to the Netherlands by the Bank.

Last April the United Kingdom placed $11.6 million under Bank administration to finance projects in Latin America. Under the terms of the British Agreement, the IADB will have primary responsibility for selecting, processing and approving loan projects in member countries of the Bank. Loans will be on 15 to 25 year terms at rates of interest to be agreed on in each case and the funds will be used for the purchase of British goods and services.

Sweden also has announced that it will make available $5 million to be administered by the IADB.

In addition to these agreements, the Bank has floated bond issues in Italy, Germany, Switzerland and Britain. Parallel financing arrangements were concluded in 1961 and 1965 with Germany to help finance the rehabilitation of Bolivia's tin mines, and in 1963 and 1964 the Bank and ECIC co-operated in a program to finance the expansion of a pulp and paper mill in Chile. In 1965 the Bank obtained a direct loan of $12.5 million from the Government of Spain, together with an agreement to purchase up to $7.5 million worth of the Bank's ordinary capital loans. A direct loan was also obtained from Japan.

The Government of Israel has also purchased $3 million in bonds and a purchase of bonds by the French Government has been agreed on.

How to Obtain Business

Canadian firms wishing to participate in sales financed under either the Bank's Ordinary Capital Resources or under Canadian bilateral 21A export credit financing or development loan funds should promote their products in the same manner as for commercial business in the same markets. They should make themselves known in advance to the Canadian Trade Commissioners and potential customers in the countries in which they are interested and to the Manufacturing Industries and Engineering Branch of the Department

of Trade and Commerce. For business financed from the IADB's Ordinary Capital Resources, the Canadian Embassy in Washington is responsible for liaison with IADB officials at Bank headquarters in Washington. They should also be registered in the *Exporters' Directory* of the Department of Trade and Commerce, and for business under Canadian development loan financing with the Department of Defence Production (Canadian Commercial Corporation).

ECIC 21A long-term financing continues to be available to finance Canadian exports of capital equipment and related engineering services to Latin America, as it is for other markets. This enables Canadian exporters who are otherwise competitive to meet the credit terms offered by foreign suppliers of similar capital equipment. Exporters should therefore submit their applications in the normal manner to the Export Credits Insurance Corporation. In his address to the Canadian Export Association published elsewhere in this issue (see page 27) the Honourable Paul Martin has dealt at considerable length with procedures under Canada's bilateral aid program.

Contracts for projects financed from the Bank's Ordinary Capital Resources are let by the authority which has received the loan in the borrowing country, and it is up to interested companies to get in touch with these authorities and obtain the necessary tender documents. Consultants interested in business financed by the Bank's Ordinary Capital Resources should also ensure that they are registered with William A. Carter, Deputy Director, Project Analysis Division, Inter-American Development Bank, 808 17th St., N.W., Washington, D.C. 20577 ●

The Asian Development Bank – – Partnership in Progress

- **New organization designed to stimulate development by co-operation and effective use of resources.**
- **Thirty countries, including Canada, are furnishing capital for the Bank.**
- **Inaugural meeting will be held in Tokyo this month; headquarters are in Manila.**
- **Procurement of goods and services limited to those produced in member countries.**

J. L. MUTTER, *Consul General and Trade Commissioner, Manila.*

A GROWING SENSE of urgency permeates the developing nations of Asia and the Far East, whose territories combined comprise roughly one-sixth of the world's land area, and whose populations in aggregate represent about half of humanity.

This impatience has its origin in most of the countries in the slow rate of economic development in the face of a high rate of population growth. It also reflects the dissatisfaction of these developing countries with the extent to which the industrially developed nations of the West have provided financing required to develop Asian economies. It is against this background that the importance of the Asian Development Bank—the newly-formed agency for the economic development of Asia and the Far East—should be viewed.

The Bank has stemmed from a recognition of the importance of closer economic co-operation within Asia and the Far East to bring about the most efficient utilization of resources and to accelerate economic development. One of its basic aims will be to make additional development financing available by mobilizing funds and resources from within and without the region.

Asian initiatives for the foundation of the Asian Development Bank came to fruition under the auspices of the United Nations in the United Nations Economic Commission for Asia and the Far East. The Agreement setting up the Bank was formally signed by the delegates of prospective member countries, including Canada, in Manila on December 4, 1965, at a meeting of the plenipotentiaries. This meeting took place at the conclusion of the Second Ministerial Conference on Asian Economic Co-operation which opened in Manila on December 1, 1965. At that time 30 countries, including 19 regional members of ECAFE, signified their intention to put up about U.S.$1,000 million for the Bank's initial capitalization. Of this Canada has agreed to subscribe $25 million. (See box feature attached.)

Future membership of the Bank will be open to members of ECAFE and to other regional countries and non-regional developed countries which are members of the United Nations or any of its specialized agencies. Switzerland has already applied for membership and the Board of Governors will consider the application at its inaugural meeting.

This inaugural meeting, marking the formal establishment of the Bank, will be held in Tokyo late this month. There the Board of Governors will elect the President and Board of Directors who will be responsible for the Bank's operations. It is expected that the Bank will commence operations before the end of the year at its headquarters in Manila. Following this, the President and the Board of Directors will lay down the guidelines for the future organization and its operating policies.

Capital Structure

Asian countries are contributing about two-thirds of its capital but it has had the close co-operation of the non-regional members and of other international financing organizations such as the World Bank and the Inter-American Development Bank.

Half of the shares subscribed are to be paid in. The other half will be subject to call only as and when the Bank requires them to meet its obligations on borrowings of funds or on guarantees of loans in which the Bank participates. Members are required to pay 50 per cent of the paid-in shares in gold or convertible currency and the remaining 50 per cent in local currency. Payment is to be made in five annual instalments of 20 per cent each.

In addition to its ordinary capital resources, the Bank may administer Special Funds which may be entrusted to it by governments or agencies where these funds are designed to serve the purposes of the Bank. These will be used in accordance with the arrangements made with the government or agency providing them. Out of its own capital, the Bank may set aside up to 10 per cent for Special Funds to be used to make or guarantee development loans on more lenient terms than those made from its ordinary resources, although repayment must be made in the same currencies as those loaned.

Functions Defined

In fulfilling its role, the Bank will perform the following functions.

- Promote investment of public and private capital for development purposes in the region.
- Finance regional, sub-regional and national projects and programs of developing countries in the region.
- Assist its members in co-ordinating their development policies and plans.
- Provide technical assistance.
- Co-operate with national and international institutions, both public and private, concerned with the investment of development funds in the region.

As for methods of operation, the Bank will be engaged principally in the financing of specific projects, including those forming part of national, sub-regional, and regional development programs, and in providing technical assistance relating to development projects and programs.

Lending Policies

The Articles of Agreement explicitly provide that in all its operations, the Bank shall be guided by sound banking principles. The proceeds of the Bank's financing will be used to procure goods and services in member countries. The terms of reference are broad enough to cover a wide range of activities. The lending activities, like those of other development banks, will be divided into ordinary operations and special operations, under separate ordinary and special funds.

Ordinary operations would involve providing assistance to worthwhile projects in Asia, preferably with regional implications, assessed in accordance with sound banking principles and at rates competitive with those of similar institutions. Special Fund operations, on the other hand, would cover the "gray area of soft loans and preferential pigment" and

Members of the Asian Development Bank

Regional members:
Afghanistan
Australia
Cambodia
Ceylon
Republic of China (Taiwan)
India
Japan
Korea
Laos
Malaysia
Nepal
New Zealand
Pakistan
Philippines
South Vietnam
Singapore
Thailand
Western Samoa

Non-regional members:
Austria
Belgium
Britain
Canada
Denmark
West Germany
Finland
Italy
The Netherlands
Norway
Sweden
United States

initially such operations will be limited by the availability of these funds and conditions under which they may be forthcoming.

A special feature of the lending policies of the Bank is that procurement of goods and services under its aegis, whether for ordinary operations or special lending, is limited to those produced in member countries.

The Bank's financing facilities will be made available to the following:

(a) The government of a member nation.

(b) An agency, instrument or political subdivision of a member government.

(c) A private entity or enterprise operating in the territory of a member government.

(d) An international agency or entity concerned with economic development in the region.

Opportunities for Canadians

Although it is still a brand-new institution, the Asian Development Bank is obviously bound to play a vital part in the financing of development projects in Asia and the Far East. Its lending policies have yet to be determined by the management, but when the Bank does begin financing projects in the region, Canadian enterprises will be able to bid, with firms from other member countries, to supply the equipment and services required. The Bank has still to determine its policies on the extension of technical assistance to regional members, but here and in other activities it will maintain close working relationships with other institutions and agencies extending technical assistance or financing projects in the area.

It would be premature at this stage, but later on Canadian consulting and engineering firms may wish to acquaint the Bank's management with their qualifications and experience in the study and supervision of development projects. Pending further information, these particulars could appropriately be addressed to the Bank's temporary headquarters, Metropolitan Building, Ayala Avenue, Makati, Rizal, Philippines. And it would be useful if these firms would provide a copy of the covering letter for the information of the Canadian Consulate General in Manila.

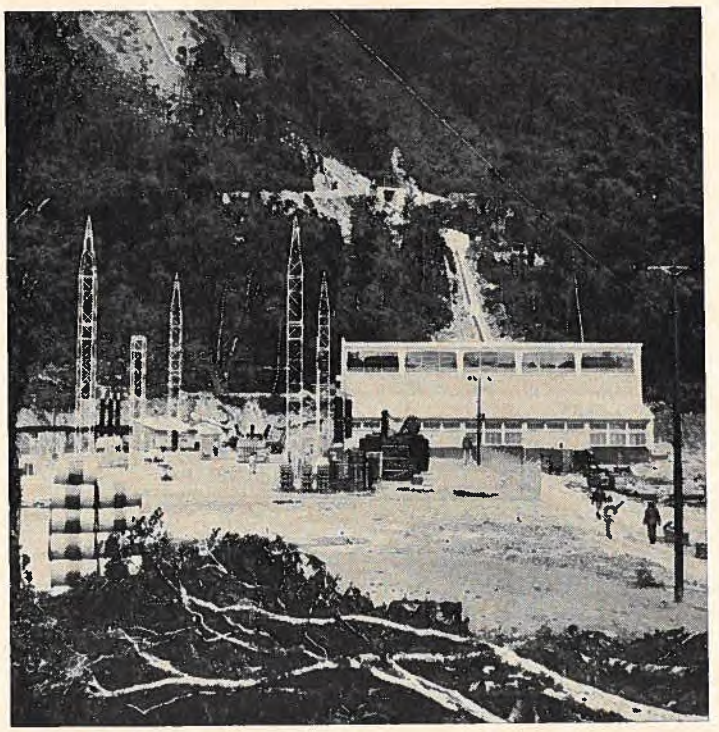
Significance and Prospects

The Executive Secretary of ECAFE, who has possibly done more than any other Asian to see the Asian Development Bank through the difficult process from dreams to reality, has expressed the gratification and expectations of the people of Asia and the Far East in the following words:

"The real significance of the Asian Development Bank will be increasingly appreciated as time goes by. It is an institution conceived in accordance with the experience of the past, the realities of the present, and the expectations for the future.

"It is an expression of the firm determination for economic betterment, founded on the realization that during the last two decades the inflow of capital funds into the region of Asia and the Far East has not been sufficient to satisfy the needs of the countries constituting this vast region. It also demonstrates recognition by the countries concerned that the developing nations in this part of the world can most effectively achieve the formidable task of accelerating the rate of their economic growth through co-operation not only among themselves but also with developed countries elsewhere.

"The Asian Development Bank is a partnership in progress among the countries of the region and between them and the economically advanced countries outside the region. It is a partnership based on very solid economic grounds and one that is bound to be beneficial to all the countries concerned. The Bank is a breakthrough achieved by the developing Asian countries in their constant and determined quest for effective means of increasing progress and prosperity." ●



This is the Corani powerhouse and substation, part of the Corani River power development in Bolivia. Financed in part by IDA and IADB loans, it was engineered by a Canadian company.

The African Development Bank: Investor in Africa

- Membership has already grown to 27 African countries.
- Headquarters staff is now being recruited; operations to begin by late 1967.
- Canadian consultants and equipment manufacturers should inform Bank about their capabilities.

V. B. CHEW,
Commercial Secretary, Accra.

THE AFRICAN DEVELOPMENT BANK was inaugurated on November 4, 1964, to contribute generally to the economic and social development of its member countries by promoting the investment of public and private capital in Africa. Membership is open to all independent African countries.

The authorized capital stock of the Bank is equivalent to U.S.$250 million, divided into 25,000 shares of a par value of 10,000 "units of account" each, available for subscription by African states. The original membership of nine has now been expanded to include 27 African countries. Half of the capital stock is to be paid-in, the other half remains callable. The paid-in capital stock of the Bank is to be paid in gold or convertible currency in six annual instalments. The 27 African states met the initial subscription, which totalled Can.$5.3 million.

The total resources of the Bank are divided into ordinary capital resources and special resources.

The "ordinary capital resources" include:

- Subscribed authorized capital stock of the Bank.
- Funds raised by Bank borrowing.
- Income derived from loans made or guarantees given against the callable capital.

The "special resources" of the Bank include:

- Resources contributed initially to any special fund established by the Bank or entrusted to it, i.e. UN agency loans or foreign loans.
- Funds borrowed for the purpose of any Special Fund.

African Development Bank Membership

Members	Subscriptions in 000,000 "units of account"	Voting Rights	Members	Subscriptions in 000,000 "units of account"	Voting Rights
Algeria	24.50	3,075	Niger	1.60	785
Cameroun	4.00	1,025	Nigeria	24.10	3,035
Congo (Brazzaville)	1.50	775	Rwanda	1.20	745
Congo (Leopoldville)	13.00	1,925	Senegal	5.50	1,175
Dahomey	1.40	765	Sierra Leone	2.10	835
Ethiopia	10.30	1,655	Somalia	2.20	845
Ghana	12.80	1,905	Sudan	10.10	1,635
Guinea	2.50	875	Tanzania	6.30	1,255
Ivory Coast	6.00	1,225	Togo	1.00	725
Kenya	6.00	1,225	Tunisia	6.90	1,315
Liberia	2.60	885	Uganda	4.60	1,085
Mali	2.30	855	United Arab Republic	30.00	3,625
Mauritania	1.10	735	Upper Volta	1.30	755
Morocco	15.10	2,135			

- Funds borrowed by the Bank from any member in its currency for financing expenditures in the lending country on goods or services needed to carry out a project in the territory of another member.

The term "special fund" covers grants or unguaranteed loans which might be made to the Bank; these can be accepted by the Bank in trust for specific as well as general purposes.

In its ordinary operations, the Bank cannot at any given time commit itself for more than its unimpaired subscribed capital, plus its reserves and surplus. At the same time, loans hypothecated against the special resources cannot exceed at any time the total special fund under the terms of which these special operations are undertaken.

Headquarters in Ivory Coast

The Bank is now undergoing a period of organization and it is not expected that it will be operating as a lending agency until late 1967. It has established its headquarters in Abidjan, Ivory Coast and its postal address is: B.P. 1387, Abidjan, Plateau, Côte d'Ivoire.

Now that it has established its operational base, the Bank is setting up its headquarters staff. This recruiting is a problem because there is a shortage of experts in Africa and various international banking organizations have lent and will lend specialists to help the Bank overcome this problem.

The Bank has yet to make any loans to its members, primarily because many of the proposed projects involve more than one member country and it is still evolving a modus operandi.

Once it is operating it will, like other such institutions, call for the services of foreign engineering consultants and contractors. Even though it has not yet established a Register of Companies, we recommend that Canadian engineering companies and Canadian capital equipment manufacturers send promotion literature continually to the Bank at its Abidjan headquarters to make sure that it is fully aware of Canadian knowhow and experience. ●

Canada's Aid Programs

These two Canadians are working on an aerial survey near Kasama in Zambia. It is part of a joint Canadian-British study of the feasibility of a railway to link Luzaka in Zambia with the port of Dar-es-Salaam in Tanzania, on the Indian Ocean.

and the Business Community

The Hon. Paul Martin, Canada's Secretary of State for External Affairs, recently outlined to an audience of exporters the steps being taken to bring the business community into a closer working relationship with the External Aid Office. The major part of Mr. Martin's speech is reproduced below.

"RELATIVELY SPEAKING, Canada is not a major contributor to the total volume of aid or financial resources flowing from developed countries at a rate of more than $10 billion a year. Our aid can never be more than part of a broad collective effort. Surely then, it is all the more important that it be used wisely, with maximum effect.

"It was for this reason that I caused a searching review of the aid program to be made earlier this year —a review to which many departments of government contributed and to which they applied the latest theories developed in the laboratories of the science of development assistance. That review has led to decisions concerning many important aspects of that program:

- "An expansion in the level of the program.
- "Increased flexibility in meeting the financing problems of developing states.
- "Emphasis on aid to countries likely to achieve a significant rate of growth fairly quickly.
- "Participation in programs producing benefits for many nations.

Policy Reviewed

"From the legislative point of view, all the world's under-developed countries are eligible for Canadian assistance, and we have had bilateral programs, large and small, in 65 such countries. But a major share of Canadian aid has always been allocated to a comparative few. Over 80 per cent of Canadian aid funds, for example, have been used to meet the needs of India and Pakistan where the population exceeds that of Latin America and Africa combined.

"At the same time, we have attempted to meet, as generously as possible, the requirements of a large number of the world's developing countries. Our assistance to such countries can often be more effective when combined with the efforts of others through the United Nations and other multilateral programs.

"In reviewing this policy, we came to the conclusion that this approach is sound and that it should be continued despite the availability of larger amounts of money under an expanding program. The best advice of the World Bank and such other aid co-ordinating agencies as the Development Assistance Committee of the OECD supports our conviction that the course of reason is to provide the bulk of our bilateral aid to those countries which may be lifted relatively quickly to the take-off point of self-sustained economic growth.

"Within this context, several factors govern the decisions which are made from time to time on the geographic distribution of the Canadian aid funds. Naturally, account is taken of our trading relations, our responsibilities in the hemisphere, and the family ties of Commonwealth and of language. But over and above this we are guided by the existence of consortia and consultative groups established for particular countries by the World Bank and similar multilateral institutions, for it is in these councils that objective calculation can be made of a particular country's needs, applied both to the required volume of aid and the terms and conditions under which it should be extended.

"You will be able to discern these influences at work in our allocations for the current year, which include in Africa such nations as Nigeria and Ghana and the French-speaking countries of Tunisia, Cameroun and Senegal, where we hope to move ahead with major capital assistance programs.

"Particular attention is, of course, also being given to the needs of the developing countries in our own hemisphere—our close friends in the Caribbean area and, through the Inter-American Development Bank, those countries of Latin America which stand most in need of the type of assistance we can provide. As in previous years, a substantial part of our aid will go to India and Pakistan to be applied to projects and programs which have been reviewed by the World Bank and other donor countries associated with us in consortia. We have been pleased to note the formation of similar consortia and consultative groups for such countries as Malaysia, Ceylon and Thailand.

"This does not mean that we have ceased our partnership with other qualifying countries. Far from it. We have extensive technical assistance and educational programs which are of proven value, and scholarships are available in Canadian institutions for students from overseas who will make a real contribution to the development of their own nations. What it does mean is that bulk of Canadian project and commodity assistance will go to countries where Canadian aid is likely to help in a decisive way the achievement of long-run development objectives.

Basic Objectives

"Exporters will be aware of the facilities available under the Export Credits Insurance Act to assist in the financing of Canadian capital goods and related services. True, this is primarily support of the Canadian exporter, permitting him to match credit terms offered by competitors in other industrialized countries. At the same time, ECIC resources provide assistance to the developing countries in the sense that the terms available are a good deal softer, particularly in maturity and grace periods, than those found in the marketplace—if, in fact, funds can be found at all. By the nature of things, these resources have gone largely to finance exports to developing countries. This is why statistics of such financing are included in the internationally-accepted measurement of the flow of financial resources from the developed to the less developed world.

"Unlike ECIC funds, the resources made available through the External Aid Office are voted by Parliament for economic, technical and educational assistance to developing countries. The initiative in the use of those funds rests with the Government of the developing country. However (although not a primary purpose of the aid program) it is worth remembering that this money is spent on the export of Canadian goods and services.

Benefits to Business

"Naturally, this brings an immediate short-term benefit to the Canadian businessman who thus shares the experience of his counterparts in other donor countries. At the moment, about 60 Canadian consulting and construction firms are working abroad on aid-financed contracts, and many millions of dollars worth of Canadian exports are being introduced or sustained in the markets of the developing countries. But there are long-term benefits of much greater significance, chief among them the creation of a wider range of global trading opportunity.

"It can be demonstrated that Western manufacturers have increased substantially their exports on commercial terms to certain countries in the months and years that have followed the attainment of a measure of self-sustained economic independence.

"One of our objectives is to encourage an increasing interest on the part of Canadian businessmen in our aid program and to improve the ways by which they can participate in it. We want to help you to identify and take advantage of the opportunities our aid program provides for you and we want to take more advantage of your specialized knowhow in selecting projects and establishing procedures which will most effectively employ our aid funds.

"Canadian aid-financed goods and services must, of course, compare favourably in price and quality with those available in other industrialized countries. It is not in the interests of the Canadian export trade or in the interests of the developing countries to use aid funds to subsidize high-cost Canadian goods and services. We must also ensure that an adequate opportunity is available to all interested Canadian firms to compete for aid-financed exports. In the normal course, therefore, tenders or bids are sought from interested Canadian producers. In some cases where a Canadian exporter has been the successful bidder following an inter-

One of the big projects being financed by Colombo Plan grant aid in Burma is the building of the Thaketa Bridge, which will connect the city of Rangoon with one of its suburbs. Canada is contributing some $1.79 million of the foreign exchange cost.

national tender call, a decision to finance the project or product in question with aid funds does not need to be accompanied by a subsequent domestic tender call in Canada.

Advertise Your Capacity

"In these circumstances, it is obvious that if Canadian business is to make its full contribution, developing countries must be made aware of Canadian capacity. . . . I would ask you to intensify your efforts to make known your abilities in the less developed countries of the world.

"You should do this in the full knowledge that, quite aside from the Canadian program, a wide world of financial backing is available for the priority development needs of these nations.

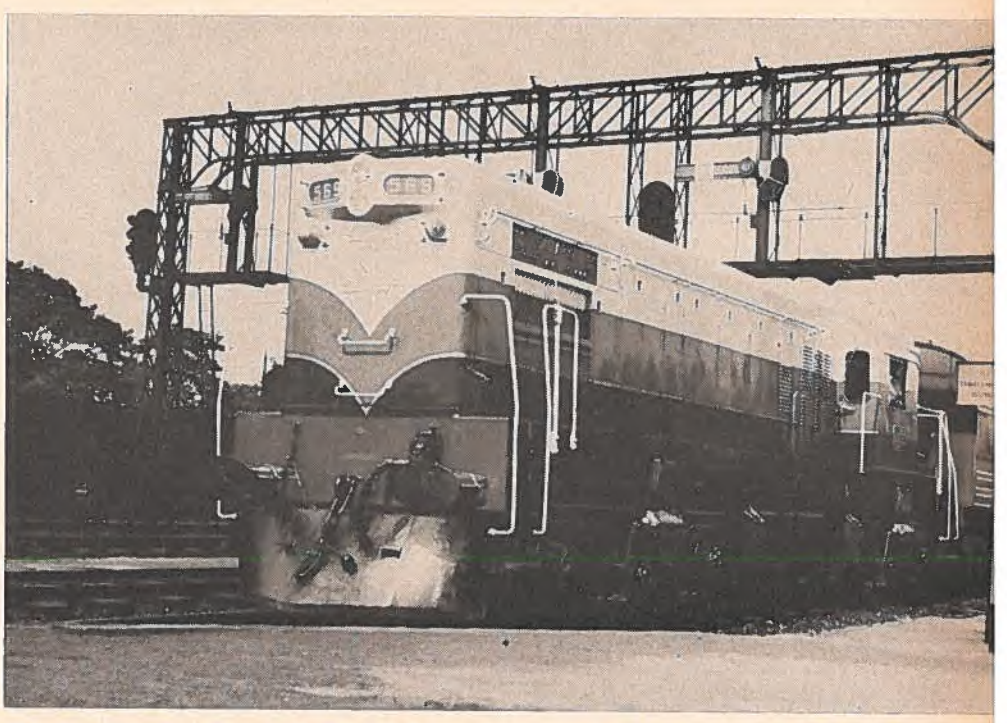
"The Canadian aid program, of course, is largely responsive in nature. Canada—or for that matter, any aid-giving country—does not tell the developing country precisely what it must purchase with available aid funds. While we may and often do indicate the areas in which we think we have a particularly strong capability, we leave it to the Government of the developing country concerned to decide for itself what Canadian goods and services can best assist in the fulfillment of its development plan.

"You will appreciate that it is to the advantage of the developing country as well as to ours that requests to us for assistance are framed in the knowledge that Canada in certain areas of business activities offers the highest quality and the best price available. And we are constantly developing new ways to assist you, the Canadian businessman, and your counterpart in the developing world to make the best possible use of the aid dollar.

Specific Steps

"We are taking several other steps in addition to those already mentioned to facilitate the increasing involvement of the private business community in our program.

First, we intend to provide more information in advance to the business community as to the areas in which we plan to commit a major share of our aid. This will enable businessmen to be guided accordingly to the areas in which their own efforts are likely to be most productive. I have already given you an outline of the areas which will receive the bulk of project and commodity assistance under the current year's program.



Colombo Plan aid to Ceylon from 1950 to 1965-66 included $16.2 million in capital assistance grants. A good part of this was spent on 71-ton diesel locomotives built in Canada, like the one pictured above, to improve internal transportation.

Second, we intend to make more funds available to finance pre-investment surveys and feasibility studies . . .

Feasibility or pre-investment studies are essential tools of long-range development in which Canadian engineers, surveyors and planners have been heavily engaged in recent years. Those studies are not luxuries. Whether it is to explore the full social and economic potential of a huge section of land such as the Chittagong Hill tracts of Pakistan or the Guayas River Basin of Ecuador, or to determine the economic value of a proposal to build a railroad, as between Zambia and Tanzania, the study can be used to guarantee the best employment of a developing nation's small store of wealth.

"There are continuing benefits to Canada, apart from the growing international reputation of the men who have worked upon such studies. The reports they bring back, which can be made public with the permission of the country involved, can be valuable guides to investors or to businessmen seeking new outlets for their products.

"Additionally, this kind of reliable appraisal can be expected to attract capital from financial institutions such as the World Bank or from private lending sources and this might be used to finance Canadian exports. You will see this line of credit operation working shortly in our Latin American program. I hope that similar arrangements can be worked out in other countries where a substantial Canadian aid program is envisaged.

"We will continue to seek the most effective procedure for purchasing and procurement. Until quite recently, virtually all aid-financed procurement was done through the multi-step procedures of government buying. These procedures, I think, make good sense where public funds are being used by the Canadian Government

to meet its own needs. In the implementation of the aid program, however, they are often quite inappropriate.

"To an increasing extent, therefore, we are leaving it to the Government receiving Canadian aid to purchase under competitive conditions, or have purchased on its behalf by its own importers, Canadian goods and services approved for aid financing. This technique will go a long way toward the establishment and maintenance of lasting commercial relationships involving high-quality goods and services, produced in Canada with an adequately high Canadian content at competitive prices.

"We have adopted improved methods for selecting consulting firms for pre-investment investigations and supervision of capital projects so as to ensure the most equitable distribution of their work among Canadian consultants and the most effective utilization of the resources they represent.

"Under our new procedures, proposals normally will be sought from a certain number (usually three or more) of competent and interested Canadian firms, including where applicable any competent firm suggested by the aid recipient. This procedure, which is comparable to that followed by a number of other donors and such other institutions as the World Bank, the UN Development Fund and the Inter-American Development Bank, will enable a contract to be awarded to a Canadian firm interested in working abroad and which has submitted the most favourable proposal from the point of view of operation, experience, and availability of qualified personnel and equipment. This procedure will help to ensure that a Canadian consultant who has developed the project will be in a good position to secure the resulting business.

Commodity Supply

"I have already pointed out that the initiative in the selection of projects for aid financing rests with the recipient. But while remaining responsive to the changing needs of the developing countries, continued efforts will be made to maintain a balanced Canadian program.

"Canadian food aid has gone to an unprecedented . . . $75 million this year and places a great responsibility on the Canadian farmer. We are making heavy demands on the technical experts, teachers and educational institutions of Canada in an extensive program of technical assistance. I have referred to the increased use which is being made of the services of Canadian consultants. All these contribute to a balanced approach and we wish to maintain this desirable balance in the area of commodity supply.

"In the first place, we have recognized the demand for imports of machinery and spare parts to serve current requirements and to stimulate the expansion of existing plants. Under our new arrangements, these goods are financed under what might be broadly described as lines of credit established with aid funds. India and Pakistan this year have the backing of several millions of aid dollars to be used at their discretion to buy in Canada such things as bakery units, tools and other equipment. This technique will help Canadian manufacturers to play a large part in main-

In Pagan, in upper Burma, a worker is binding sheaves of millet grown from seed given by Canada as part of the food aid under the Colombo Plan. This food aid has totalled about $3.3 million in the last fifteen years.

taining the pace of development in these countries and will also introduce new Canadian exports into what we confidently expect will become, over time, growing markets.

"Secondly, our revised regulations will enable Canadian producers and Indian and Pakistani importers to enter into long-term purchasing arrangements for the supply of such things as nickel, copper, fertilizer and fertilizer components, aluminum, asbestos, lead, zinc, wood pulp, synthetic rubber and newsprint. While the choice of the commodities to be financed will largely be left to India and Pakistan, we will of course seek to ensure that an appropriate commodity balance is maintained and that a fair level of commercial purchasing is carried out . . .

Compete for Business

"I need not stress that there can be no guarantee to a Canadian consulting engineer interested in feasibility studies or project inauguration —nor to a Canadian producer or manufacturer—that aid financing will necessarily be available for his particular service or product. He must compete for the scarce resources available to the buyer and be in a position to demonstrate not only his capacity to contribute to economic development but that his product or service compares favourably in price and quality with his competitors in Canada and abroad.

"Canadian exporters can be assured that the methods and procedures adopted by the External Aid Office are designed to ensure that our aid program is run on businesslike lines, and that the legitimate interests of the Canadian exporter are respected. Canadian development assistance must serve as a catalyst for private effort. Through our program, Canadian business will establish closer links with private enterprise in less developed countries and play its full part in raising standards of life and well-being throughout the world." ●

Canadian Consultants Find Commercial Work Abroad

CANADIAN consulting engineers and aerial surveyors are putting to use all over the world the skills they have acquired in developing this country. They are at work today in Brazil and Bolivia, in Sweden and in Somalia, in Togo and in Thailand, and in many other areas. The search for foreign business has accelerated with completion in the postwar years of many large Canadian projects, leaving engineering resources free for employment elsewhere.

Figures confirm these statements. In a twelve-month period in 1964-65, some 89 Canadian engineering firms reported to the Department of Trade and Commerce that they were engaged in 227 projects in 67 different countries. Seventy per cent of these were in the developing areas, where the need for engineering expertise is greatest—Latin America and the Caribbean (31 per cent), Asia and Australasia (27), and Africa (12). Twenty per cent were in the United States and 10 per cent in Europe.

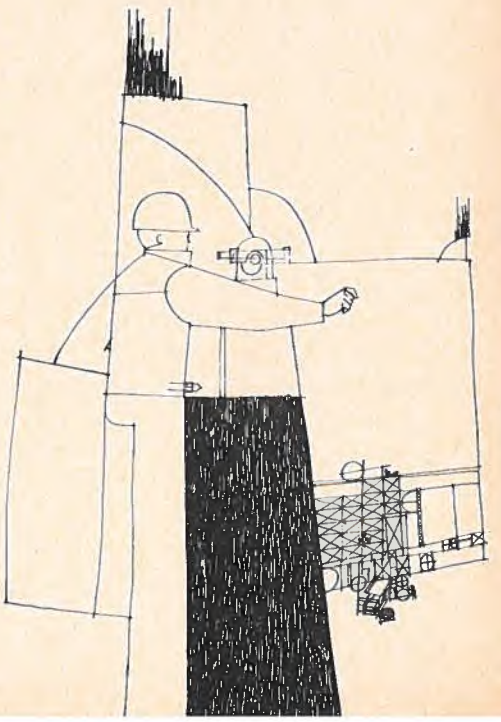
Canadian engineers have long been recognized for their experience in four special fields, closely related to the geographic and economic facts of life in Canada. These are pulp and paper, hydroelectric power and power transmission, mining, and aerial surveying. Of the 227 projects mentioned above, 59 were in pulp and paper, 44 in power, 31 in mining, and 20 in aerial surveying. Twelve of the 25 firms reported earning over $500,000 in the twelve months on foreign projects; 22 reported foreign earnings of over $300,000.

Equally interesting is the source of funds for the projects. Many of the developing countries cannot finance by themselves or even with money from private sources the projects on which they embark. Twenty per cent by dollar value of the work undertaken abroad by the 227 firms was financed by Canadian grant aid, soft loans, or ECIC long-term financing, 16 per cent by foreign governments, and 15 per cent by the international financing agencies.

The latter provided funds mainly for power development, pulp and paper projects, transportation, land and water use surveys, and aerial surveys. A number of examples of Canadian consultants who have obtained contracts in these areas and with international financing are set out in the preceding articles.

Of the 227 projects reported in the survey, 16 per cent of the total dollar value represented financing by foreign governments and 18 per cent private foreign financing other than U.S. This confirms that, even in the developing countries, Canadian consultants can and do obtain contracts not only for feasibility studies but also for designing and supervising big projects not paid for with international funds. In fact, undertaking of a feasibility study often leads to further work.

We present on the following pages four examples in four different fields of privately financed assignments that Canadian consultants have obtained abroad.



Canadian engineers have designed and are now supervising the construction of a waterworks and sewage disposal system in the Arabian cities of Riyadh and Medina. Signing the contract for this are R. A. Frigon (second from right), president of Cansult Limited, and His Excellency Prince Abdullah Sudairy, Deputy Minister of the Interior for Muncipal Affairs in Saudi Arabia.

Cansult Gets Arabian Contracts

A FIVE-YEAR-OLD Canadian consulting engineering consortium, Cansult Limited, provides an illustration of the opportunities offered by the oil-rich Middle Eastern countries. Last year Cansult won two Middle Eastern contracts. The first, in Saudi Arabia, covers reviewing the designs for, supervising the construction of, managing for one year after completion, and training staff for a waterworks and sewage disposal system in the cities of Riyadh and Medina. Tenders for construction were called last month and work on the $20 million job is expected to begin in March 1967.

Farther south, in the Trucial Sheikdom of Abu Dhabi on the Persian Gulf where oil was recently discovered, Cansult was chosen to design and oversee construction of an international airport to handle jet planes, a bridge from Abu Dhabi island to the mainland, a deepsea harbour, and a pier that extends into the ocean for several miles. This assignment, valued at about $50 million, is already proceeding under the supervision of a resident engineer. The airport runway is under construction, the bridge has been started, and the airport buildings are being designed. Work on both the Saudi Arabian and Abu Dhabi contracts will extend over nearly five years.

Cansult's president, R. A. Frigon, believes that a number of factors work in Canada's favour in obtaining business on commercial terms in the developing countries. One of the most important is the relevance of Canadian experience. Canadians, he says, still have "bush sense". This means that they can work in isolated spots, in difficult terrain and with unskilled help. The resident engineer on the Abu Dhabi project, for example, has worked and lived in the Canadian North and, temperature aside, he doesn't find conditions too different. Mr. Frigon also feels that Canadian engineers are more accustomed to making decisions on the spot and accepting responsibility for them, without having to wait to check with head office. And the fact that Canada has never acted as a colonial administrator also is a plus in certain areas.

Getting business in the oil-rich countries means, however, winning out against the stiffest of competition. It also means acting promptly on getting word of projects mooted. Cansult heard about possible business in Saudi Arabia in late 1963 from a member of a Canadian trade mission that had travelled in the Middle East. Within three weks the president flew out to Jeddah and, using introductions to various people in Saudi Arabia, obtained more information and decided that the firm should put in a proposal to the Minister of the Interior. About 18 other firms were competing for the contract to cover waterworks and sewage disposal systems in four cities. Eventually—after more than a year had passed and Cansult personnel had made many trips to Saudi Arabia—the assignment

was divided. The Canadian company got the contract for work in Riyadh and Medina and a British firm for Mecca and Jeddah.

The Abu Dhabi contract too proved the value of fast action—though there also the results were slow in coming. One day the Cansult president noticed in an engineering periodical a brief announcement that the Ruler of Abu Dhabi would like to hear from consulting engineers interested in participating in the Sheikdom's development plans. Immediately he sent off a letter to the Ruler, with the Cansult brochure. The rest was silence—for a full year. Then the Ruler sent a cable requesting that someone come to Abu Dhabi to discuss terms of a consultant contract. Mr. Frigon at once flew down to Abu Dhabi and entered into negotiations directly with the Ruler. Less than a month later the contract covering the airport and the bridge was duly signed. Later the deepsea harbour and the long jetty were added, under a contract signed with the present Ruler of Abu Dhabi, Shaikh Zaid, who replaced his brother, Shaikh Shakbut, in an orderly transfer of power.

Consultants who want to work successfully in the developing countries, Mr. Frigon believes, must have the ability to deal with people of different nationalities and must have a genuine sensitivity to their ways of thinking and feeling. The experience he acquired in carrying on negotiations with the Saudi Arabians proved invaluable in his dealings with the Ruler of Abu Dhabi. He knew that he must talk only to the Sheik and that he could only offer him alternatives and leave it to him to make up his mind; one does not argue with an absolute ruler.

Important too in obtaining business in these areas is patience and a quiet persistence in putting before the authorities the experience and the qualifications of your company. This helps enormously when the Ruler or Government Ministries have trouble making up their minds. Even better, try to be on the spot as much as possible. As an example, Cansult obtained the contract in Abu Dhabi in December 1965; in January the president returned to the Sheikdom and spent two months there, until the resident engineer for the project arrived.

Cansult has established an office in Riyadh and one in Abu Dhabi; the former will have a staff of about 15, of whom five key persons will be Canadians. Other employees will be Saudis or will be recruited in other parts of the Middle East. Normal practice is to employ as many nationals as possible and to send out from Canada only those people essential to ensure that the job is done expeditiously and properly.

Try to develop a genuine understanding of and sympathy for the country in which you obtain work, establish a reputation for efficient service, select your on-site Canadian staff carefully—and the way lies open for further contracts if Cansult's experience is a guide.

Surveying Libya's Resources

OVER in Libya, an affiliate of Cansult—Watts, Griffis and McOuat—won on its own one of the six contracts awarded by the Libyan Government for carrying out mineral-resource projects. This contract covered the evaluation of certain clay deposits near Libya's second largest city, Benghazi, and included drilling, sampling, topographic mapping, extensive chemical and physical testing of samples, and a comprehensive report. The project therefore required more than just engineering services: it called for experience in carrying out drilling programs, a knowledge of support costs, and a background in co-ordinating all aspects of an in-depth study.

Watts, Griffis and McOuat's bid on this job was no accident. For the past several years the company has made a major effort to secure foreign business. It has informed all Canadian Trade Commissioners abroad of its capabilities, as well as the various government officials and private firms in each territory who could use such services. It registered in Libya as a foreign consultant and when tenders were called in the late fall of 1965 was informed of them directly by the Kingdom of Libya's Ministry of Industry. The Canadian Embassy in Rome, however, also forwarded a notice which had been published in the Libyan newspapers.

Tender documents were immediately purchased and an engineer dispatched to Tripoli to investigate local conditions in order to prepare a bid. Contractors able to provide drilling and surveying services locally were contacted and prices obtained. Background information and taxation data were obtained from government officials directly concerned and local costs for living, transport, etc., were evaluated.

As there is no official Canadian representative in Libya, it was necessary to obtain all of this information the hard way. Because of the oil boom, however, there are a great many subsidiaries of U.S. and British service companies in Libya. The local management of these companies is usually U.S. or British, and this made the job of obtaining information somewhat easier.

An agent was retained to look after the formalities of submitting the tender, which was accompanied by a bank guarantee of 1 per cent of value and was effective for a period of three months.

The competition for the work was truly international: bids came from Britain, Poland, the United States, Libya, France, Italy and Germany. The range of quotations was also wide: the highest bid was almost 200 per cent over the Canadian figure.

The contract itself was of a "fixed fee" type, and general conditions were standardized to cover a wide variety of engineering work. Some of the more interesting terms included the following: payment in Libyan pounds quarterly during the term of the contract; posting by the company of a bank guarantee for 10 per cent of the value of the contract; provision for an increase or decrease in the work of up to 25 per cent, with payment to be revised proportionately.

Those familiar with the terms required by the Export Credits Insur-

ance Corporation before insuring contracts for engineering services will notice that these terms would be unacceptable to the corporation. Because the contract was relatively small, no effort was made to negotiate terms which would have made the contract insurable. However, it is not impossible to negotiate terms, particularly where the size of the contract involved is greater.

The successful tender was submitted on February 28, 1966, official notification of the award was made April 17, a contract was signed on May 15 in Libya, and the work began June 1.

The study itself went off without a hitch. The company engineer was able to live in Benghazi and commute each day to the survey site. Drilling was subcontracted to a subsidiary of a U.S. geophysical firm, the surveying to a subsidiary of a British organization. Samples are now being tested in Canada and the company expects to submit its final report before the end of the year.

Company officials believe that opportunities for engineers and contractors in Libya are excellent. A five year development program (1963-1968) is going ahead, with none of the usual delays caused by financing difficulties. They report that the government officials concerned provided the utmost in co-operation and that the tenders were evaluated and the job awarded with refreshing speed.

Tunnelling Under Hong Kong Harbour

A 6,000-FOOT precast concrete tunnel under the busy water of Hong Kong harbour is the design job currently facing the Montreal firm of consulting engineers, Per Hall Associates. Acknowledged masters of the highly complex art of underwater tunnel construction, the company is being retained as a subcontractor by the two British firms which hold the main contract. The assignment includes recommending suitable designs and details for precasting and positioning the tunnel elements, preparing drawings and specifications for special structures and methods required for positioning the elements, supplying personnel if needed, preparing detailed designs, and supervising the actual placement.

Although Per Hall Associates have a solid reputation as tunnel specialists, it was their work on Montreal's Lafontaine Tunnel which crosses the St.

The dotted line shows the route of a tunnel under Hong Kong Harbour to Kowloon. Under a subcontract from two British firms, a Canadian consulting firm is designing the precast concrete tunnel, preparing drawings and specifications, and will later supervise the actual placement of the completed tunnel, an exacting job that demands both care and experience.

Lawrence River that brought them to the attention of the British engineers. A number of technical articles written by members of the firm and others appeared in such magazines as the *PCI Journal*, the *Engineering Institute Journal*, *Engineering News-Record* and *The Dock and Harbour Authority;* they generated a great deal of interest in the mammoth project. The British engineers working on the Hong Kong Tunnel were interested in its design and they contacted the Minister of Highways of Quebec for more information. The Minister referred them to the joint venture of Canadian engineers in charge of the Lafontaine Tunnel, of which Per Hall Associates is a partner firm. Members of the British firms visited Montreal in 1965 and began negotiations with the Canadians. After a number of meetings in both Montreal and London, a contract was signed.

Mr. Hall himself and Armand Couture, partner in the firm and project engineer, went out to Hong Kong to view the site so that on the basis of projected traffic flow, physical conditions and local regulations they could make recommendations to their principals. Liaison between the British and Canadian companies, Mr. Hall stresses, has been very good. At various stages throughout construction, at least one Canadian engineer will be at the site because the company's policy is to keep a constantly watchful eye on any project in which it is active. Quality control is all-important and Mr. Hall is quite prepared to shut down a project if the work is not being done exactly to his firm's specifications.

The Hong Kong job will be a gigantic undertaking. It is to consist of three tubes: two for traffic of two lanes each and one for ventilation and services. It will be built of 12 precast reinforced concrete elements. Each of these sections will be 26 feet high and 86 feet across. According to present plans, the elements are to be cast near the tunnel site in a drydock, then towed out into the harbour and sunk into a trench dredged out of the harbour floor. Each unit takes about three weeks to transport, position and sink. This must be carried out with painstaking accuracy by men who are experts in the technique. The concrete sections are joined temporarily by nothing more than rubber gaskets and railway-type couplings and these must fit perfectly. The work is further complicated by both the fact that each of the football-field-size elements weighs about 27,000 tons (no small weight when pinpoint positioning is imperative) and that currents and tides in Hong Kong Harbour are strong and tricky. The tunnel will be lowered onto a temporary foundation until the final structure has been completed. The couplings can then be removed, as water pressure will hold the units together.

The three-and-a-half- to four-year job is now under way, and planning currently calls for a 1970 opening. The preliminary design work is finished and tenders have been called for construction. Reports are that the general contractor's papers are to be signed in February 1967.

Hong Kong is a far cry from the St. Lawrence River, but to Per Hall and his colleagues a tunnel is just a tunnel, no matter where it has to be built.

Studying Tel Aviv's Traffic Tangle

EVERY COUNTRY has traffic problems and in a tiny one like Israel, where the population has increased from 600,000 to 2.5 million in less than 20 years, special difficulties arise. Geographically and economically Israel resembles an hourglass. The area around the Sea of Galilee in the north is joined to the new burgeoning area of the middle south by a narrow strip which is only eight miles wide at one point north of Tel Aviv. Almost all communications north and south pass through Tel Aviv and its sprawling suburbs.

The city unfortunately has proved to be a boulder in the path of progress. Through traffic is forced to endure the jams that are inevitable in a city with narrow crowded streets. Although Israel has railway lines serving both its northern and southern regions, the two services end on the outskirts of Tel Aviv and because of a missing link, through passengers have to use another means of transportation to change trains.

To help both motor and rail traffic, the Israeli authorities hope to construct a major arterial expressway and rail link through Tel Aviv, bypassing the present bottleneck of the city's streets and roads. One alternative is to divert the Ayalon Creek into the Mediterranean and to utilize for the new highway its bed (or wadi) which meanders through Tel Aviv and is dry much of the year. This is the Ayalon Project, merely an idea when our story begins.

Early in 1965 the Israeli Government and the Tel Aviv Municipality established a new agency for the purpose of carrying out the planning and construction of the proposed scheme —the Ayalon Highway Authority. The project was of special interest to the Montreal consulting engineering firm of Cartier, Côté, Piette, Boulva, Wermenlinger & Associates, specialists in hydraulics, soils (they did the soil mechanics of the Laurentian Autoroute), structures and roads, all fields connected with the project. For traffic studies, the firm joined with P. Ewart & Associates of Montreal. Mr. Piette visited Israel with a Canadian Government trade mission in 1962 and his office had tendered for two earlier jobs there.

On April 15 the new Authority issued a circular letter saying that it wished to pursue the Ayalon Highway Project by engaging consultants to prepare a feasibility study, and asked 26 consulting engineering firms across the world to submit brochures and outline their qualifications. These consultants, including Cartier, Côté, Piette, Boulva, Wermenlinger & Associates, were quick to offer their services. On May 12, 1965, the Canadians wrote their first letter to the Ayalon Highway Authority, outlining their qualifications, previous experi-

ence, and readiness to accept the task of producing a feasibility report for the project. The Authority then reduced the original 26 to 16 and asked for further references on qualifications and services. Several weeks of waiting followed. All inquiries from the Canadian Commercial Secretary on behalf of the Montreal firm were greeted with the standard reply: "The proposals are under study". Finally, in July 1965 word came that the four most likely contenders had been chosen and that the Authority would request detailed proposals from them. The Canadian firm was one of these, with one French, one British, and one U.S. company.

In August one of the partners of the Canadian company visited Tel Aviv and a proposal was submitted. Another long waiting period followed and as bits and pieces of the proposals started to be known, the Canadians learned that their proposal was more expensive than two of the other three presented. However the proposals were studied in the light of their advantages and in October new hope came when three of the Authority's top administrators flew to Montreal for discussions with the Canadian company. Visits were arranged in Montreal, Quebec and Ottawa with the consultants and some of their clients (the Quebec Provincial Highway Authorities, the City of Montreal, and the Federal Department of Public Works among others). The result: in January 1966 the firm of Cartier, Côté, Piette, Boulva, Wermenlinger & Associates was awarded the contract, its first in Israel. The project is being financed by the Government of Israel and the Municipality of Tel Aviv.

The study itself covers a number of related fields, including traffic counts, projections, town planning concepts, land uses, etc., soils, structures, hydrology, hydraulics, economics, cost engineering and general engineering. One major question related to mass transportation was whether space was to be reserved for the completion of the rail line. A number of engineering specialists were sent to Tel Aviv and one of the firm's partners was there all the time directing the studies. An Israeli firm was also retained to assist the Canadians in all areas of the operation. The Montreal engineers are now studying the traffic data which have been programmed in computers in Washington, D.C.

The schedule calls for a draft final report to be submitted some time in February 1967. The Authority will study it and return it with its comments. The Canadian company will then have 45 days to prepare the final report which will include consideration and clarification of any comments made by the Authority.

This contract has been in many ways a major breakthrough. Discussions have already taken place regarding detailed planning of the project and supervision of the construction. In other words, this initial six-month job could develop into a five to six year contract for the Canadian company. And who knows what other jobs may come its way in Israel or in some other developing countries in need of Canadian engineering talent?

Trade Commissioners on Tour

Temporary Duty in Ottawa

The following officers will be on temporary duty in Ottawa. Anyone who wishes to see them should contact the Trade Commissioner Service, phone: 992-9930.

R. D. Lee, Assistant Commercial Secretary in Karachi, Pakistan, December 20-January 3. Mr. Lee will be posted to Philadelphia as Vice Consul and Assistant Trade Commissioner.

J. H. Nelson, Commercial Secretary in Guatemala City, November 28-December 9. Mr. Nelson will be posted to Liverpool, England, as Trade Commissioner.

In Territory

Chile—Z. W. Burianyk, Assistant Commercial Secretary in Santiago, will visit Concepcion, Nacimiento, Temuco, Osorno, Puerto Montt and Valdivia December 5-13.

Communist China—R. G. Woolham and J. M. Fraser, Trade Commissioners in Hong Kong, will visit Peking and other cities December 9-22.

India—R. R. Parlour, Commercial Counsellor in New Delhi, will visit Bombay December 12 to 15.

Italy—J. H. Stone, Commercial Counsellor in Rome, will visit Florence December 1-6.

Saudi Arabia—R. H. M. Cathcart, Assistant Commercial Secretary in Beirut, Lebanon, will visit Jeddah, Riyadh, Al-Qobar, Dhahran, and Dammam December 5-15.

Spain—L. A. Campeau, Commercial Counsellor in Madrid, will visit Barcelona December 4-8.

Taiwan—E. L. Bobinski, Consul and Assistant Trade Commissioner in Manila, Philippines, will visit Taipei December 5-10.

United States—V. G. Lotto, Consul and Assistant Trade Commissioner in Detroit, Michigan, will visit Jackson, Lansing, Flint, Saginaw, Bay City and Port Huron December 5-9.

Businessmen who would like these officers to undertake assignments for them should write to them at their posts as soon as possible.

trade lines

West Germany and West Berlin currently have nearly 1.4 million foreign workers. Among them (according to a survey made in mid-1966) are 399,100 Italians (30.4 per cent), 196,200 Greeks (14.9 per cent), 185,300 Spaniards (14.1 per cent), 158,000 Turks (12 per cent), and 19,800 Portuguese (1.5 per cent). Most of them are concentrated in four areas: North Rhine-Westphalia, Baden-Wuerttemberg, Hesse and southern Bavaria—Bad Godesberg.

A consortium of German firms has been awarded the contract for a new kraft paper mill in Turkey. The mill, to be completed in 1969, will produce 60,000 tons of kraft paper and liner a year for the cement and fertilizer industries.

New credit extended by Britain's durable goods shops on instalment buying agreements decreased by 18 per cent in the second quarter of 1966. This represents a fall of over $50 million on a seasonally adjusted basis from the previous quarter. Credit sales by durable goods shops in June were 14 per cent lower than at the same period last year. The downward trend was most pronounced in the radio and electrical goods shops—London.

A new airport is to be built in 1967 near Targu Mures in Central Rumania. The concrete runway of 1,350 metres will enable aircraft in the IL-14 class to service the area. Domestic sources will supply modern aircraft equipment and navigation instrumentation. A modernization program is slated for airports at Suceava (northeast), Oradea (northwest), Arad (west) and Bacau (east)—Vienna.

A new Brazilian Code granting incentives to national and foreign fishing enterprises has been announced. The new code gives five years' exemption from income tax and from duties normally levied on imports of boats and other fishing equipment. It also eliminates a 3 per cent tax formerly charged on imported fishing equipment—São Paulo.

Chile has practically doubled its poultry farming activities during the last year, as a result of the Government's restrictions on the consumption of beef. This has meant a considerable saving in foreign exchange. At the start of the restrictions some 750,000 kilos of chicken meat had to be imported, but this has gradually been reduced to 250,000 kilos. It is also reported that pig farming is being encouraged, as a further substitute for beef, but results will not be apparent before two years—Santiago.

Spain's four aluminum plants reached a record total production of 61,000 tons in 1965, compared with 4,100 tons in 1954 and 43,500 tons in 1964. Aluminum output this year is expected to rise to 78,000 tons and by 1968 to 102,500 tons. By 1970 it will reach 129,000 tons, creating an exportable surplus—Madrid.

Hungary plans a 75 per cent increase in paper production in the next five years. Under the current Five-Year Plan, over $92.1 million will be spent on new plants, with a target of 300,000 tons of paper by 1970. The main increase will be in fine papers and paperboard, but Hungary will continue to import about $20 million worth of paper a year, including newsprint, chiefly from the U.S.S.R. The majority of the capital equipment for this expansion will be imported—Vienna.

South Africa's first whitefish trawler, the "Narval" has arrived in Walvis Bay, South West Africa. The 1,500-ton trawler was built at a cost of R1.2 million. The vessel, owned by Rocky Point (Pty.) Limited, will begin its activities off the west coast of South West Africa in the vicinity of Walvis Bay and Lolito Bay—Cape Town.

The volume of trade between Chile and Argentine in 1965 reached approximately U.S.$100 million, a record figure, but Chile had a deficit on this trade of some U.S.$3 million. Chilean representatives made this statement at a meeting of the Mixed Chilean-Argentinian Integration Committee held in Buenos Aires. They discussed industrial complementation agreements covering the motor vehicle and electronics industries, copper and the railways—Santiago.

Pakistan's first white cement plant will begin producing by June 1967. It is being set up with Danish help by the West Pakistan Industrial Development Corporation at Daudkhel and will produce 50 tons a day. The estimated cost of the project is Rs.7.1 million (approximately Can.$1.5 million). Pakistan at present consumes approximately 15,000 tons of white and coloured cement. Once the plan goes into production, imports of white cement will be eliminated and foreign exchange saved.—Karachi.

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 Trade Relations, Department of 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 .92. To convert column two,** *divide* **by .92.**

Country and Currency	Value of Foreign currency unit in Canadian dollars	Value of Canadian dollar in foreign currency units
	at Nov. 10	
Algeria		
Dinar	.2190	4.58
Argentina		
Peso (free)	.0043	232.56
Australia		
Dollar	1.21	.8333
Austria		
Schilling	.0419	23.98
Bahamas		
Dollar	1.057	.9523
Belgium and Luxembourg		
Franc	.0217	46.25
Bermuda		
Pound	3.021	.33
Bolivia		
Peso	.0913	11.01
Brazil		
Cruzeiro (official free)	.0005	2,053.39
Britain		
Pound	3.021	.33
British Honduras		
Dollar	.7552	1.32
Burma		
Kyat	.2273	4.40
Ceylon		
Rupee	.2266	4.41
Chile		
Escudo (bank rate)	.2514	3.98
(free)	.2195	4.56
Colombia[1]		
Peso (intermediate)	.080	12.50
Congo, Republic of[2]		
Franc	.0072	139.50
Costa Rica		
Colon	.1633	6.15
Cuba[3]		
Peso	.....	.....
Czechoslovakia		
Koruna	.1503	6.67
Denmark		
Krone	.1565	6.41
Dominican Republic		
Peso	1.082	.92
Ecuador		
Sucre (official)	.0601	16.67
(free)	.0547	18.35
El Salvador		
Colon	.4329	2.31
Fiji		
Pound	2.721	.37
Finland		
Markka	.3382	2.96
France, Monaco, etc.[4]		
Franc	.2190	4.58
Franco-African Republics[5]		
Franc	.0044	227.79
French Pacific[6]		
Franc	.0121	82.64
Germany		
D Mark	.2721	3.68
Ghana		
Cedi	1.259	.80
Greece		
Drachma	.0361	27.86
Guatemala		
Quetzal	1.082	.92
Guyana		
Dollar	.6293	1.59
Haiti		
Gourde	.2164	4.65
Honduras		
Lempira	.5411	1.85
Hong Kong		
Dollar	.1888	5.33
Hungary		
Forint (official)	.0921	10.86
Iceland[2]		
Krona (official)	.0252	40.00
India		
Rupee	.1436	7.02
Indonesia[7]		
Rupiah	.....	.....

Country and Currency	Value of Foreign currency unit in Canadian dollars	Value of Canadian dollar in foreign currency units
	at Nov. 10	
Iran		
Rial	.0143	70.02
Iraq		
Dinar	3.030	.33
Ireland		
Pound	3.021	.33
Israel		
Pound	.3607	2.77
Italy		
Lira	.0017	581.86
Japan		
Yen	.0030	335.37
Lebanon		
Pound (free)	.3481	2.87
Malaysia		
Dollar	.3535	2.83
Mexico		
Peso	.0866	11.61
Morocco		
Dirham	.2164	4.42
Netherlands		
Florin	.2990	3.34
Netherlands Antilles		
Florin	.5738	1.74
New Zealand		
Pound	3.010	.33
Nicaragua		
Cordoba	.1546	6.50
Nigeria		
Pound	3.021	.33
Norway		
Krone	.1515	6.64
Pakistan		
Rupee	.2266	4.41
Panama		
Balboa	1.082	.92
Paraguay		
Guarani (free)	.0087	116.27
Peru		
Sol (free)	.0403	24.94
Philippines		
Peso (free)	.2776	3.24
Poland		
Zloty (fixed basic rate)	.2705	3.72
Portugal & Colonies[8]		
Escudo	.0376	26.66
Sierra Leone		
Leone	1.510	.66
South Africa		
Rand	1.510	.66
Spain & Dependencies		
Peseta	.0181	55.55
Sweden		
Krona	.2092	4.79
Switzerland		
Franc	.2505	4.00
Syria		
Pound (free)	.2833	3.59
Thailand[2]		
Baht (free)	.0523	19.25
Tunisia		
Dinar	2.072	.48
Turkey		
Lira	.1202	8.35
United Arab Republic		
Pound (official)	2.489	.44
United States		
Dollar	1.082	.92
Uruguay		
Peso (free)	.0158	63.29
Venezuela		
Bolivar (official free)	.2411	4.11
West Indies		
Dollar[9]	.6293	1.59
Pound[10]	3.021	.33
Yugoslavia		
Dinar (official)	.0866	11.63

1. The fixed rate is no longer in effect, as of August 22, 1966.
2. Additional rates are in effect.
3. There is no trading in Cuban pesos in U.S. or Canadian banks at present.
4. Franc is also used in French Guiana, Guadeloupe and Martinique.
5. Chad, Central African Republic, Congo, Dahomey, Gabon, Ivory Coast, Mali, Islamic Republic of Mauritania, Niger, Senegal, Upper Volta, Cameroons, Togoland, and Malagasy. Also Reunion, Comoro Islands, St. Pierre and Miquelon.
6. New Caledonia, New Hebrides, French Polynesia.
7. As Indonesia is no longer a member of the IMF, a realistic rate is not available.
8. Approximately same rate for Portuguese territories in Africa.
9. Barbados, Trinidad and Tobago, Leeward and Windward Islands.
10. Jamaica.

The World Bank Is Financing These Projects

Brazil to Build Kraft Mill

A NEW $26 million kraft pulp and paper mill is to be established in southern Brazil by Papel e Celulose Catarinense S.A., with the assistance of a $6 million investment by the International Finance Corporation (IFC), a World Bank affiliate.

The new mill, to be located near Lajes in the state of Santa Catarina, will have the capacity to produce approximately 47,000 metric tons of bleached and unbleached kraft papers annually, as well as about 10,000 metric tons of kraft pulp for sale to other paper producers. This will place the mill in a position both to help supply the existing market and to meet part of the growing demand in Brazilian industry for quality kraft papers for making multiwall sacks, wrapping paper, and various kinds of paper bags.

Initially the mill's chief raw material will be waste from logging and saw-milling operations; in the longer run, pulpwood will also be available from pine plantations to be established in the area by the company.

Papel e Celulose Catarinense is sponsored by the Klabin group, a major Brazilian industrial group and the largest integrated pulp and paper manufacturer in Latin America. The company, which has been privately owned up to now, was recently converted into a corporation whose shares may be publicly held. This is the first time a company controlled by the Klabin interests has been opened to participation by outside investors. ●

Nicaragua to Expand Electric Power

NICARAGUA will expand its power generation and transmission facilities to meet requirements, expected to increase at an average annual rate of about 11 per cent during the next seven years. A $5 million loan from the World Bank to the Empresa Nacional de Luz y Fuerza, an autonomous government corporation which supplies most of the country's public power, will help to finance a 15,000 kilowatt gas turbine.

In order to meet power requirements at time of peak demand and to maintain a prudent reserve, the Empresa will need additional generating capacity and expansion of the transmission system within two years. The corporation will probably meet its long-range needs by more hydroelectric plants but the installation of a gas turbine-powered generating unit best fits its immediate needs. The turbine will be located at Chinandega, an important centre of power consumption in the western part of the country.

By the construction of two 138 kv. and two 69 kv. lines, additional high-voltage circuits will strengthen the Empresa's transmission system. The World Bank loan will also assist in the financing of the expansion of substation capacity, improvement of the distribution lines, building of a new headquarters for the corporation, and will provide engineering and management services.

The total cost of the project is estimated at $7.3 million. The World Bank will cover the foreign exchange cost and the Empresa will meet the remainder from its own resources. ●

Road Engineering in Malawi

A credit of $490,000 from the International Development Association will finance road engineering services in Malawi, a narrow landlocked country of eastern Africa. The transport system is generally inadequate for present traffic in this country and this hinders economic growth. Out of 6,200 miles of all-type roads, only 250 miles are paved. The urgent requirement is for the improvement of the 168-mile road between Zomba, the capital, and Lilongwe, the major market center for agriculture. The 90-mile section between Lilongwe and the border of Zambia also needs improving.

The IDA credit will partially cover the services of consultants who will do the detailed engineering, including designs and preparation of tender documents for the Zomba-Lilongwe road. They will also review the detailed design of the second road, already prepared by Malawi's Ministry of Works, and will present firm cost estimates. In addition, the credit will be used to reimburse the Malawi Government for the cost of a last-year study of alternative routes.

The Government has engaged Brian Colquhoun and Partners of Britain, who conducted the route-selection study, to carry out the detailed engineering. The entire work will take about 12 months and will cost an estimated $575,000. The IDA credit will take care of the foreign exchange component and the Government of Malawi will meet the local currency costs. ●

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