

POINT FOUR
IN BOLIVIA

1942-1960

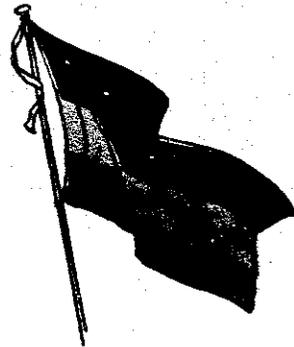


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POINT FOUR IN BOLIVIA

1942-1960

Programs of Technical Cooperation and Economic Assistance
of the
UNITED STATES OF AMERICA and BOLIVIA



United States Operations Mission
to Bolivia
December 1960

UNITED STATES OPERATIONS MISSION to BOLIVIA

Banco Popular del Peru Building

La Paz, Bolivia

Telephones 7760, 7761, 7764

FOR U S CORRESPONDENTS:
226 DEPARTMENT OF STATE MAIL ROOM
WASHINGTON 25, D. C.

FOR OTHER CORRESPONDENTS:
CASILLA 873
LA PAZ, BOLIVIA

December, 1960

To the Reader:

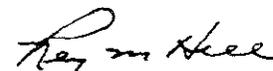
The objective of the United States Government, in the conduct of its technical and economic participation in Bolivia, is to help develop local leadership and understanding by Bolivians and North Americans alike of the factors that are deterrents to social and economic improvement and progressive means to prevail over them. With leadership and understanding arise opportunities to improve existing facilities and to create new institutions to promote national growth.

The prime objective is not to administer projects, to conduct training programs, to grant funds for urgent needs, nor to make loans; rather, the United States participates in such activities because they are vehicles for the development of leadership capability in a practical environment.

In recent years, the United States Operations Mission to Bolivia has increasingly encouraged Bolivian technicians and administrators to assume positions of greater authority and responsibility. The number of United States technicians has been diminished as Bolivians have accepted this challenge. The Government of Bolivia has been encouraged to accept full responsibility for the operation of projects. Many activities, begun as joint ventures, have been incorporated into the regular structure of government.

The objective can be attained only if Bolivia is motivated to execute projects and programs on a progressive basis, under national leadership, utilizing local skills, at levels that can be maintained with Bolivian revenues. Activities primarily dependent on foreign skills and foreign financing often can make a visible impact, they can be photogenic, and they can be satisfying to foreign and local technicians and observers, but they too often fail to build the leadership necessary for long term success.

The USOM to Bolivia is dedicated to the improvement of the techniques of international cooperation.

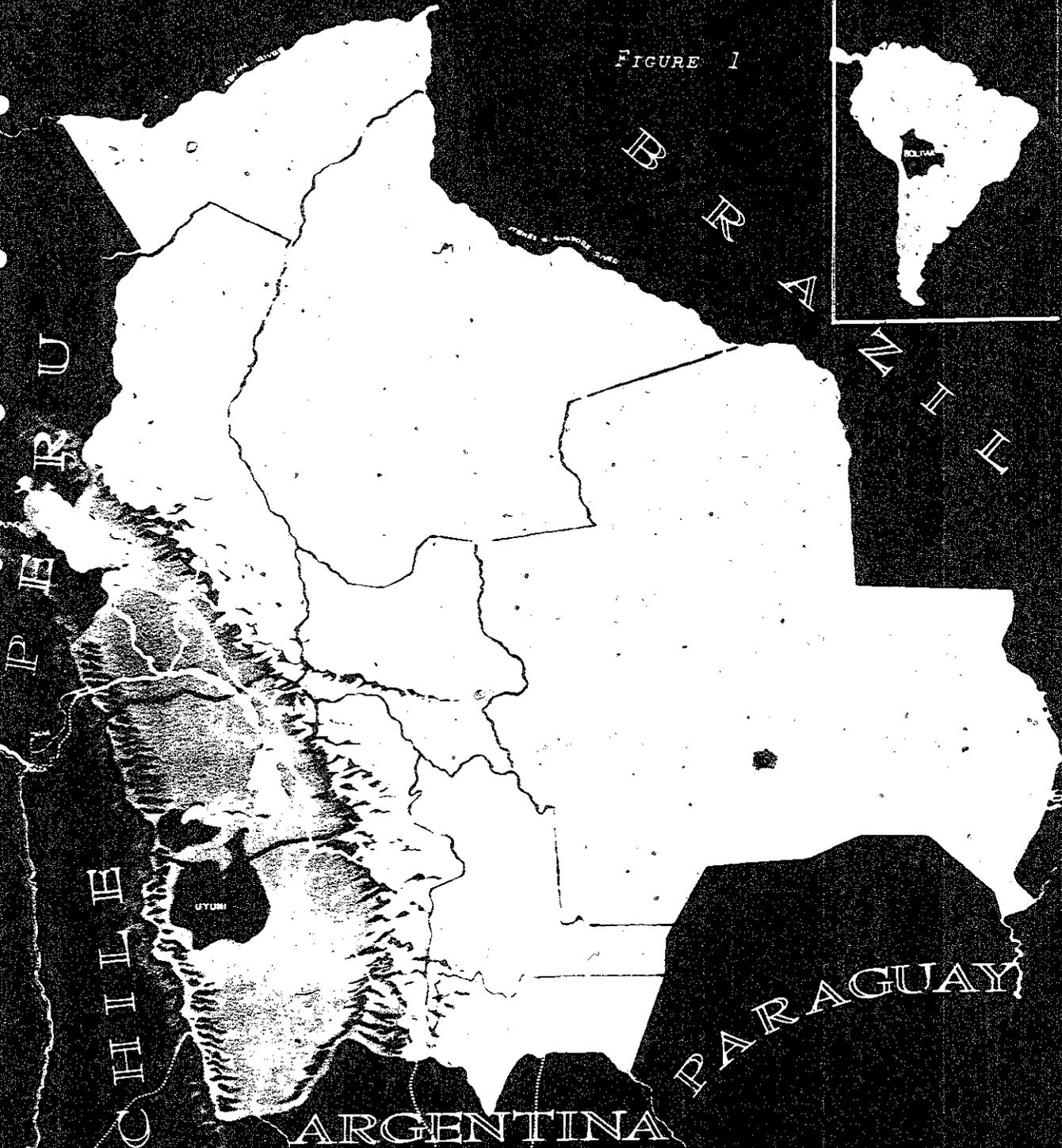


Rey M. Hill
Director

BOLIVIA

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FIGURE 1



BOLIVIA was called "Upper Peru" in colonial times, although governed by the Spanish Viceroyalty of La Plata, now Argentina. The present name dates from independence in 1825, won under the leadership of Simon Bolivar.

THE INSERT shows the location of Bolivia in the heart of the continent, lacking seacoast which was lost to Chile in 1819 during the violent "War of the Pacific."

POLITICAL DIVISION of the nation into states, or "Departamentos" is indicated by yellow lines. Most cities shown are departmental capitals. Thousands of lesser towns and villages are not shown.

RAILROADS and highways descend westward to the ocean through Peru and Chile. Others extend south into Argentina, and a railroad from Santa Cruz runs east, across Brazil, to the Atlantic seaboard. Some roads connect with rivers which flow north of the Amazon, but none of the rivers are navigated by large vessels. See page 30 for a partial network of highways.

THE ANDES MOUNTAINS have rich veins and deposits of the minerals which are the principal wealth of Bolivia. Several peaks on the southwestern border are volcanic; those to the east have perpetual snows and ice from 17,000 feet to maximum altitudes of 23,000 feet.

THE ALTIPLANO is the 12,000-foot plateau between mountain ranges in the southwest where most of the Bolivian population dwell. Lake Titicaca, 3,000 square miles and 12,700 feet altitude, is the world's highest body of water navigated by large steamers. They ply between the railhead at Puno, Peru, and the Bolivian port of Guaqui at the southern end of the lake. The lake drains into Lake Poopo, which has no outlet. During February rains, Poopo sometimes floods the flat Altiplano as far as the mining center of Oruro, in the north and the vast salt plains of Uyuni in the south.

THE YUNGAS is the Bolivian name for the deep green valleys descending the eastern slopes of the Andes almost to sea level. Heavily timbered, they have much unexploited agricultural land and waterpower.

THE ORIENTE, or eastern tropical flatlands, comprises three-fifths of the total area of Bolivia, as with the adjacent Republic of Peru. But unlike the Amazon headwater regions of Peru, which are heavily forested, much of eastern Bolivia is not jungle but grasslands. Drainage is poor, and vast areas become swamps in the rainy season. Camiri, south of Santa Cruz, is the major oil-producing region.

2

COVER: A baby llama, four hours old, teeters on his soft hooves. The llama is still a source of meat and milk, and a beast of burden throughout the Andean regions.

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This report gives a brief account of the various activities which have been carried on under the United States programs of technical cooperation and economic assistance in Bolivia, showing funds spent and benefits received.

The United States aid program to Bolivia consists of a Technical Cooperation program started in 1942 and an Economic Assistance program initiated in 1954, both of which are commonly called "Point Four". Both activities are part of the United States Foreign Aid program which began with Latin American countries under the Good Neighbor Policy and is now an integral part of United States foreign relations with most developing nations of the free world.

The United States agency responsible for carrying out these programs is the International Corporation Administration, represented by United States Operations Missions (USOMs) in more than sixty countries.

The purpose of the programs is to assist the peoples of the world in their efforts to attain a higher level of social and material well-being based on individual freedom and political independence.

Although international technical cooperation is today and henceforth an accepted part of United States foreign policy throughout the world, the initial cooperative agreements were developed with the Latin American nations under the stimulus of World War II, when the countries of the Western Hemisphere joined in a massive mutual effort to supply foodstuffs and raw materials needed to win the war.

Under the U. S. Foreign Economic Administration, three offices were established in Bolivia to promote national development of raw materials:

▶ The METAL RESERVE provided loans, machinery, and U. S. technicians to increase the productivity of marginal mining operations, particularly in the smaller, undercapitalized mines.

▶ The RUBBER RESERVE encouraged the gathering of natural rubber along the Amazonian headwaters of northern Bolivia, supplying loan funds, equipment, and technical assistance to private producers.

▶ The CHICHONA PROCUREMENT office was formed to improve the production and exportation of quinine. Owing to the inaccessability in the

northern jungle of trees bearing the cinchona bark, equipment pools, purchasing offices, and buying agencies had to be set up, and airports were constructed. The entire population of Rurrenabaque, several thousand people in a district where the Beni River flows from the jungle slopes to the tropical lowlands, turned out to build the airport. This impressive demonstration of community self-help has since been repeated frequently by the people of that region, as in the laborious construction of their water supply, which became the theme of a popular Bolivian motion picture.

None of these operations would have been feasible without a successful prior solution to the grave problem of human habitation in the disease ridden jungle and in unhealthy mines at high altitudes. In 1942 the Inter-American cooperative Public Health Service was established to set up medical centers, sanitary posts, and to form mobile health units, thus inaugurating the long range program of mutual assistance between the peoples of the United States and Bolivia which now has its goal set on meeting human needs far beyond those temporary shortages of the war years which were the beginning of the concept of international technical cooperation.



SECTION I



TECHNICAL COOPERATION



ECONOMIC ASSISTANCE





▲
ABOVE: Symbol of technical cooperation is Professor Raul Flores, of the Education Servicio's normal school at Warisata, at the foot of 23,000-foot Mount Illampu, one of the highest mountains in the Western Hemisphere. After a scholarship in sociology and agricultural methods at Costa Rica, Professor Flores returned to teach mechanized farming methods to adult classes of highland farmers.

The "Servicio" is an organization composed of Bolivian and United States personnel joined together under the auspices of the two Governments for the purpose of carrying out mutually agreed upon programs of technical assistance. Each Government contributes funds in its own currency to the separate Servicio Joint Funds which are used to pay both the dollar and local currency cost of Servicio projects. In addition, the U.S. Technical Cooperation Program pays for the costs of U.S. technicians, participant training, commodities needed for demonstration purposes, and certain other costs.

As the Servicios in Bolivia were used to administer massive U.S. economic assistance programs, they grew to become large organizations with responsibilities beyond the scope of a technical cooperation project. But in recent years the Servicios have been divested of operating responsibilities and have re-directed their efforts towards the basic innovating functions for which they were established.

Table A-V of the Appendix shows the yearly contributions of the United States and Bolivia to the joint funds of the Servicios.

Technical Cooperation is designed to aid in the transfer of knowledge and techniques from the more advanced western nations to the developing nations through the introduction of new methods of learning, organization and production. Projects are carried on in Bolivia in the major fields of agriculture, health, and education through joint government organizations called "Servicios".

In addition, the Technical Cooperation Program includes projects in roads, aviation, industry, mining, petroleum, labor, land, settlement, public administration, communications media, and public safety.

After experimentation in certain fields and when demonstrated to be successful in the Bolivian social and economic environment, the new technique and/or organization is adopted by an appropriate Bolivian institution and incorporated into the local economy. There have been many instances of such successes in Bolivia and certain major examples stand out:

▶ THE ROADS SERVICIO has constructed new roads and maintained 4,000 kilometers of existing roadways throughout Bolivia and has trained a highly skilled and competent staff of Bolivian engineers, technicians and workmen who are now capable of continuing the project with only a minimum amount of U.S. technical advice.

▶ THE AGRICULTURAL EXTENSION Service, with 36 offices and 115 employees, teaching improved farm practices to the farming community throughout the nation, is ready for integration into and operation by the Ministry of Agriculture in 1961. The Supervised Agricultural Credit Program, operating 33 provincial offices, with a capital fund of over \$1,000,000 is in the stage of limited technical assistance.

▶ THE AGRICULTURAL EXPERIMENT Station of La Tamborada, near Cochabamba, and the Agricultural School at Muyurina near Santa Cruz, are now completely independent activities, the former operated by the University of San Simón, and the latter by a religious order, for the Bolivian Government.

▶ SIXTEEN HEALTH CENTERS AND MOBILE Units, staffed and operated by Bolivian personnel have been transferred from the Health Servicio to the Ministry of Health.

▶ CAMPAIGNS FOR ERADICATION of malaria, yaws, and smallpox have been conducted by Bolivian personnel under Bolivian direction, with a minimum amount of United States and international technical assistance.

▶ THE RESEARCH CENTER IN PUBLIC Administration, designed to assist the Bolivian Government in all fields of public administration is staffed by Bolivians who were trained locally under the University of Tennessee-University of San Andrés Public Administration Project.

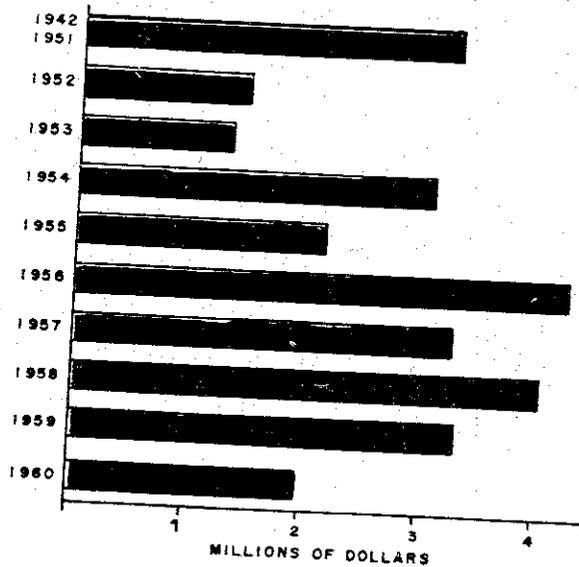
▶ THE PEDRO DOMINGO MURILLO Industrial Vocational School established by the Education Servicio is operated entirely by a Bolivian staff and serves the urban needs of industrial education and training.

▶ FOUR NORMAL SCHOOLS staffed by personnel trained by the Education Servicio, presently graduate 150 teachers a year.

▶ CUSTOMS REVENUES will have increased an estimated 50% from 1958 to 1960 partly as a result of reforms introduced by the Government of Bolivia in 1959, as recommended by the joint UN-US team of customs advisors.

Activities of the Technical Cooperation Program in the several substantive fields are further described in Section II of this report. A complete list of Technical Cooperation project expenditures may be found in Table A-II of the Appendix (Section IV of this report). Figure 2 on this page and Figures A-I and A-II of the Appendix reflect the recent transfer of many projects to Bolivian management and the reduction in personnel as responsibility and authority has been assumed by Bolivian technicians and administrators.

FIGURE 2
**U.S. TECHNICAL COOPERATION PROGRAM
 IN BOLIVIA 1942-1960**
 OBLIGATIONS BY FISCAL YEAR PROGRAMS



U.S. obligations listed above include costs of U.S. technicians, foreign training of Bolivian participants, commodities for Technical Cooperation projects, contributions to Servicio Joint Funds and other costs. Includes \$72,000 of Regional Funds, and \$3,873,000 of Special Assistance project funds.

Source: Controller, USOM/Bolivia.

The Economic Assistance Program to Bolivia began in 1954 when the country was in serious economic difficulties. The basic problems were caused by decreased production, inflationary monetary policies and consequent scarcity of foreign exchange. A complex of multiple foreign exchange rates existed, varying between the low official rate of Bs. 190 to the U.S. dollar, various other higher official rates, and a free market rate of Bs. 1,800 per U.S. dollar. This set of artificial exchange rates resulted in a voluminous traffic of illegal contraband exports, making essential commodities in extremely short supply. The public was forced to wait in long queues in front of retail stores and distribution centers to purchase basic items.

To assist Bolivia in overcoming this serious situation, the United States began the shipment of certain essential food imports, aviation gasoline, machinery and equipment. Most of these goods were sold to local importing firms for distribution and sale throughout the country. Payment for these aid commodities was made in local currency (Bolivianos) and the proceeds deposited in the Special Account-Counterpart or other appropriate account, and retained in the Bolivian economy. In this way, scarce foreign exchange was not needed to pay for essential imports and the pressures were reduced for a still further decline in the international exchange value of the Boliviano.

In addition to the commodity and machinery imports, the United States Government began a program of direct cash payments to the Bolivian Government in 1957. The Central Bank "bought" these dollars with Bolivianos, which were deposited in turn to the Special Account-Counterpart. The effect of the "cash grant" program was identical to the commodity import program in that dollars were contributed to the Bolivian economy, thereby bolstering the foreign exchange revenues of the Central Bank and helping to stabilize the world price of the Boliviano.

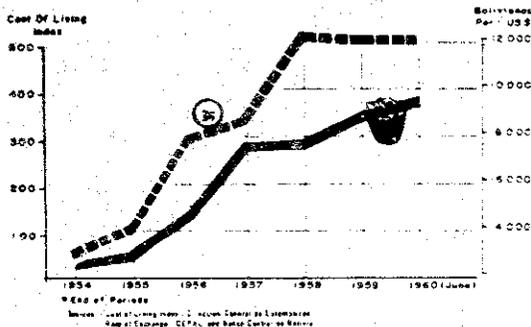
In December 1956, the Government of Bolivia introduced a Monetary Stabilization Program designed to correct the shortage of goods and to halt the rampant inflation which had seen the value of the Boliviano fall precipitously from Bs. 50 to the U.S. dollar in 1950 to over Bs. 12,000 to the U.S. dollar in 1956. The fundamental elements of the Stabilization policy were:

- the suppression of multiple exchange rates, devaluation of the Boliviano, and establishment of a freely fluctuating exchange rate;
- the elimination of controls and prohibitions on imports and exports;
- suppression of price controls and government subsidies for major consumer items;
- freezing of most wages and salaries;
- control of banking credit and adoption of responsible fiscal policies.

In order to confront the demand for dollars and maintain the rate of exchange, the International Cooperation Administration of the United States Government, the United States Department of Treasury, and the International Monetary Fund (IMF) assisted the Government of Bolivia in the Stabilization Program by authorizing \$10 million, \$7.5 million and \$7.5 million respectively, to the Stabilization fund, the latter two in the form of loans. Gross drawings from the IMF made by Bolivia reached \$12,600,000 as of September 1960, including a \$3,400,000 advance by the IMF to meet Bolivia's increased quota to the Fund in 1959. Repayments of \$3,500,000 were made in 1959 and 1960, so that Bolivia's present obligation to the International Monetary Fund is \$9,100,000. The International Cooperation Administration has provided \$70,700,000 since fiscal year 1957 through the Economic Aid Program described below. No drawings were made by Bolivia directly from the \$7,500,000 U.S. Treasury authorization which lapsed in December 1958.

The Stabilization Program has achieved notable results in recent years; by December of 1958 the rate of inflation had been significantly reduced and the foreign exchange value of the Boliviano became stabilized. (See Figure 3, below).

FIGURE 3
COST OF LIVING INDEX IN LA PAZ AND
THE RATE OF EXCHANGE IN BOLIVIA *

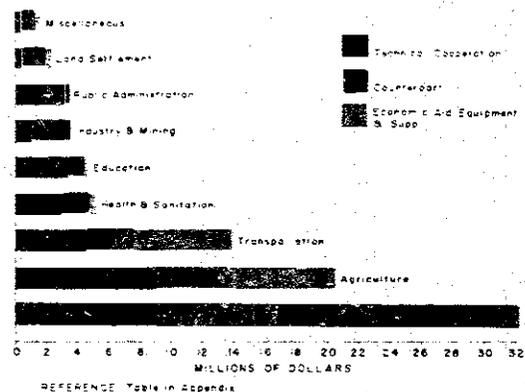


Part of the cause of the economic dislocation was the decrease in agricultural production. In order to alleviate this problem, U.S. aid funds were spent to import agricultural machinery, tools, fertilizers, and insecticides which were used or distributed for sale by the Agricultural Servicio to increase the level of agricultural production. A second major import item of the U.S. aid program was road building equipment, given to the Bolivian-American Cooperative Roads Servicio, which achieved an outstanding improvement in the difficult Bolivian mountain highway transportation system. Other imports of road equipment were donated to the Bolivian Development Corporation to assist in the development of agricultural regions.

Local currency received from the sale of U.S. aid commodities and from the purchase of U.S. aid dollars by the Central Bank have been deposited in the Counterpart Account and spent for purposes mutually agreed upon by the United States and the Government of Bolivia.

Part of the funds have been used by the Government to cover normal operating expenses included in the national budget, thereby reducing budget deficits and inflationary financing. Development projects in all sectors of the economy have also received a large portion of counterpart funds and are discussed in detail in Section II of this report. A detailed list of expenditures for Counterpart projects may be found in the Appendix (Section IV). Figure 4 illustrates the relative amounts of technical cooperation, counterpart, and economic aid funds spent in each field of activity.

FIGURE 4
SUMMARY OF PROJECT EXPENDITURES
BY FIELD OF ACTIVITY, 1952-1960
IN BOLIVIA



The combined effect of economic aid equipment, technical assistance projects and counterpart fund projects has measurably improved several sectors of the Bolivian economy. With the drain on foreign exchange stopped in part by the commodity imports program and cash grants, the inflation measurably slowed down by the Stabilization Program, and agricultural production increased, the purposes of the U.S. Economic Aid Program have been substantially achieved.

In spite of the accomplishments of the U.S. assistance programs, the Bolivian economy has not yet returned to its position of strength of earlier years. The major weakness lies in the relatively low level of production in the nation's important mining sector. Prior to 1952, when the National Revolutionary Movement came to power and nationalized the largest mining operations, mineral exports had accounted for over \$100 million a year. Since that time, Government production of the major item, tin, has fallen from 28,400 tons in 1952 to 15,800 tons in 1959, and total earnings from mineral exports have fallen to a recent (1958-1959) average of \$60 million a year. (See Figure 5).

The United States entered into a technical cooperation project with the Government of Bolivia in 1955, providing the services of the mining engineering firm of Ford, Bacon & Davis. An exhaustive study and detailed report of the mining industry was prepared in 1956, containing recommendations for several fundamental reforms. None of the Ford, Bacon & Davis

recommendations have yet been put into effect and the mining industry still suffers from drastically reduced production. The ultimate success of any program of economic assistance will depend in large part upon the measures which the Government of Bolivia adopts with regard to the mining industry, and the Government Mining Corporation in particular.

The partial recovery of the Bolivian economy has reduced the need for economic assistance in the form of direct grants; accordingly it is planned that the U.S. Economic Aid Program will be gradually diminished. The United States will continue its efforts to improve the standard of living in Bolivia, as throughout Latin America and the world, through technical cooperation programs. In addition, an expanded loan program to be administered through U.S. and International lending agencies will provide the Latin American countries with the much needed capital for investment projects to speed up the rate of economic and social development.

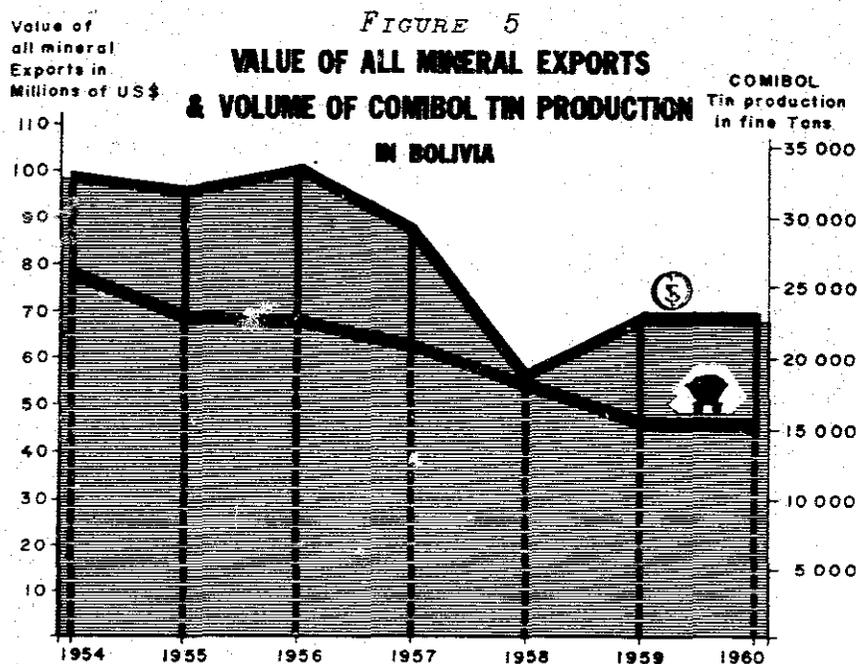
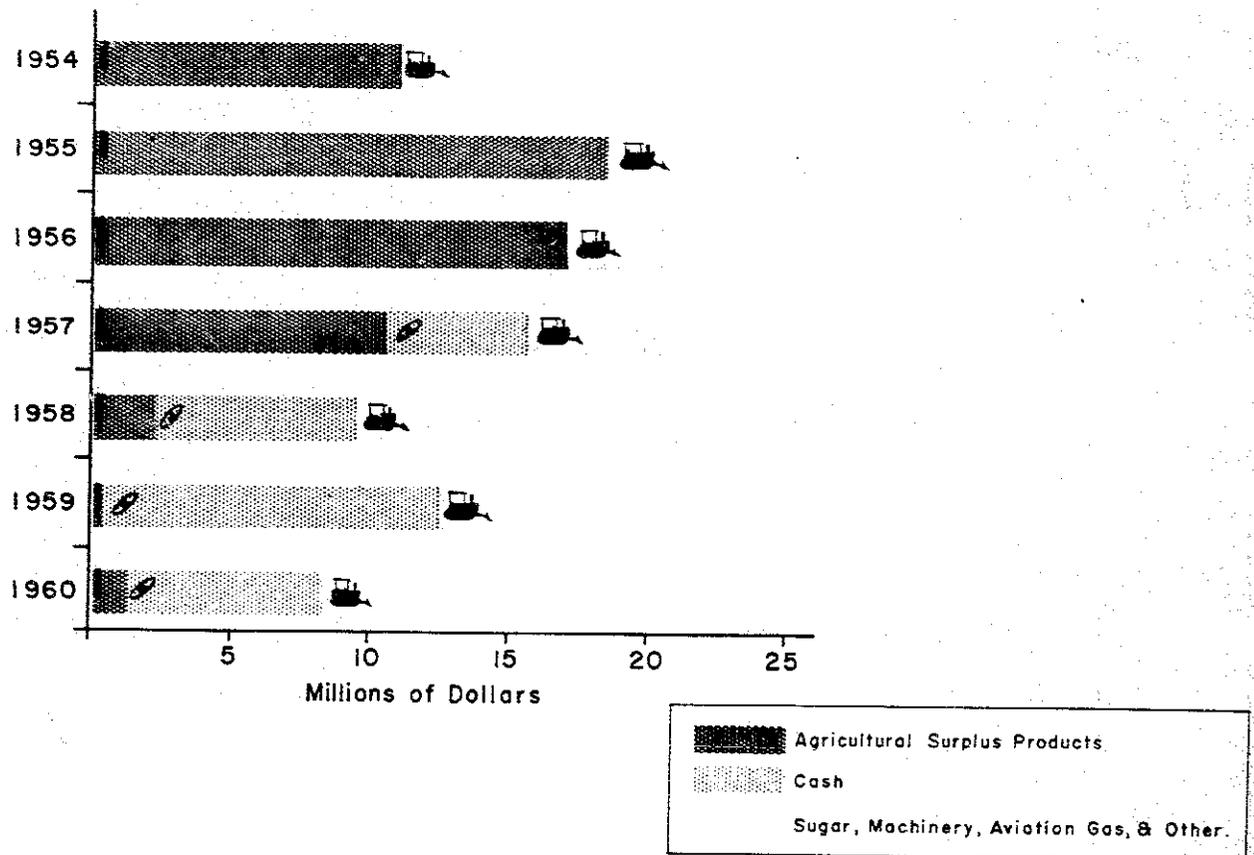




FIGURE 6 - TABLE I

COMPOSITION OF U.S. ECONOMIC AID TO BOLIVIA 1953-1960

Net Obligations by Fiscal Year Programs*
(in millions of dollars)



	1954	1955	1956	1957	1958	1959	1960	Total
<u>U.S. Surplus Agricultural Commodities</u>								
Wheat and Flour	8.0	9.9	9.5	4.0	1.4			32.8
Lard	0.5	1.4	1.0	0.8				3.7
Edible Oil	0.2	1.4	0.5	0.8				2.9
Cotton	0.9	2.5	1.9	1.8		0.2	1.2	8.5
Rice		1.1	0.9	1.9	0.3			4.2
Powdered Milk		0.4	0.7					1.1
Transportation	1.3	1.7	2.4	1.1	0.5			7.0
<u>Sub Total</u>	10.9	18.4	16.9	10.4	2.2	0.2	1.2	60.2
<u>Other</u>								
Sugar				2.6	2.5	3.3	2.5	10.6
Machinery and Equipment	1.2	5.4	3.5	3.7	4.6	0.9	4.4	23.7
Aviation Gasoline					0.9	0.1		1.0
Cash				5.1	7.2	12.2	7.0	31.5
<u>Sub Total</u>	1.2	5.4	3.5	11.4	15.2	16.2	13.9	66.8
<u>GRAND TOTAL</u>	12.1	23.8	20.4	21.8	17.4	16.4	15.1	127.0

*Includes Public Law 480 and 216 funds.

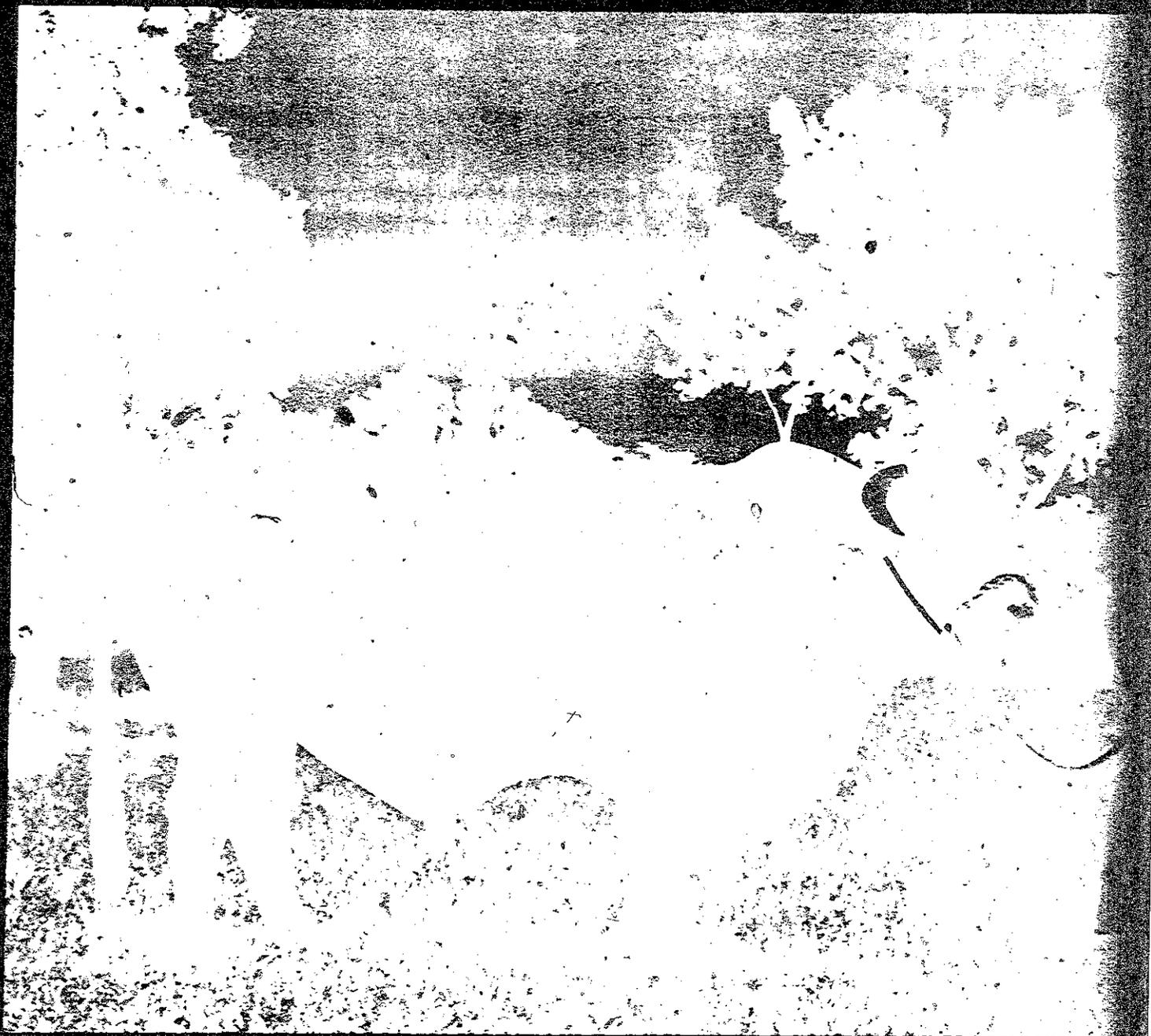
Source: Controller, USOM/Bolivia

SECTION II

PROJECT ACTIVITIES

The combined effect of U.S. technical and economic assistance and counterpart projects has had substantial results in all major program activity fields. The discussion that follows presents the project activities in each economic sector.

AGRICULTURE	_____	
EDUCATION	_____	
PUBLIC HEALTH	_____	
TRANSPORTATION	_____	
INDUSTRY	_____	
MINING	_____	
PETROLEUM	_____	
SANTA CRUZ AREA DEVELOPMENT	_____	
LAND DEVELOPMENT & RESETTLEMENT	_____	
PUBLIC ADMINISTRATION	_____	
COMMUNICATIONS MEDIA	_____	
TRAINING	_____	
BUDGETARY SUPPORT	_____	
LOANS	_____	



ABOVE: "Yankee", the Santa Gertrudis herd sire and leading artificial insemination stud at Miryurina, near Santa Cruz, has over 300 offspring scattered about eastern Bolivia, from Concepcion to Trinidad. "Yankee" was born on the King Ranch, Kingsville, Texas. He cost \$750, plus \$750 plane fare, when he flew to Bolivia at the age of 2 years with 11 other Santa Gertrudis cows and bulls, in March, 1956. He now weighs 2400 lbs. His cross-bred progeny are twice the weight of criollo cattle, and much more resistant to adverse climate and inadequate feed.

THE AGRICULTURE SERVICIO

The basic activity in agriculture has been carried out by the Inter-American Cooperative Service for Agriculture (SAI), the vehicle for technical cooperation in agriculture in Bolivia since 1948. In its early years of operation, SAI maintained experiment stations in various regions of the country and organized a nationwide program of agricultural extension.

From 1954, SAI expanded its activities with the arrival of \$7,550,000 worth of agricultural equipment imported under the U.S. economic assistance program and established machinery pools in principal agricultural areas. In addition, a program of Supervised Agricultural Credit was created with capital funds contributed from the Counterpart Account. One hundred and thirty Bolivians have received training abroad in the field of agriculture, sponsored by the U.S. Technical Cooperation Program.

EXPERIMENT STATIONS

Seven agricultural experiment stations, located in the several characteristic regions of the country, occupy over 15,000 acres of land devoted to continual efforts to improve crop and livestock production. Results of successful experiments have been introduced into the local agricultural economy with consequent gains in production and income. In the case of rice, sugar cane, and corn, new varieties of seeds were introduced that significantly increased yields. In most cases have spread to areas of the major growing areas. Along with these seeds, better planting, cultivation, and harvesting techniques have been developed through experimentation and introduced into the regional farming practices. Sugar cane yields rose from 14 to 23 tons of cane per acre when the practice of burning the cut fields was replaced by plowing under the stubble.

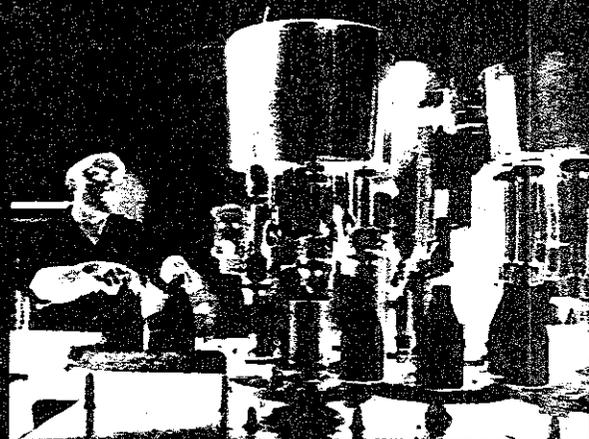
The livestock experiment stations have devoted much of their efforts towards materially increasing the Bolivian supply of beef cattle. The Reyes Station has sold 787 improved bulls to cattlemen of the Beni region. Over 1,000 cows have received artificial insemination from the Muyurina and La Tamborada Stations as part of the national experimental program of cattle improvement. Modern methods of herd and pasture management have been demonstrated and accepted throughout the cattle growing areas. Phenomenal success was attained at the Muyurina experimental farm in the Santa Cruz areas where advanced techniques of pasture management permitted optimum conditions of grazing for nearly one head, plus calves, per acre.

BELOW: The Agriculture Servicio's first experimental station, at 8000 feet altitude in the fertile valley of Cochabamba, has conducted thousands of experiments in small grains, pastures, potatoes, poultry, fertilizers, and irrigation. Servicio agronomists Espiaga and de la Cerda examine successful experiment in rust-resistant oats for supplemental pasture use.





ABOVE: At SAI's experimental farm at Belen, near Lake Titicaca, local livestock experts and farmers display the results of sheep-breeding experiments during an agricultural field day. All sheep are the same age. They represent various crosses between Corriedale and native breeds.





AGRICULTURAL EXTENSION SERVICE

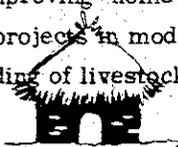
Investigations for increasing the local supply of milk have been carried on for over 10 years in the La Tamborada Experiment Station in the Cochabamba Valley. New techniques of herd and pasture management, feeding, cattle, and milk improvement have been introduced and applied by local ranchers, with the very satisfying result that dairy farming has become a profitable business in the Cochabamba Valley. La Tamborada station is now operated by the University of San Simón.

MILK PLANT

Complementing the efforts of the experiment stations, the United Nations and the Government of Bolivia, in cooperation with the U.S. aid program, established a pasteurization and powdered milk plant in Cochabamba which began operations in mid-1960. By December, 6,000 liters of raw milk were converted daily into 280 kilos of powdered milk, 3,500 liters of pasteurized fresh milk and 350 lbs. of butter. As the supply of raw milk increases, the full capacity of the plant, 40,000 liters daily, will be utilized.

In 1960 the Ministry of Agriculture entered into an Agreement with the Agriculture Servicio to take over in 1961 the nation-wide Agricultural Extension Service, which had been developed over a 10 year period under the auspices of SAL. The 35 provincial Extension Services offices work closely with the experiment stations in an effort to introduce improved farming practices through local method and result demonstrations and farm visits. Over 500,000 persons have witnessed demonstration projects and 17,000 farm families have received individual assistance.

The Extension Service sponsors an active 4-S rural youth club movement patterned after the 4-H clubs of the United States. Now numbering 4,450 members, the 4-S clubs stimulate local initiative and interest among Bolivian farm youngsters in improving home life and rural living, including projects in modern agricultural methods and breeding of livestock.



Another important program of the Extension Service is rural home economics, which, through home demonstration and instruction teaches cooking, sewing, family health and home improvement.

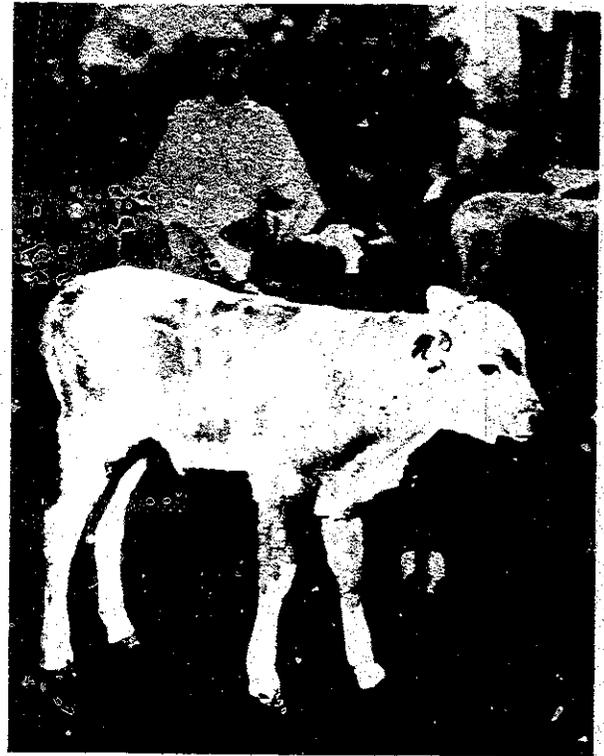
In addition to the programs described above in rice, sugar, corn and cattle, similar kinds of experimental work and assistance through extension have been carried out throughout the country in other significant crops such as barley, corn, quinoa, rubber, cacao, coffee, wheat, potatoes, and vegetables; and in sheep, hog, chicken, and fisheries development. Until June 1958, the Agricultural Extension Service also acted as distributor for certain agricultural equipment and supplies such as tools, insecticides and fertilizers contributed by the U.S. Economic Aid Program, and provided technical assistance to buyers.

OPPOSITE, LEFT: In the early days of the Economic Assistance Program, the United States supplied more than a million dollars worth of powdered milk to Bolivia, as shown in this 1955 picture of lunch hour at the community of Huasa-Calle, at Ucureña, in the Cochabamba valley.

OPPOSITE, RIGHT: Bolivia now enjoys its first domestic milk processing plant (see text, above) which produces powdered milk and also has the first modern pasteurization plant in the country, as shown.



RIGHT: Newborn calf on the 500-hectare Itaguazurenda ranch in the Bolivian Chaco which received agricultural supervised credit loans for barbed wire and planting of pastures lost in flood damage. Itaguazurenda means "the place of the big stone", a remarkable feature in the tropical flatlands of South America which usually have no rock whatever -- while rock is the main material for fences in the Andean highlands. See Section III for more about the Hacienda Itaguazurenda.



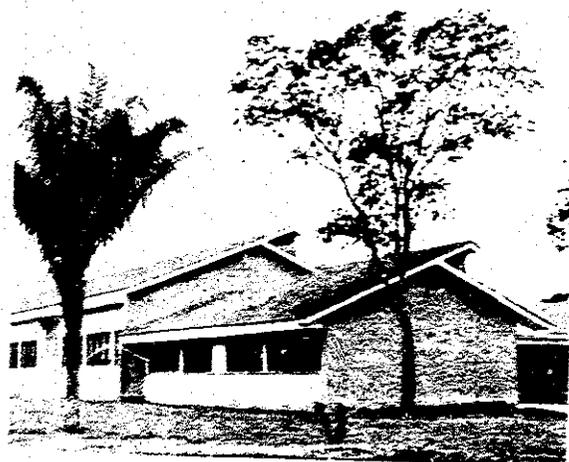
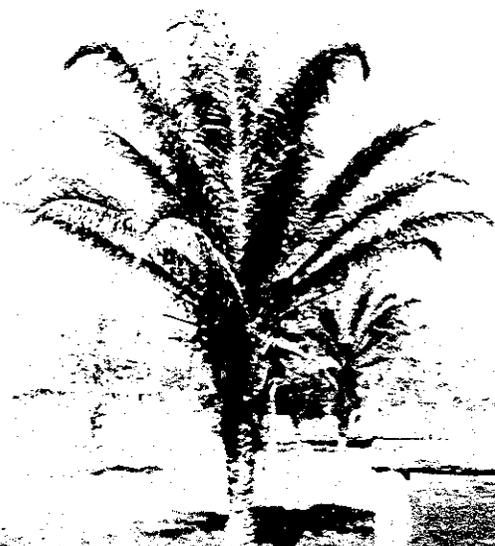
BELOW, LEFT: National champions of the annual 4-S Club Convention held in Cochabamba, April, 1960: David Tankara and Romulo Alcon of Caranavi (see page 43; also pictures in Section III) demonstrate their homemade wooden coffee-bean huller, which, with their roasting oven, won first prize.



BELOW: 4-S Convention runner-up Cipriano Fernandez and Florian Navarro of Sucre, in native costume of the Yampara, show control of nose worm in sheep.



BELOW: Illustrated are only a few of the many buildings, shops, and laboratories ~~at the Mariano School~~ which was originally conceived as a part of the Santa Cruz Area Development ~~project~~ (see page 23). The Education, Agriculture, and Health Servicios, which in earlier years of Point Barrow ~~Alaska~~ ~~operated~~ independently, joined under USOM supervision to construct a complex to provide ~~technical training~~ ~~in~~ their various specialities. Text on page 25 describes this project which was ~~initiated~~ ~~by~~ Salesian Fathers under contract with the Government of Bolivia. The Salesians are recognized ~~throughout the world~~ for the successful teaching of manual training and agriculture to under-privileged ~~students~~.





THE EDUCATION SERVICIO

The Inter-American Cooperative Education Service (SCIDE) has maintained a continuous program of technical cooperation in education since 1944. The Education Servicio worked entirely on rural education until 1955, at which time the program was broadened to include industrial and agricultural vocation programs. Technical assistance in education has been carried on in cooperation with the Ministry of Rural Affairs and the Ministry of Education.

RURAL EDUCATION

Throughout the past 15 years, the Education Servicio has had control of selected rural normal and elementary schools on a rotating basis, with responsibility for administration, supervision, and financial support of these schools. During 1960, the Education Servicio reduced its scope of operation in the rural school division to providing only technical advice to four rural normal schools and four rural elementary schools; full responsibility for the Superior Normal Technical School will continue through 1960. Beginning in 1961 the efforts of the Education Servicio will be redirected towards a program of technical cooperation concentrating in specific problem areas throughout the educational field.

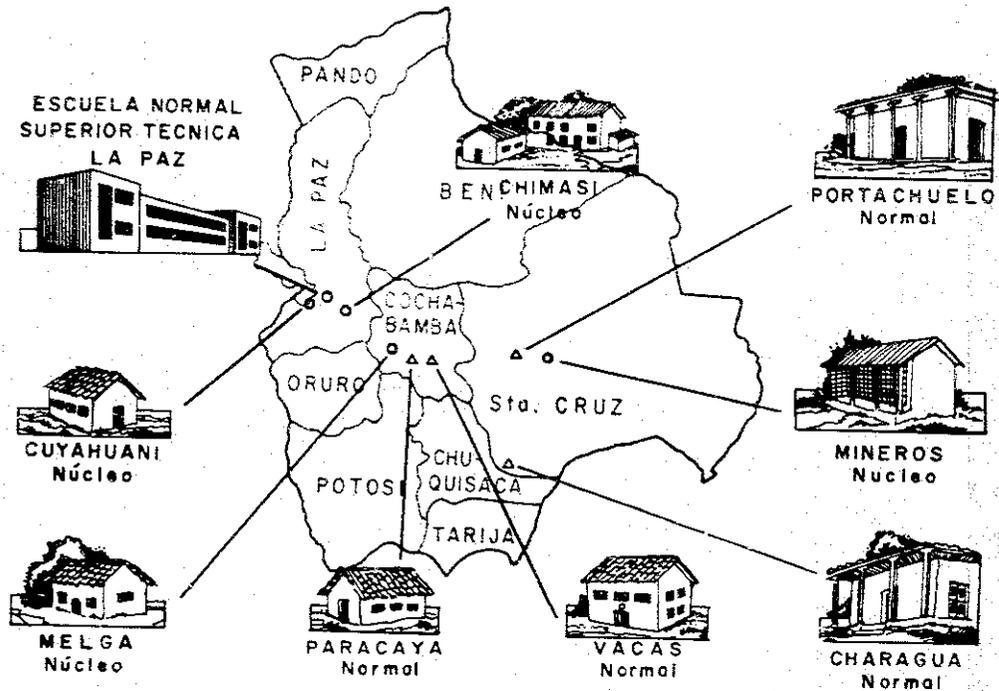
Geographically, the program of rural education has included the Altiplano, the Cochabamba Valley,

and selected populated areas of eastern Bolivia. Personnel of the Education Servicio work directly with rural elementary and normal schools to improve methods and techniques of instruction. In addition, programs are carried on in rural arts, agriculture, homelife, sanitation, and rural development.

Work in the above phases has been carried out by means of workshops for teachers and community workers by classrooms and field demonstrations by periodic teacher consultations, and by a constant flow of prepared and published teaching aids and materials. During 1960 a total of 344 teachers and laymen participated in five workshops. One of these was for 28 homelife education teachers, three were for 298 non-certified teachers (Interinos), and one was for 18 laymen who were interested in helping out their schools in the construction of classrooms, teaching facilities and classroom furniture.

In the field of materials production the rural phase of the program has been most prolific. In 1960 alone over 20,000 pamphlets were distributed free of cost. Teaching aids are sold at nominal cost. These publications vary from simple "how to do it" items to the more technical subjects. Two periodicals, "Bolivian Education" and "School and Work" are published quarterly and monthly, respectively, 1800 copies each. The former is distributed throughout the hemisphere.

FIGURE 7
SCIDE ACTIVITY CENTERS



BELOW: One cooperating activity helping the literacy campaign of the Education Servicio is the mission of the Maryknoll Fathers at Las Peñas, near Lake Titicaca. With a one-kilowatt transmitter (most powerful to date in Bolivia) these U.S. priests conduct a unique radio school to teach reading and writing both to Aymara indian farmers and to young listeners in outlying villages, who are equipped with single-channel receivers supplied by the Fathers. Listeners follow radioed instructions in textbooks which are printed at the USOM Audiovisual Center under supervision of the Education Servicio (pages shown below).



INDUSTRIAL EDUCATION

Developmental assistance has been given to the "Industrial Sections" of 14 secondary schools and six "pre-vocational sections" of elementary schools in the leading urban centers of the country. Fifty graduates of the "Superior Normal Technical School" which was organized by SCIDE in 1958 are teaching in the industrial sections of schools throughout the nation. At present there are 65 other teachers undergoing training in the Technical School. Beginning with the 1961 scholastic year, the Ministry of Education will assume full control of the school; technical assistance from the education Servicio will continue.

Financial and technical assistance has been given by SCIDE to the Pedro Domingo Murillo National Technical and Vocational School, the construction of which was largely financed by the United States. Its present enrollment is 640 students who are pursuing five to eight year courses of instruction.

ADULT EDUCATION

Adult Education coordinators in the major cities have been trained in the fields of training -within- industry, police training, trade extension, and other courses. In cooperation with the USOM Public Safety Division, 1,000 members of the Carabineros and Traffic Police have received various types of instruction in trade extension; in addition close to 2,000 persons have received trade extension and training within industry courses. English, secretarial practices, office procedures, and other classes in the commercial field have also been given.

The training -within- industry program was financed exclusively by SCIDE in the past, but in October of 1960 each interested plant began contributing a percentage of the program costs.

This cost contribution is to be maintained on an ascending scale until the entire cost is absorbed by the plants themselves with the aid of the Technical Education Council and the Chamber of Industries.

AGRICULTURAL EDUCATION

The vocational agricultural school at Muyurina associated with the Muyurina Experiment Station was completed in 1958 as a training school for rural youth. The Bolivian Teaching staff was trained in the United States, Puerto Rico, and locally, through the educational technical cooperation project. Sixty students attended the school during 1959. The project has been completed and the school will be operated independently by the Order of Salesian Priests under terms of a contract signed with the Government of Bolivia. Advisory services of the U.S. Operations Mission and the Servicios will be continued.

SCHOOL REPAIR

In 1959 a special school repair project was initiated, financed from Counterpart funds and supervised by the Education Servicio. During its first year 52 urban schools were repaired. The number in 1960 was somewhat less because of the new requisite that communities contribute 50 per cent of the total cost of repair or construction.

TEACHER TRAINING

The technical cooperation program in the field of education has relied heavily on training of Bolivian personnel both locally and abroad. Since 1944, 134 teachers have received special courses of instruction in the United States, Puerto Rico, and other Latin American teacher training centers. The training programs of the Education Servicio have made a significant contribution to the Bolivian teacher education program.

RIGHT: At the town of Puerta Aimacen, near Trinidad, the capital of the Beni Department in the northern tropical flatlands of Bolivia, a member of the National Malaria Eradication Campaign sprays the thatched roof of a dwelling with Dieldren. As mosquitos usually alight on walls and roofs after feeding on humans, they thus contact the insecticide and die, breaking the cycle mosquito-man-parasite-mosquito.



BELOW: A spray team from Trinidad embarks on the River Ibare, a branch of the Mamore, tributary of the Amazon. If the world-wide malaria eradication campaign is completed before the mosquitoes become immune to the insecticide, some 200 million sick people who are now non-productive burdens on their societies, will be restored to a useful life.



THE PUBLIC HEALTH SERVICIO

The Inter-American Cooperative Public Health Service (SCISP) was established in 1942 to administer the first program of technical cooperation entered into between the Government of the United States and the Government of Bolivia. The function of the Servicio was to assist in the establishment of an effective national public health program that would alleviate the heavy incidence of disease throughout the country and reduce the high mortality level.

DISEASE CONTROL

Several successful disease eradication campaigns were terminated in 1959. Where Bolivia once had the highest incidence of smallpox among South American countries, the spread of the disease had been brought to a virtual standstill through vaccination administered to 2,750,000 persons, representing 85% of the Bolivian population. A year long campaign reduced the infection of Yaws Disease from 7% and 3.5% in the North and South Yungas provinces to less than 2% and 0.5% respectively, in 1959.

The anti-malaria campaign, conducted under the joint auspices of the Health Servicio, World Health Organization of the United Nations, and the Pan American Sanitary Bureau, is in the second phase of operation. By 1962, 250,000 houses in malarial zones will have been sprayed, giving protection to 1,700,000 persons who are now exposed to the disease. The program is being carried out by the Servicio with counterpart funds, equipment and materials donated by UNICEF and the World Health Organization (WHO); technical advisory services are supplied by WHO as well as the Servicio.

HEALTH FACILITIES

A second accomplishment of technical cooperation in public health has been the construction, equipping, and training of a staff for a nationwide system of health facilities. The 16 health centers and mobile units have brought improved services to the Bolivian population in maternal and child care, diagnosis and treatment of tuberculosis and venereal disease, and immunization against smallpox, diphtheria, whooping cough, and tetanus. The nursing staff of the health centers maintain programs in health education, nutrition, and environmental sanitation.

The health centers are staffed and supervised exclusively by Bolivian personnel, many of whom have received special training in the United States and other countries, under the sponsorship of the United States Technical Cooperation program. The health centers and their associated programs were transferred in 1960 from the Servicio to direct operation by the Ministry of Health.

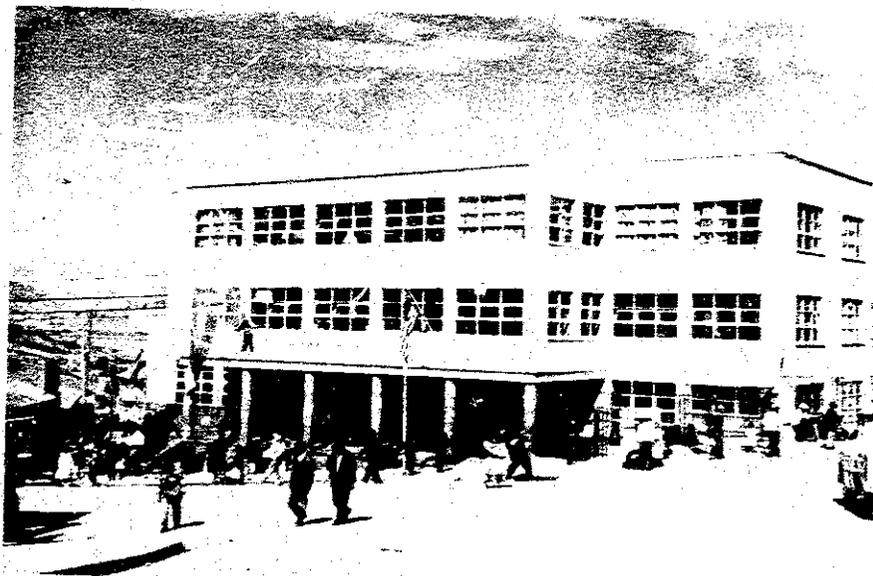
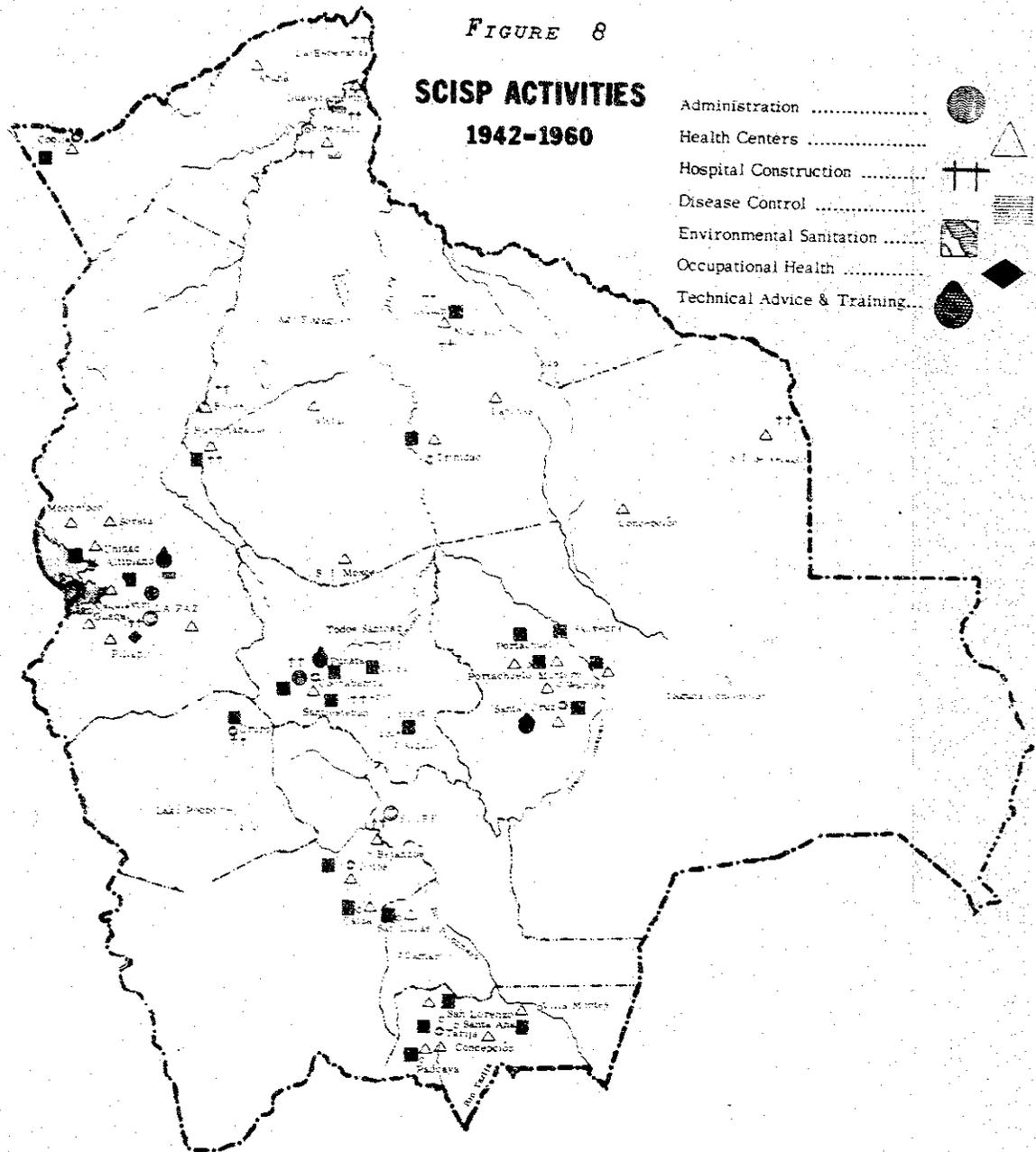
OCCUPATIONAL HEALTH

A special project in occupational health was initiated in 1952, in cooperation with the Ministry of Mines and Petroleum, designed to protect miners and industrial workers from accidents and occupational diseases. Surveys have been made of over 500 industries, employing 60,000 workers, and laboratory tests conducted of toxic minerals. As a result of these tests and surveys, individual mines and factories have been advised of techniques for improving medical services and working conditions.

FIGURE 8

SCISP ACTIVITIES 1942-1960

- Administration 
- Health Centers 
- Hospital Construction 
- Disease Control 
- Environmental Sanitation 
- Occupational Health 
- Technical Advice & Training 



ENVIRONMENTAL SANITATION

Demonstration projects in environmental sanitation have been conducted in the health centers, especially in small safe water supplies, excreta disposal, food sanitation, insect and rodent control, and school sanitation. Various training courses have been given to sanitary inspectors. A large number of hand pumps and privies were installed in the Santa Cruz area, and projects were undertaken in cooperation with various towns throughout the country to provide water through means of public hydrants. Municipalities have been assisted with water and sewerage problems and the Ministry of Health has received technical advice from Health Servicio personnel in the planning of hospital construction and other medical facilities.

The Health Servicio has begun to pioneer a new field of activity in the encouragement of self-help improvement projects for water supply facilities in small towns and villages. After a careful survey to determine the needs and willingness of the people and local governments to participate, the program was initiated in the Departments of Chuquisaca and Tarija. If this demonstration self-help program is successful, it should spread to other areas as a Government program. Training is being given to personnel of the Ministry of Health in preparation for establishing a Ministry Division of Sanitary Engineering.

OPPOSITE: The La Paz Health Center "Garita de Lima," established by the Health Servicio, treated free of charge 135,828 cases in fiscal year 1959-1960, thus making a major impact on the health and sanitation problems of this city of 350,000.

MEDICAL FACILITIES

Besides the service projects discussed above, several other important facilities have been constructed and equipped by the Health Servicio and/or financed by counterpart funds: the Central Laboratory in Cochabamba; the National Bacteriology Institute in La Paz, which now produces vaccines for smallpox, rabies, whooping cough, and typhus; the Animal Vaccine Laboratory in Ovejuyo; the Thorax Institute in La Paz; and the Broncho-Pulmonary Institute in Cochabamba.

BELOW: Sanitary engineers trained by the Health Servicio drill for drinking water in the El Trompillo district of the city of Santa Cruz. SCISP has supervised drilling of hundreds of wells in Portachuelo, Montero, Warnes, General Saavedra, Mineros, and other urban areas of Santa Cruz Department.



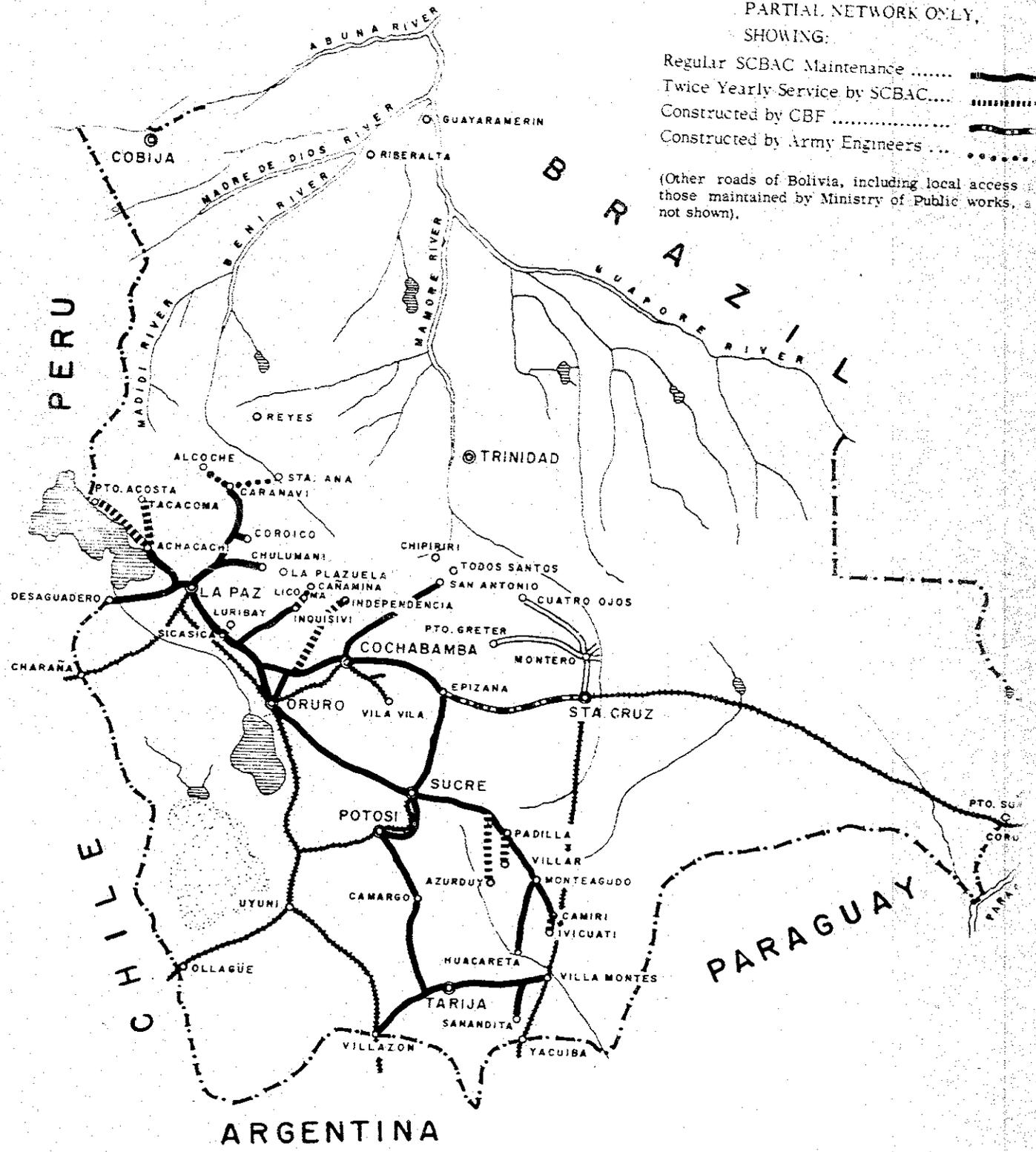


FIGURE 9
HIGHWAYS OF BOLIVIA
PT IV COOPERATIVE PROGRAMS

PARTIAL NETWORK ONLY,
 SHOWING:

- Regular SCBAC Maintenance
- Twice Yearly Service by SCBAC....
- Constructed by CBF
- Constructed by Army Engineers ...

(Other roads of Bolivia, including local access those maintained by Ministry of Public works, are not shown).





THE ROADS SERVICIO

The Bolivian-American Cooperative Roads Service (SCBAC) was established in 1955 to carry out a joint program of road maintenance and improvement throughout Bolivia. Since its inception, 3,385 kilometers of main inter-city and farm-to-market roads, and 687 kilometers of secondary roads have been improved and maintained. (See Figure 9, opposite).

EQUIPMENT AND CONSTRUCTION

Besides the joint Bolivian and American funding for the normal operation of this Servicio, over \$4,000,000, representing 470 units of road equipment, has been contributed by the United States under the economic assistance program. Graders and other heavy equipment have worked continually throughout the past four years building and maintaining 4,000 kilometers of roadway; ten major bridges have been built with over 240 meters of span; 35,000 meters of culverts have been placed, and over 7,000,000 cubic meters of earth moved.

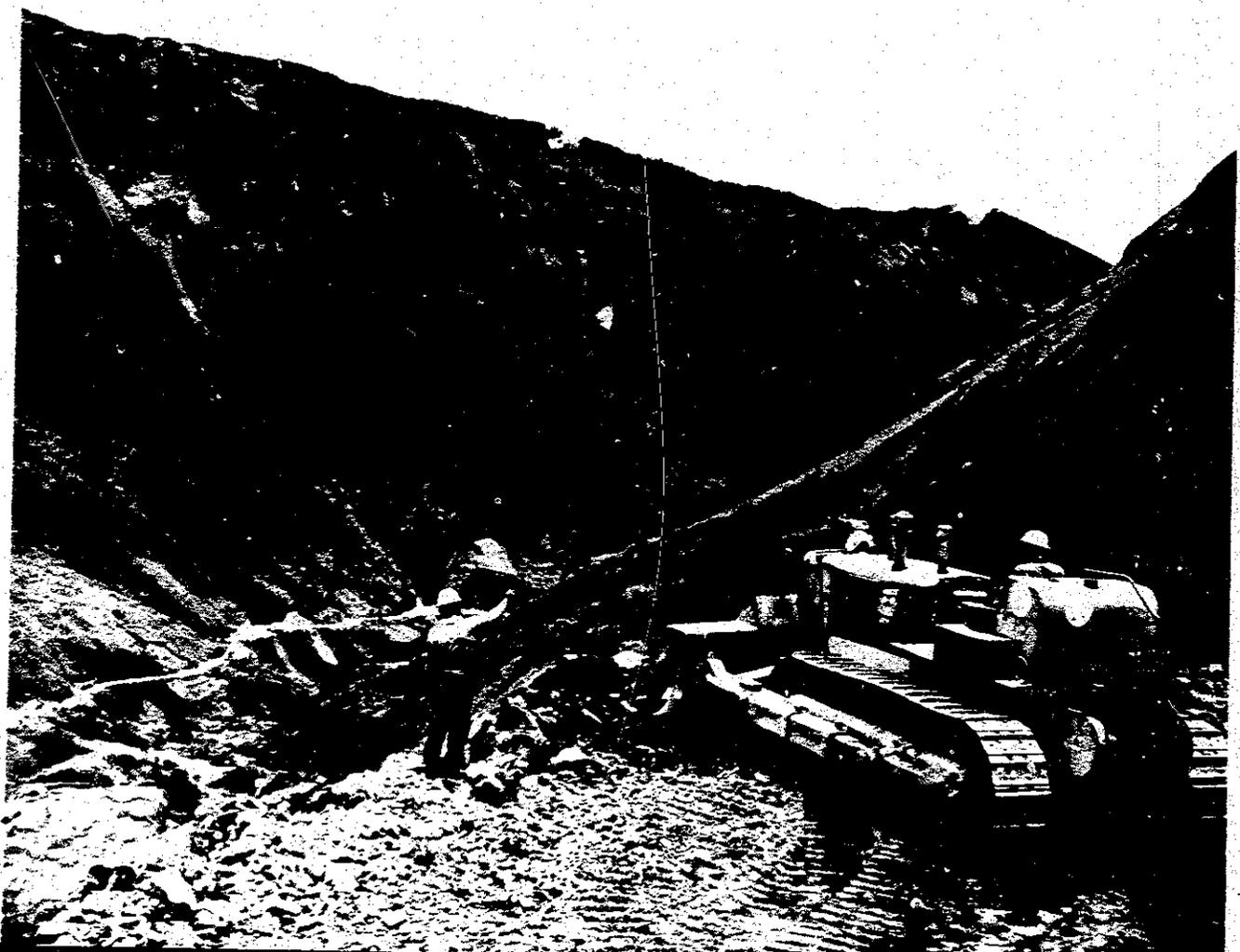
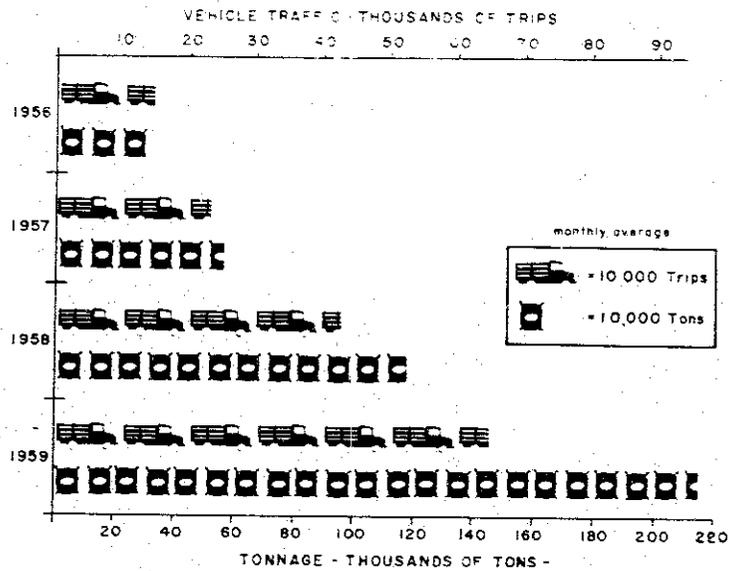
INCREASE OF TRAFFIC

The results of this road project have been dramatic. Before the Servicio was established, roads were impassable from three to five months of the year, during the rainy season. Now, as a result of improved maintenance and design, major roads are open all year long. Travel time and costs of vehicle operations have been substantially reduced, while payloads and traffic have increased manyfold. (See Figure 10, next page). The impact of this accomplishment on the national economy has been significant.

ROADS SERVICIO PERSONNEL

The Servicio has trained a competent staff of Bolivian engineers and technicians in all phases of road building and maintenance, including 40 technicians trained abroad. For several years, the Servicio has been one of the nation's largest employers. The U.S. technical assistance group which numbered 12 in 1958 had been reduced to a resident staff of 5 by November 1960. The Servicio became an operating agency of the Ministry of Public Works in 1960.

FIGURE 10
**VEHICLE TRAFFIC AND TONNAGE HAULED OVER
 ROADS MAINTAINED BY THE ROADS SERVICIO
 IN BOLIVIA**



32

OTHER HIGHWAY ACTIVITIES

In addition to the Roads Servicio's far-reaching general construction and maintenance program, counterpart funds have been used to finance the costs of maintenance of certain other roads, including several to new areas. The Bolivian Development Corporation and private contractors have had the responsibility for work on certain roads in the Santa Cruz and Cochabamba areas financed by counterpart funds under the technical supervision of the Roads Servicio. The economies of the Yungas, Caranavi, and Santa Cruz areas have been assisted materially by the road improvement work and hold great promise for the future.

OPPOSITE: One of the tremendous facts of life in Bolivia is the Andes mountains, where most of the 3-1/2 million inhabitants dwell. The Andes are geologically new mountains, steep and crumbling. Even the finest roads need constant maintenance, so that great sectors of the country will not become completely isolated. The Roads Servicio has nearly 300 pieces of heavy equipment constantly on the job.



A third activity has been with the Bolivian Army Engineer Battalion equipped with \$554,000 of American Aid equipment and trained locally by U.S. Army Mission engineers, and by the U.S. Army School in Panama. The Engineer Battalions have constructed roads from Caranavi to Alcoche and from Sanandita to Palos Blancos. These battalions will continue their important work both in maintaining roads they constructed and assisting in the maintenance of other roads. Plans are underway to establish a youth corps under the supervision of Bolivian Army Engineers to improve roadways in newly opened agricultural areas. Outstanding individuals will be selected for the award of homestead land and assisted in land clearing and construction of basic facilities.

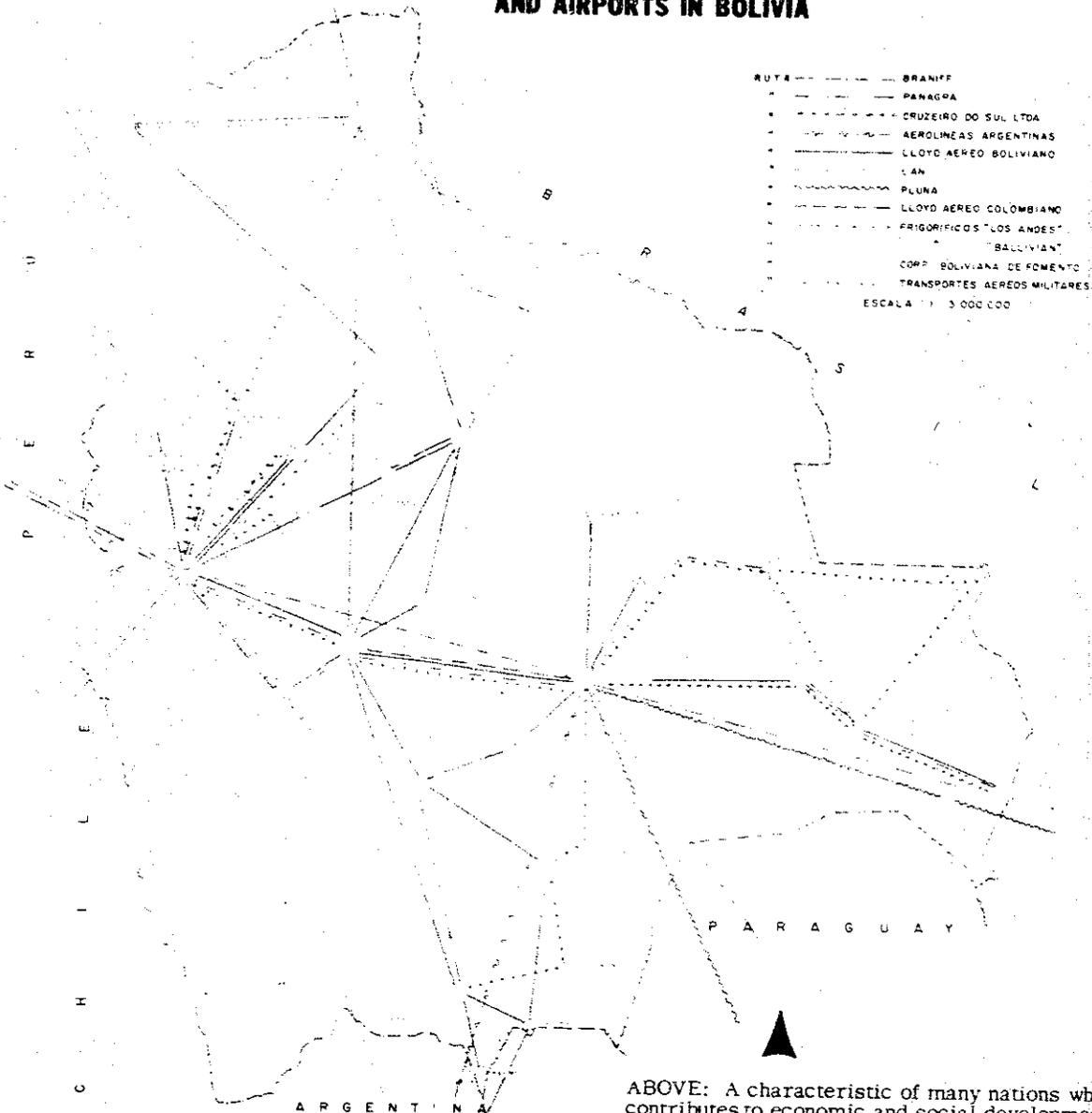
AVIATION

Besides road work, the USOM has provided assistance in the field of aviation, through technical assistance in training and qualifying pilots and airplane technicians in aircraft certification, navigational aids, and communication networks. Economic aid funds were used to purchase equipment for the National Aviation Maintenance Center repair shop in Cochabamba. Counterpart funds have been used to finance airport studies and the National Institute of Aeronautics, and are programmed to pay local currency costs of the El Alto airport construction. Improvements in the El Alto airport are being mainly financed by a \$1,500,000 loan from the U.S. Development Loan Fund.

LEFT: Many miles of the Oruro-Cochabamba railroad were left in this condition after the 1960 rainy season, thus putting even a greater burden on the Roads Servicio to keep open the highway which parallels the railroad along equally unstable terrain.

FIGURE 11

NATIONAL & INTERNATIONAL AIRLINES AND AIRPORTS IN BOLIVIA



▲

ABOVE: A characteristic of many nations where ICA contributes to economic and social development is the transportation jump in a short time "from oxcart to airplane". This is true of Bolivia where the oxcart is a symbol of flatlands travel (see page 39 and Section III). As shown by multiplicity of airlines on map, many outlying towns have their only communication with the rest of the nation via air travel. Meat for the city of La Paz is supplied from the Beni by cargo plane.



▲

LEFT: This B-17 bomber, built in Seattle, Washington, USA, a World War II veteran converted to a food carrier for the Bolivian Development Corporation, lies crumpled in the jungle where it overshoot the landing strip at Caranavi (see page 43). Point Four has since lent funds to lengthen the airport.

34

INDUSTRY

The principal activity in the field of industry has been the Supervised Industrial Credit program. Begun in 1958, and financed with Bs. 22.8 billion (equivalent to \$2,107,000), the program has contributed much to the development, rehabilitation and expansion of traditional and new Bolivian industries, such as textiles, food products, hides, and lumber. Loans are made for the purchase of importing machinery, for equipment and associated installation costs, and for imported and local raw materials. The imported items are received through the U.S. Economic Aid program, and payments received by the Credit Office from borrowers (purchasers) are put into a revolving fund from which further loans may be made.

The Supervised Industrial Credit program represents a significant addition to the scarce supply of credit available from local institutions. Over \$1,500,000 has been loaned for purchase and installation of machinery, representing a sizeable addition to the national capital investment in industrial plants and equipment. The remaining \$500,000 has been used for raw material imports and local currency working capital, including purchase of local raw materials. The latter category includes export industries in cocoa, fruits and lumber. In addition, special loan projects were conducted in commercial credit for importing U.S. aid commodities and for Brazil nut processing and export. The Brazil nut program, financed with Bs. 5,000,000,000 (±17,000), will increase Bolivia's exports of nuts to approximately \$2,000,000 in 1961.

Another special project in industry financed with counterpart funds assisted in the construction of the Government owned cement plant in Sucre.

A technical cooperation project in industry has provided supervision for the credit program and assisted Bolivian industry in general through technical reports, liaison with American and international lending agencies and the like. Plans have been made to bring in special consultants to investigate possibilities for developing new Bolivian industries. A second technical cooperation project in this field, carried out in cooperation with the UN, helped establish a pilot labor Productivity Center and National Employment Service.

A 6 man team of leading Bolivian industrialists visited the United States and Puerto Rico under the auspices of the Technical Cooperation program, to study labor management relations in North American firms similar to typical Bolivian businesses. The group has initiated improvements in their own plants, with techniques adopted from U.S. practices. Some 20 other Bolivians have received training abroad in various phases of industrial activities.



ABOVE: Loading a box car with \$35,000 worth of Brazil nuts for rail transport to a Pacific Coast port and ocean freight delivery to U.S. markets. This was the first export from Blanca Flor, a 100-family cooperative in the northern jungle of Bolivia sponsored by Caritas Boliviana, a Catholic Relief organization to which a Supervised Industrial Credit loan was granted.

MINING

The major assistance provided to Bolivia in the all-important mining sector was the intensive study and detailed report prepared on the Bolivian mining industry by Ford, Bacon and Davis, Inc., an internationally renowned engineering firm. The study was carried out and the report was submitted to the Government of Bolivia in 1956. While no immediate action was taken based on measures recommended in the report because of continuing difficulties in the government mining sector, current plans for the mining industry include essential features of the Ford, Bacon and Davis proposed program.

In addition to the basic study of the mining industry, a mining investment code designed to encourage private investments was prepared

through a Technical Cooperation project, a revision of which has been recently proposed to the Bolivian legislature by the Government. Further assistance to the mining industry awaits the Bolivian Government's policy decisions affecting the industry.

A program of technical advice and credit to the private mining sector was initiated in 1958. Eighty mines received technical advice and others were examined in connection with credit applications. The Office of Minerals Deposits Development has been established in the Ministry of Mines and Petroleum, which has continued providing technical assistance and will begin surveying mineralized areas. This program receives technical advisory services from representatives of the U.S. Geological Survey.

BELOW: One of the larger private tin mines which has not been nationalized is "La Fabulosa", which employs about 550 miners. Shown are workers' quarters of La Fabulosa at Milluni, less than 15 miles north of the city of La Paz. The snowpeak behind the mine is Huayna Potosi, over 21,000 feet.





PETROLEUM

In 1942 the Export Import Bank of the United States loaned the Government of Bolivia \$3,500,000 to purchase equipment for well drilling and for the construction of pipelines and refineries in Cochabamba and Sucre. Recently, the United States Operations Mission to Bolivia financed a study for the Bolivian Government Petroleum Development Company (YPFB) by the internationally known firm of DeGolyer and McNaughton. A special loan for \$2.7 million under the Economic Assistance Program was made to YPFB for the purpose of re-equipping in order to expand both its exploration and exploitation activities.

A Petroleum Code (law) was designed in 1956 through a technical cooperation project and implemented by the Bolivian Government. Foreign private investment in petroleum has increased significantly over the past 5 years, reaching a total of \$76 million in 1959, and new fields are now in production with some wells yielding 2,000 barrels per day.



Santa Cruz AREA DEVELOPMENT

The combined effect of the several interlinking programs of area development has produced dramatic results in the rapidly growing agricultural economy of Santa Cruz. Prior to 1956, this eastern lowland region was economically isolated from the western highland population centers, and contributed little to the national product. The impetus to growth was given by the construction of the all weather highway connecting Santa Cruz to Cochabamba.* The Santa Cruz - Cochabamba highway was financed in part by a \$33,400,000 twenty year loan from the U. S. Export Import Bank received between 1942 and 1955.

*From Cochabamba, gravel roads extend to La Paz and other cities of the Altiplano region, and thence to the Pacific coast, via Peru. See Figure 1 at the front of this report; also Figure 11 under "Transportation".

Upon the completion of the highway, the avenue was open for the development of regional crops to supply the needs of the larger Bolivian market. Colonization programs were begun, bringing in immigrant Japanese and Okinawan farmers, and penetration roads were built to tie in the better agricultural region north of the city of Santa Cruz to the main arterial highway. Health Centers were established and potable water supply and sewerage systems installed by the Health Servicio. Land was cleared, basic facilities constructed, and seeds provided to enable these immigrant groups and local farmers to begin production of rice, sugar cane, and other crops. Subsequent assistance from the Agriculture Servicio was made available in farming practices, crop loans, machinery rental and sales, marketing, and formation of cooperatives.

FIGURE 13

**PRODUCTION OF HULLED RICE
IN BOLIVIA**

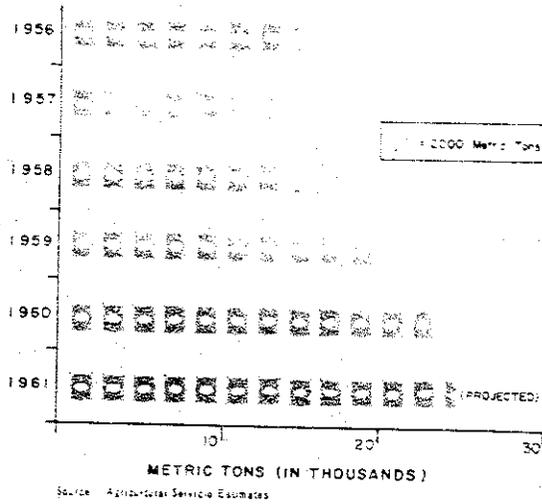
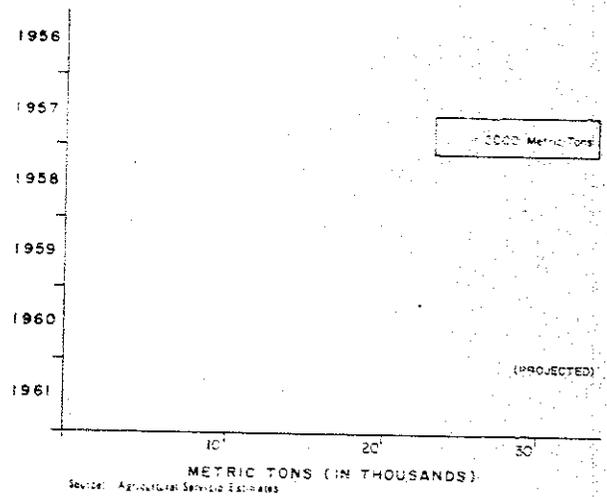


FIGURE 14

**PRODUCTION OF REFINED SUGAR
IN BOLIVIA**



BELOW: Although the city of "Santa Cruz de la Sierra" is of early Spanish origin (1961 marks the 400th anniversary of its founding), a number of new settlements have been carved out of the surrounding jungle in recent years. Those which have received Point Four assistance through access roads, loans, etc., are shown on the map, page 38. One of these colonies is Aroma, founded by the Bolivian Development Corporation for Quechua indians from the highlands of the Cochabamba region. Colonists are shown cutting sugar cane on their cooperative plantation.

BELOW: Most of the commerce of eastern Bolivia was once with Argentina to the south and Brazil to the east. Now the asphalt highway from Cochabamba to Santa Cruz has linked this region more closely to the national economy. Here a paved extension of the highway serves to haul sugar cane from a distant farm to the government sugar mill at Guabira.



One of the outstanding achievements of the development of the Santa Cruz area has been the rapid and dramatic increase in rice production which presently supplies close to 80% of national consumption, and, as a substitute for imports, represents a yearly saving of \$4,000,000 in scarce foreign exchange.

Sugar cane is another major crop which has been developed in the Santa Cruz region through the combined efforts of government and private enterprise, experiment stations, extension and credit services, machinery pools, road construction, and agricultural education. The Government-owned Guabirá sugar mill, with a yearly capacity of 18,400 metric tons, was established in 1954 with funds borrowed from France and assisted by U.S. economic aid funds for the purchase of machinery and equipment. In addition, the privately owned La Bélgica sugar mill has been increasing its yearly capacity from 4,600 metric tons to 18,400 metric tons with a \$2,500,000 loan received in 1959 from the U.S. Development

Loan Fund. The Supervised Industrial Credit Program has provided over \$500,000 for enlarging the capacity of several private sugar factories. By 1961, 60% of national sugar consumption will be supplied by Santa Cruz, representing a substitution of \$3,000,000 of imports. The accompanying charts depict the phenomenal growth in the production of sugar and rice in the Santa Cruz region.

Plans for the continued growth of the sugar industry were helped substantially by the study and report prepared by the resident U.N. specialist and a visiting Puerto Rican sugar expert, the latter technician brought to Bolivia under the auspices of SAI (Servicio Agrícola Interamericano), and the Ministry of Agriculture. In accordance with their recommendations, a pricing policy has been devised whereby better quality sugar cane receives premium prices. The price paid for sugar cane has been subsidized with counterpart funds, but the subsidy program will no longer be needed after 1961.

RIGHT: Sugar cane being trucked along the asphalt highway (opposite) is delivered to the mill at Guabira. This sugar mill is operated by the Bolivian Development Corporation (Corporacion Boliviana de Fomento, CBF), a government agency.





LEFT: Japanese farmers' wives and children in old country dress at the San Juan colony. They are celebrating the rice harvest feast in the Japanese tradition.

BELOW: Land clearing at San Juan, a colony of Japanese immigrants in the Santa Cruz area (see location on map, page 38). Picture shows virgin forest in background, with plot in foreground burned over during dry season, having been cut the year before. Stumps remain a major problem when no heavy equipment is available.



LAND DEVELOPMENT and RESETTLEMENT

An important counterpart program has been carried out in the field of land settlement, providing road construction, land clearance and essential facilities for re-settled and immigrant families. Among the six colonization groups in



▲
ABOVE: At Okinawan colony No. 1, immigrant farmers demonstrate their new rice hulling machine. As indicated by Figure 15 on page 40, the recent increase in national rice production has been phenomenal. These farmers belong to one of the many large cooperatives sponsored by the Agriculture Servicio.



the Santa Cruz area, U.S. technical cooperation and counterpart funds administered by the Bolivian Development Corporation, assisted in the establishment of a Japanese colony, two Okinawan groups and a Bolivian settlement at Aroma. These groups have become self-sustaining agricultural units, and have achieved outstanding successes in rice and sugar cane production. Some economic aid agricultural machinery was donated to these groups and other machinery provided on a rental basis. Crop loans through the Supervised Agricultural Credit Program assisted considerably in the notable crop yields achieved. The construction of roads north of Santa Cruz through Portachuelo and extending as far west as the River Yapacaní was an essential factor in the successful development of several colonization groups. Plans are under way to introduce specialty crops for supplying a private edible oil refinery.

In addition to the land development projects in Santa Cruz, penetration roads were constructed from San Pedro to Caranavi, and from Caranavi to Alcoche, opening new lands in the Department of La Paz. The Alto Beni region is about to be reached through another counterpart financed penetration road project. Completion of this latter road will permit an initial settlement of 800 families in an area rich in tropical products and close to the La Paz market. Further plans are under consideration for extending this road downstream to a navigable port on the Beni River.

▲
LEFT: Sketch shows some of the fruits and vegetables raised year-round in the San Pedro-Caranavi-Alcoche region, recently opened by all-weather roads constructed and maintained with Point Four cooperation. This fresh produce is sold in markets of La Paz and other Altiplano cities, about 10 hours away by truck. Most of the growers are members of cooperatives numbering 10 to 150 farmers.



LEFT: The University of Tennessee Mission had its offices and library on the 13th floor of the National University of San Andres, in La Paz, the tallest building in Bolivia.

RIGHT: Both the police force and carabineros are national institutions in Bolivia. A squad of carabineros is shown in wedge formation for riot control, as taught by the USOM Public Safety Mission.



THE UNIVERSITY OF TENNESSEE MISSION

Under a contract financed by the United States International Cooperation Administration between the University of Tennessee and the University of San Andrés in La Paz, a project was begun in 1955 to improve public administration in Bolivia through training courses for public employees and advisory services for public agencies. A School of Public Administration was established in the University of San Andrés and over 3,000 government employees completed various in-service training courses.

The University of Tennessee contract terminated in 1960. While the University of San Andrés has not been able to establish its own faculty branch to continue the School, because of funding difficulties, a provisional Public Administration Training and Research Center has been created. The Center is operated by former local staff members of the School and provides assistance in all fields of public administration. Counterpart funds contributed to the support of the five year San Andrés School and now support the Center.

The University of Tennessee Mission initiated studies of the National Treasury, the Social Security Office, and YPFB, (the Bolivian Government Petroleum Development Company) in such administrative areas as organization and management, work simplification, office systems, and personnel and records management. Manuals were prepared in record keeping, secretarial practices, and government organization. An extensive library of 5,000 volumes of Public Administration material was assembled and a bibliography prepared. Fourteen persons who received one year training courses in United States institutions, along with the training received locally, were prepared to take over the research and training functions of this project.

THE PUBLIC ADMINISTRATION DIVISION

Additional assistance in the public administration field has been given by U.S. technicians to the Superintendency of Banks, the Office of Communications, the Customs Administration and the Office of Internal Revenue. New projects have been initiated with the Controller General and the Post Service. Customs revenues increased from Bs. 92 billion in 1958 to Bs. 116 billion in 1959, partly as a result of the reforms recommended by the United Nations and U.S. Customs advisors.

THE PUBLIC SAFETY MISSION

Another project within this field of activity is the Public Safety Mission, designed to assist the Director General of Police and Carabineros and the Director General of Traffic in police training programs. Over 1,800 officers and policemen have completed courses at the La Paz training center in the fields of administration, law, investigation, riot control, patrol methods, traffic control and enforcement, public relations, and first aid. In cooperation with the Education Servicio, district schools have been established in all major cities for training in modern police methods.

THE FINANCIAL ADVISORY MISSION

A third public administration project is the Financial Advisory Mission which provides the services of a U.S. economist to advise the Stabilization Council in state financial matters.

ADMINISTRATIVE OFFICES

Besides these projects, certain services within the field of Public Administration have been financed from counterpart funds; they include the Department of Supply, Audit Division, and Bolivian Accounts Division of the Ministry of Economy, and the Office of Special Projects, which has general responsibility for administration of the counterpart funds of selected projects. The Office of Special Projects is staffed entirely by Bolivians.

BELOW: The Public Safety Mission, the Health Servicio, and the Education Servicio have strong programs in mass communications to reach the Bolivian general public with messages on such subjects as traffic safety or smallpox vaccination. Shown are some of the hundreds of posters produced for these and other activities by the USOM Audiovisual Center. These posters are done in bright colors by the silkscreen process. When printings of several thousand are required, lithography is used.



OPPOSITE: An Aymara indian, flute in hand, shakes hands with the "President of Bolivia" while "Abraham Lincoln" looks on. The program of this traveling puppet theater conducted by the USOM Audiovisual Center includes skits on sanitation, the advantages of the steel plow, the need for community cooperation in the construction of rural schools, the use of fertilizers, the need to boil drinking water, civic responsibilities as taught by famous men -- with every other act just plain humor in the Aymara, Quechua, and Spanish languages.

THE COMMUNICATIONS MEDIA DIVISION

The efficiency of many USOM programs depends partly on the ability of technicians to overcome language and literacy barriers in transmitting their knowledge. The La Paz Audiovisual Center of the USOM was established in 1958 as a technical cooperation project, thoroughly equipped and staffed to help increase the impact of the substantive divisions in communicating technical information to the Bolivian people by means of audiovisual aids and techniques. The Audiovisual Center produces and assists with the utilization, distribution, and evaluation of publications, posters, displays, exhibits, photographs, films, filmstrips, puppet shows, and radio programs.

The Center provides printshop facilities for all program activities, delivering up to four million pages of printed matter a month. Increasing emphasis on both in-service and formal classwork training has resulted in the introduction of new techniques of moving knowledge throughout the country. The La Paz Center is staffed by 45 Bolivians under the direction of one U.S. technician. In 1960 a large part of the Audiovisual Center's operation was transferred to counterpart funding. In 1961 the Center will be further integrated with the Bolivian Government through an agreement with the Ministry of Education.

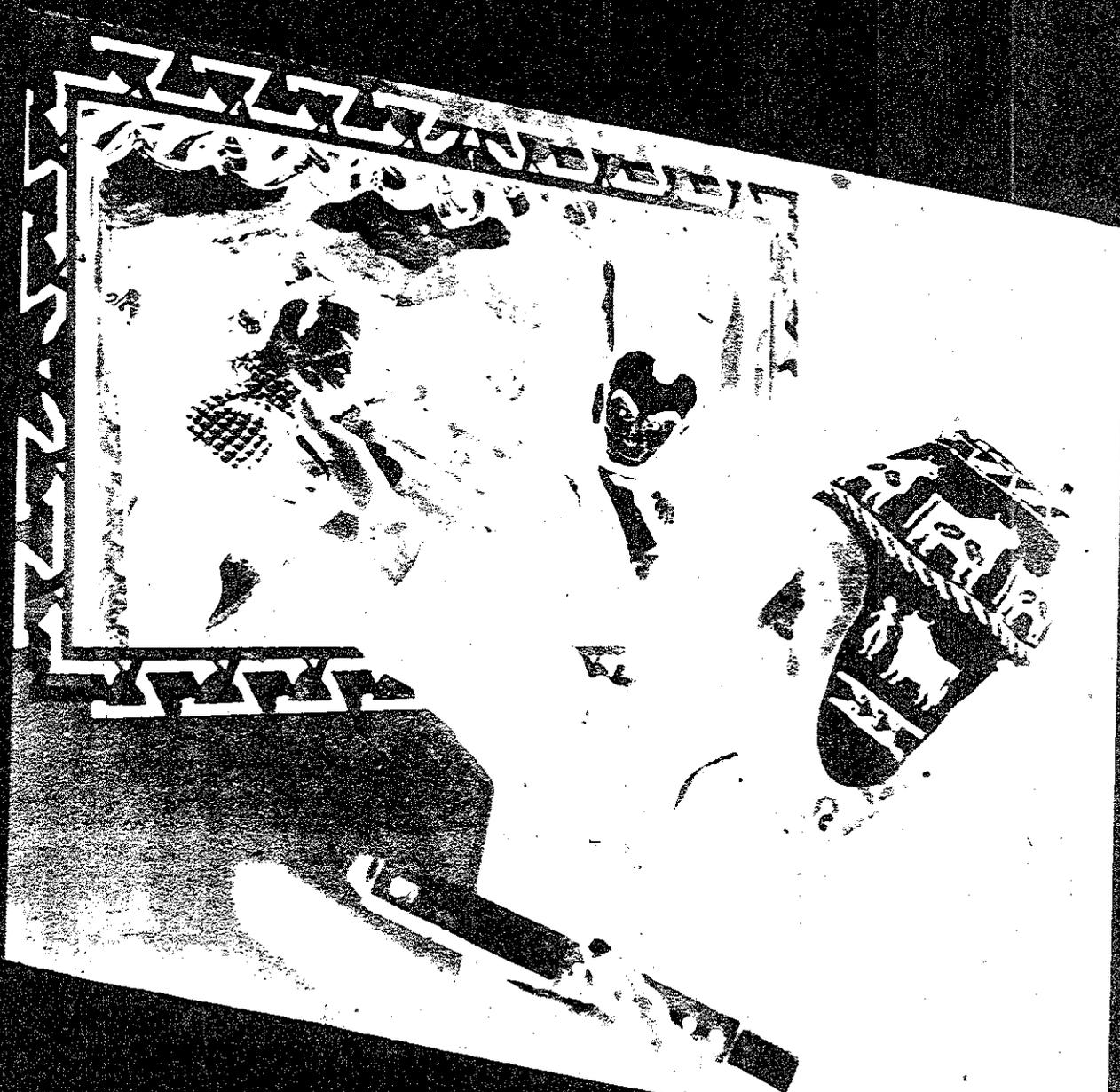
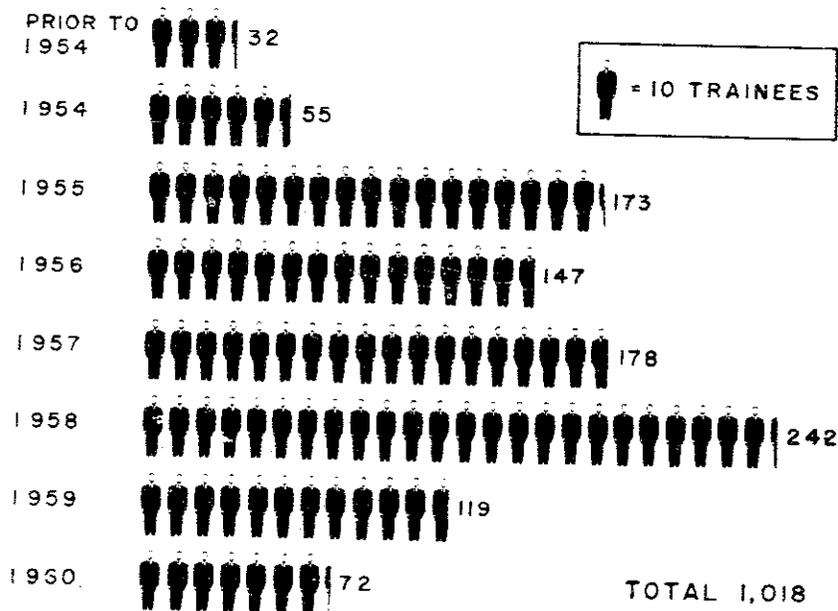
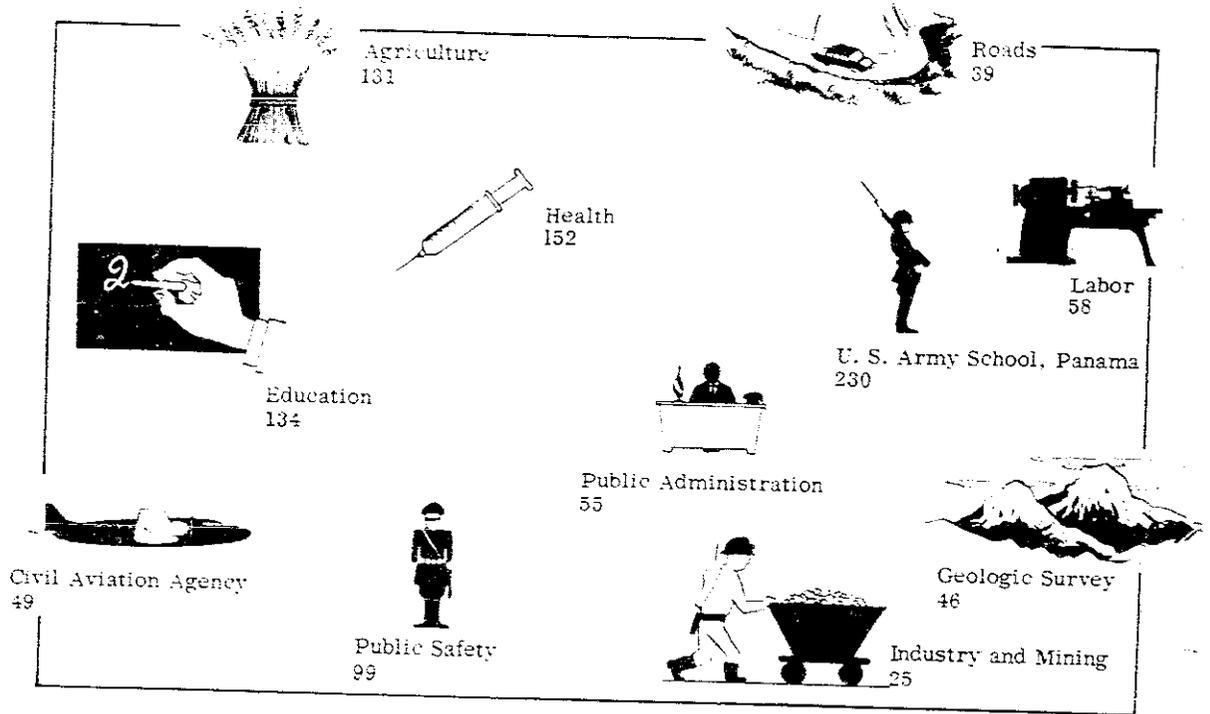


FIGURE 15

NUMBER OF BOLIVIAN PARTICIPANTS TRAINED ABROAD IN THE U.S. TECHNICAL COOPERATION PROGRAM

by Year and Field of Activity 1945-1960



TRAINING

Investment in human beings through education and training has proven to be an especially useful instrument for moving knowledge among nations and is an integral part of technical cooperation throughout the world. Over one thousand Bolivian technicians and officials have participated in training programs in the United States, Puerto Rico, and Latin American countries since 1945, sponsored with over \$2,500,000 of U.S. Technical Cooperation funds.

The type of training varies according to the need of the project being served. Academic training normally is of one year duration for the most part in U.S. teacher's colleges. "In-service" training permits Bolivian participants to train with appropriate organizations in the United States and other countries. For example, agricultural technicians receive in-service training with the U.S. Agriculture Extension Service, experiment stations, and land grant agricultural colleges; highway engineers train with State Highway Departments. Programs for Public Health technicians are planned by the U.S.

Department of Public Health, in cooperation with state and national public health organizations and provide training in laboratories, hospitals, nursing schools, and the like. Training in public administration has been provided by the U.S. Customs Service, the U.S. Census Bureau, and agencies of the Governments of Mexico, Panama, and Costa Rica. Police training has been given in the United States and Cuba. The U.S. Federal Aeronautics Agency and the U.S. Army in Panama have trained Bolivians in aviation, engineering and highway maintenance.

In addition to the academic and in-service training programs, short period observation tours have been provided for certain high ranking government officials and businessmen to better acquaint them with modern techniques and operations in their particular fields.

Close to 90% of the Bolivian participants trained abroad under the Technical Cooperation program now reside in Bolivia and are contributing their newly learned techniques to the development of the national economy.

After one year's study of home management in Puerto Rico under a Education Servicio training grant, Flora Jurado returned to Bolivia to pass her new technical learning on to these Aymara girls who live on the slopes of the lofty peaks of the Cordillera Real, near La Paz. Miss Jurado is bilingual (Spanish and Aymara), as she must be to communicate with these farm children who speak little Spanish.



BUDGETARY SUPPORT

Since 1954, a major share of counterpart funds has been used by the Bolivian Government to help defray normal operating expenses included in the national budget.

As may be seen in the list of Counterpart Projects in the Appendix, Budgetary Support has been close to 60% of total counterpart expenditures. This large scale assistance, reaching 25% of Bolivian Government income in certain years, has been deemed necessary in order to avoid large budget deficits and inflationary financing. The amount of this aid is to be reduced

on the basis that government revenues should increase with improvements in customs and other tax collections. It is expected that budgetary support will cease not later than 1962.

TRANSPORT OF AID COMMODITIES

In addition to the functional fields mentioned above, counterpart funds are used to transport commodities contributed under the U.S. aid program from ports to Bolivian population centers.



LOANS

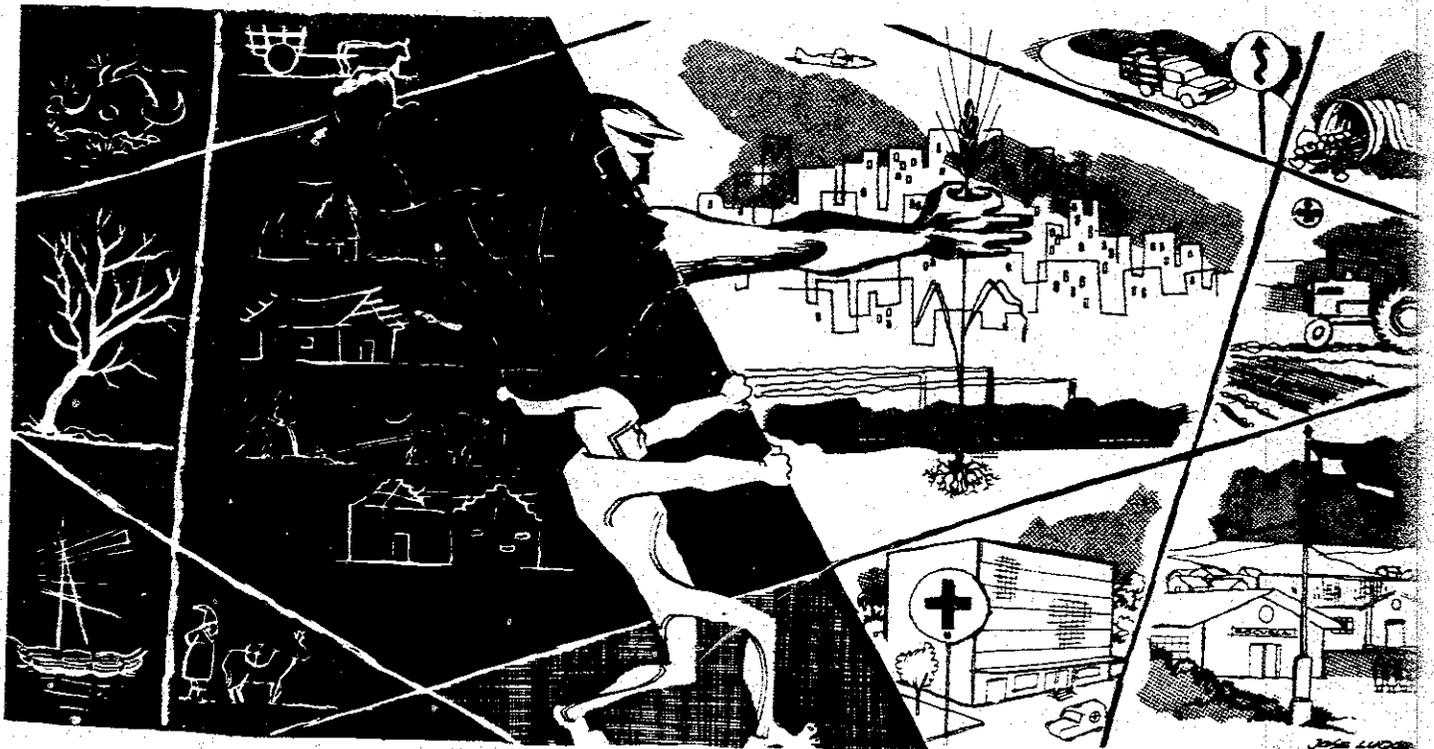
PROGRAM OF U.S. LENDING AGENCIES IN BOLIVIA

In addition to the U.S. programs of Economic Aid and Technical Cooperation, the Development Loan Fund of the United States has provided \$1.5 million for a loan to the Bolivian Government for the construction of "El Alto" airport and \$2.5 million to a private enterprise for expansion of the "La Bélgica" sugar mill. The Export Import Bank of the United States loaned the Government of Bolivia \$34,400,000 for the construction of the Santa Cruz-Cochabamba highway between 1942 and 1955, and \$8,500,000 in 1942 for petroleum equipment. The important effects

of these loans have been discussed above.

The new Inter-American Development Bank and the recently announced program for an expanded United States loan program to Latin America promise to contribute much to the economic and social development of all Latin American countries, particularly those countries that enter wholeheartedly into programs of tax reform, customs service improvement, and participate substantially on a self-help basis in their development program.

The United States Technical Cooperation Program in Bolivia has completed 18 years of operation. The results of the combined efforts of United States and Bolivian technicians have been extremely gratifying. Many of the activities described above are now part of general development programs sponsored by the Government of Bolivia. The future promises to bring an even more intensive program of cooperation between the United States and Bolivia in their mutual efforts to achieve a still higher level of well being of the Bolivian people.





SECTION III

BOLIVIA IN PICTURES



PEOPLE



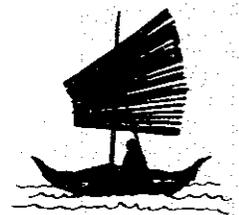
PLACES

"Point Four in Bolivia" is much more than a hard statistic left in a ledger by the hundreds of Americans and their Bolivian fellow workers who have labored these past eighteen years to urge this nation toward its just position in twentieth century technology, and whose names and faces do not appear in this report. The problems and accomplishments of the program cannot be appreciated unless they are viewed within their unusual environment. Yet Bolivia is too vast and varied a country to be adequately understood in even a lifetime of travel and talk, of study and thought. The terrain is far more fractured and the inhabitants far less homogeneous than in many larger, more populous nations. Although no book, no film, nor any human being could tell the entire story of the warmth and color of the Bolivian land, or recount all the national traditions and individual aspirations of the Bolivian people, perhaps the pictures on the following pages may afford some recognition of the scene in which this experiment in international cooperation is being enacted.



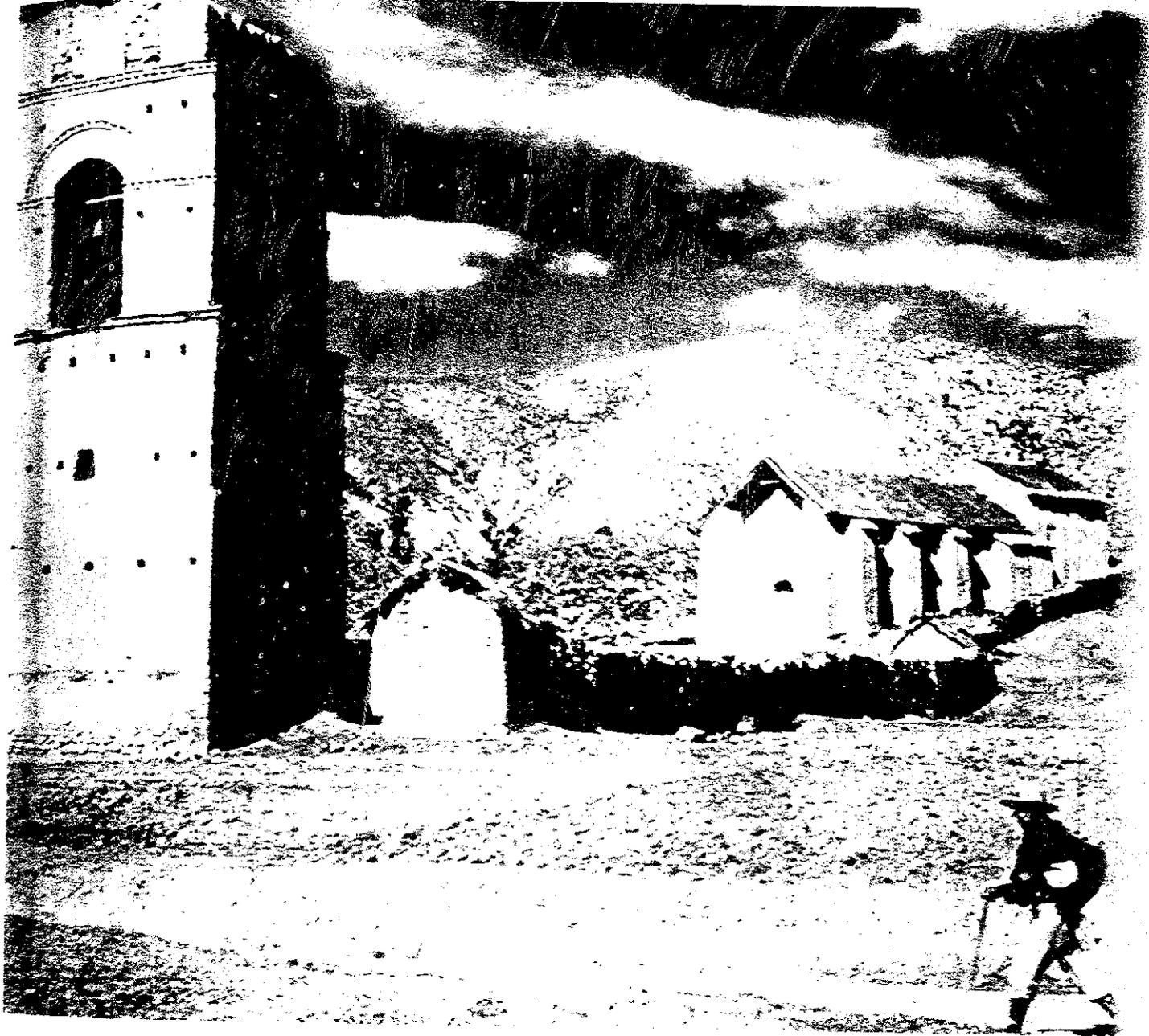


There are several legends concerning the birth of the Inca race and the founding of the Inca Empire, and nearly all of them begin with Lake Titicaca and with the Island of the Sun in the middle of the Lake. By the time of the discovery of America, and of Pizarro's incursions into the Andes, the Incas had completed the conquest of all of their known world. The population was surely much greater than it is at present; nearly all the slopes of the Andes are shaped into agricultural terraces that once bore millions of acres of corn and other crops, much more than enough to feed the people of today. Few of the terraces have been farmed in modern times. The stonework still stands. But the irrigation ditches are dry. A million full-blooded descendants of the early civilizations live along or near the shores of Lake Titicaca. They do not live very well; neither do they starve. Many are fishermen. From the "totora" reeds that grow in the Lake, they fashion their reed boats. Their language and their customs are still laden with traditions dating from the Twelfth Century A.D., from the time of Manco Capac, the first Inca.

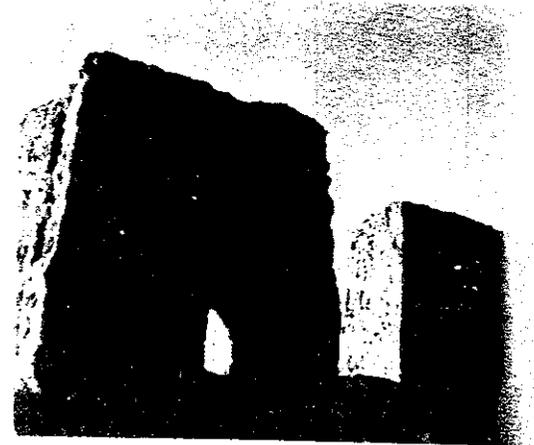




Near the southern shores of Lake Titicaca are remains of a civilization older than that of the Incas. At TIAHUANACO are figures and faces carved of stone, and the fabled Gate of the Sun, surrounded with stone pillars like those of Stonehenge on the British moors.



As with most early civilizations, the people of the Andes and the Altiplano mummified their deceased rulers, and on the Altiplano they built (right) great adobe "chullpas" above the tombs. After the Conquest by the Spaniards, they buried their dead in churchyards, in graves marked by little houses and crosses. The 300-year old colonial church at Caracolla has its steeple set apart, in deference to construction problems and earthquakes: a practice common throught the Andes.





Colorful costumes, masks and music,
alcohol, coca, and the dance:
these sensory stimulants
lift the people of the Altiplano
every weekend and feast day
out of that unanalytic sub-world
of the illiterate, where science
and literature are meaningless, and
knowledge comes mainly from experience.



The dancer, above, wears a jaguar skin from the Bolivian jungle. The pan-pipe players, opposite, are Quechuas from Ucureña, near Cochabamba. They are welcoming members of SCIDE to the Vacas normal school. The Aymara flute player is celebrating SCIDE's fifth anniversary at Kalaque school. The masked dancer wears a North American indian headdress. His hair, long and blond as Custer's, is a rope-yarn wig. His mask is painted bright red, for he is masquerading as a "piel roja", or North American redskin. He does not realize that he is of the same race.





It is untrue that the Andean peoples are hopelessly welded to tradition and have no wish to improve their lot. A thirst for knowledge is commonplace, although most of the elders are content to see increasing numbers of their children learn to read and write and win new stature in the community. Scores of adults participate in the Maryknoll radio school and hundreds of young women learn reading and home improvement at the Warisata Normal School. Yet uncounted thousands of children like this orchid vendor at Achacachi receive no formal schooling at all.





With the vast program of agrarian reform that came with the Revolution of 1952, land was parceled among the indians in plots too small to be efficiently farmed. Since then, the Government of Bolivia and the Agriculture Servicio have encouraged the growth of cooperatives for sowing, harvesting and marketing of crops. The cooperative concept is nothing new to the descendents of the Incas, whose agricultural clans or "aillus" developed into state-controlled communal organizations for the production and storing of foodstuffs. That tradition persists today in a custom called "chocco" by the Quechuas and "minkasi" in the Aymara tongue, a practice similar to the "bees" of U.S. rural communities.

In October, the "campesinos" of Chirapaca, on the road from La Paz to Lake Titicaca, gather for the "minkasi", above: a thousand men, women, and children; and two hundred oxen decorated with colored flags, tassels, and bells. The oxen pull the wooden plows in staggered rows, and the women follow to sow seed potatoes in the furrows. Not until the work is done do festivities begin.

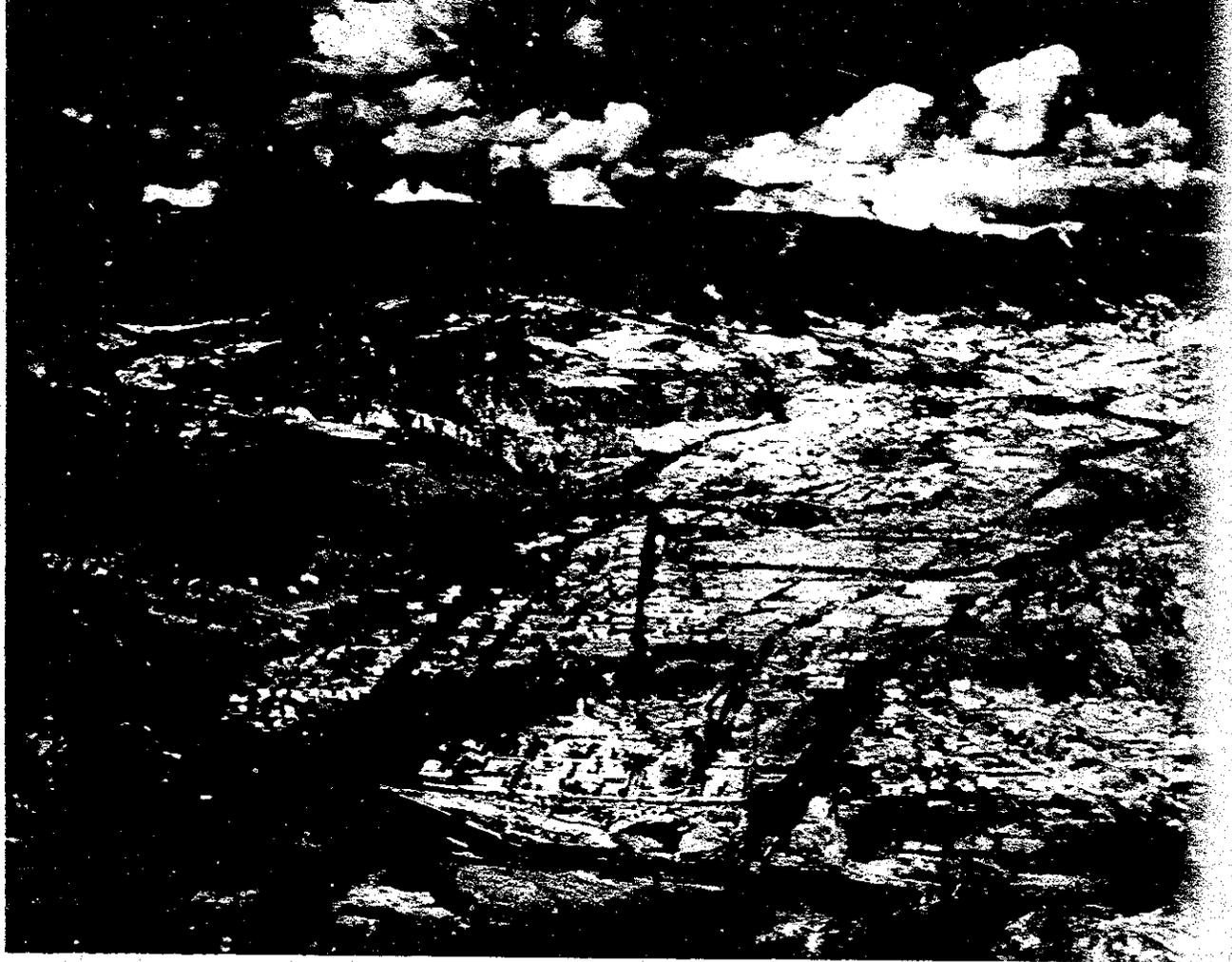
Here in their original highland home, the sixty-odd varieties of potato plants grow slowly and stunted under the summer rains and hailstorms. In March, the farmers of Chirapaca gather again for the harvest, below. Most of the crop is then preserved indefinitely, in the form of "chuño". Chuño is made by spreading the potatoes to freeze during the winter nights; then, when they thaw in the hot sunshine of the winter day, they are scooped into piles and trampled under dancing bare feet, to squeeze the water out, and thus dehydrated, are left to dry in the sun and to be stored away.





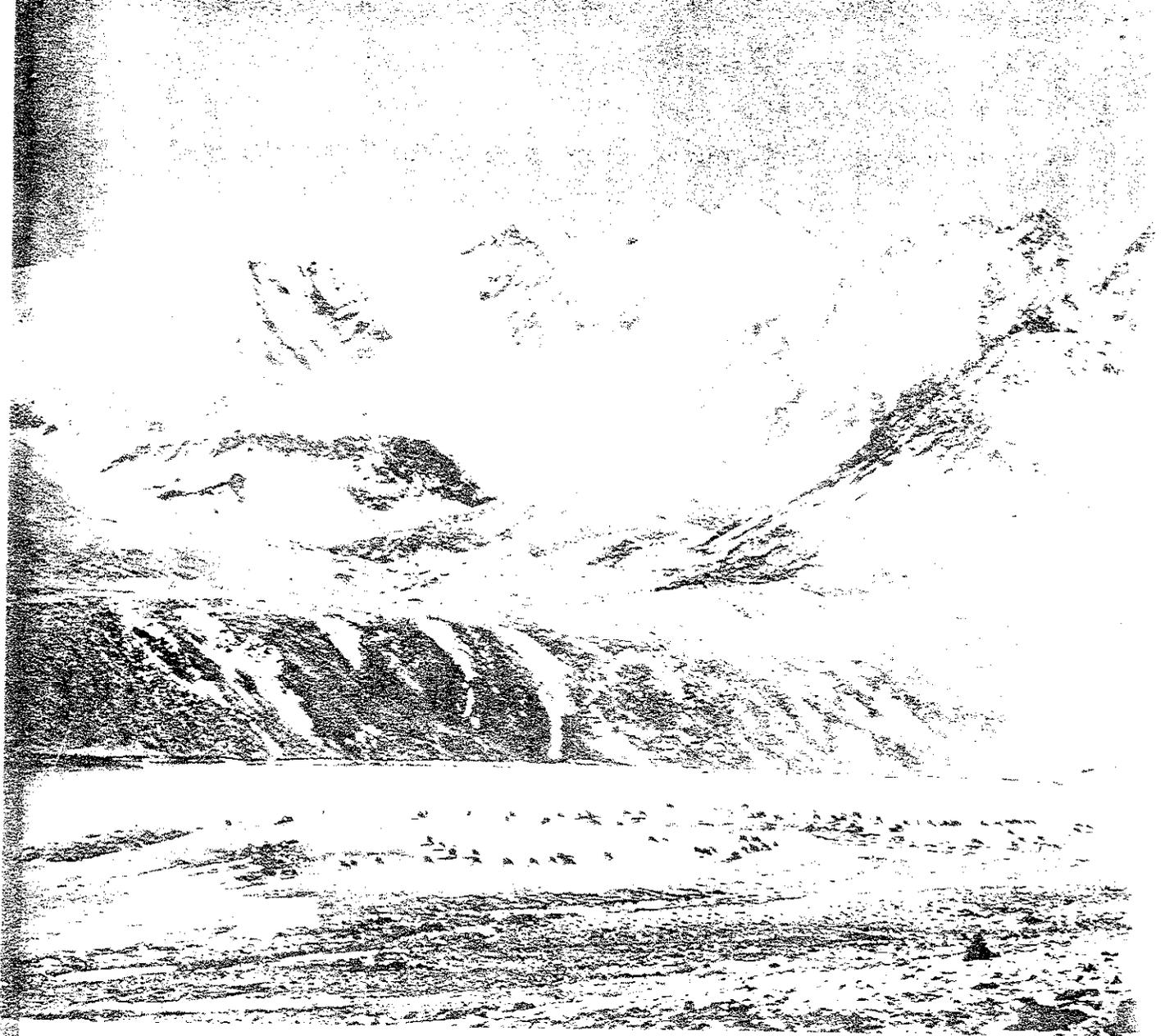
Eleven hundred miles south of the Equator and thirty miles south of Lake Titicaca a great canyon has been scoured out of the soft alluvial earth and round boulders of the Altiplano by a gold-bearing river, a headwater of the Amazon.

This vast eroded depression, at a place bordered by snow peaks of the eastern Andes, was called Chuquiapa by the aborigines. It was a way station on the trail from the River Plate to Lima, and also on the silver-laden road to Lima from Potosi. Here, on October 20th, 1548, a Spanish captain, Alonso de Mendoza, founded the city of "Nuestra Señora de La Paz".



A city of summer hailstorms and winter sunshine, La Paz is the loftiest capital city of the world, a thousand feet higher than Lhasa, capital of Tibet. Travelers arriving by plane land at the world's highest commercial airport, 13,400 feet altitude, at the edge of the flat tableland above the city. If their plane comes in from Lima, over Lake Titicaca, they disembark without having seen La Paz. They take an auto and in a minute or two they dip over the canyon's edge for their first sight of the city, a thousand feet below (opposite). Mount Illimani towers to the East, the factory district is at the middle left, and the city center at the right. A main avenue continues off to the right, winding downhill another thousand feet, to the residential and farming communities of Calacoto and La Florida (above), where many U.S. employees live. These pictures of the valley of La Paz and Calacoto were taken not from an airplane but from the surrounding heights.









Sixteen miles northeast of La Paz, a highway maintained year-round by the Roads Servicio crosses a summit at 16,000 feet, opposite, and descends into the sub-tropical Yungas. A narrow-gauge railroad crosses the slopes above the highway. Mount Illimani, above, rises twenty miles east of the city. As its peaks tower nearly two miles above the surrounding highlands, Illimani is the dominant landmark of La Paz, and can be seen even from Lake Titicaca, seventy miles to the Northwest.



Potosí was once the richest city in the Americas, despite its remoteness and great altitude. In the year 1611 its 160,000 people pursued gracious living, the fine arts, and mining. From the hill behind the town, honeycombed with mining shafts, the Spaniards took two billion dollars worth of silver during nearly 300 years of colonial rule. Today the yield of silver is slight; the population of Potosí is about 50,000.



The man in dark glasses is a dancer from Kalaque, near Titicaca, dressed in his version of a Spanish warrior. The women garbed like Bedouin nomads are farm girls of Arani, near Cochabamba. The unsmiling girl in the torn cap herds sheep along the Oruro-Cochabamba highway. She speaks two languages, Aymara and Quechua, but knows no Spanish. The seated indians are Quechua-speaking Yamparas, from Sucre. They wear their hair in pony-tails, with headgear modeled after Spanish helmets. The musicians are Calchas, from Potosi, whose "charangos", or mandolins, are made of armadillo shell.





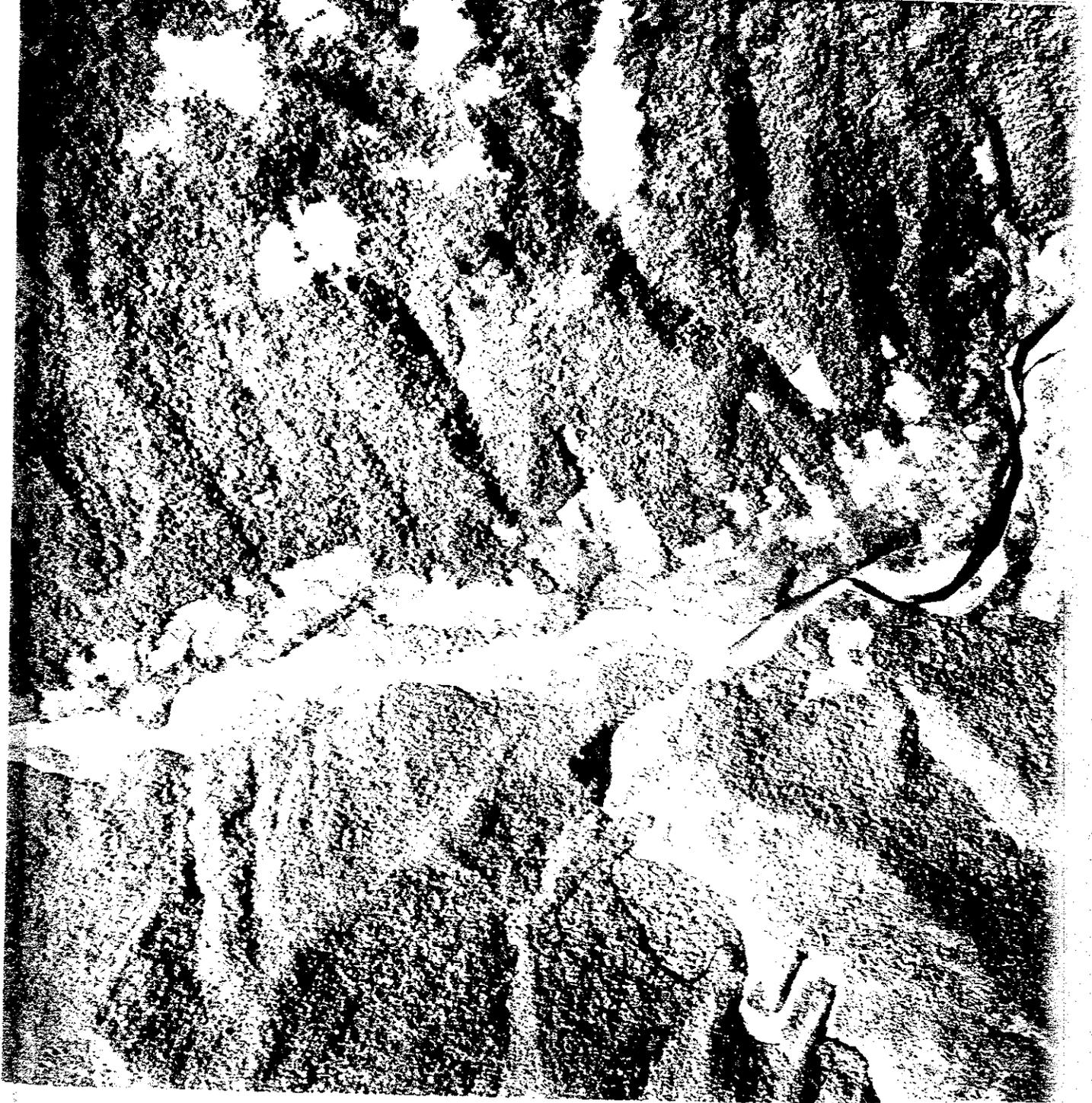
Although most of the people of Bolivia are engaged in agriculture, the country is not yet self-sustaining in production of foodstuffs.

One region where produce is easily grown for urban consumption is the Yungas, the sub-tropical valleys east of La Paz.

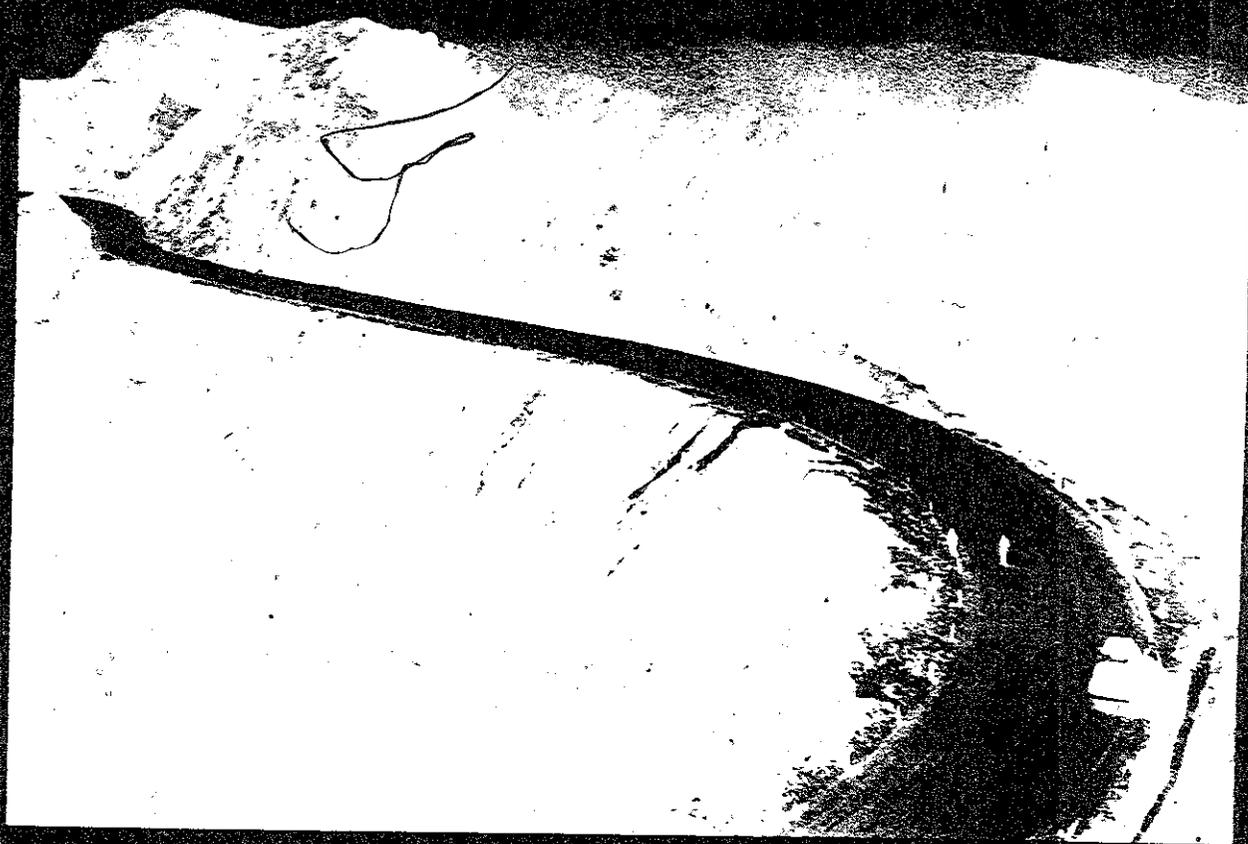
Members of the 4-H club of Caranavi, above, display the giant yuca, or manioc root, the main item of diet throughout the Amazon basin.

They are also exhibiting several varieties of the ubiquitous banana, and other fruits and vegetables grown on their fertile farms, which only a year or two before were carved from virgin jungle.

Their livestock is limited to pigs, rabbits, and chickens.



The towns of the Yungas are perched on steep green cliffs; the fifty-degree slopes are terraced for planting coca, which the highland indians chew for endurance and which is the source of all cocaine and derivative drugs. In the lower valleys the rivers are dredged for gold, and farms are being cleared from the jungle as access roads begin to open the region to colonization. This aerial view shows the Caranavi district.

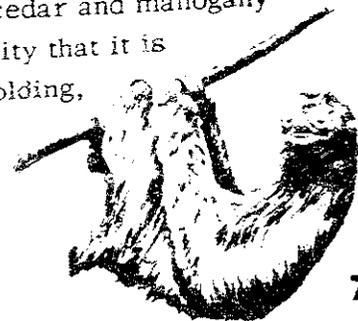


The highway from Cochabamba to Santa Cruz, 500 kilometers of broad asphalt, is the only first-class highway in Bolivia. Above, it passes a region called Siberia, where moisture-laden winds from the jungle leave the surface clouded and wet year-round. A few miles farther East, at Comarapa, left, the countryside is sandy and utterly dry, covered by thorny mesquite and giant cacti.





While at the extreme altitude of the Andean highlands the eucalyptus is the only tree to be cultivated for fuel and building, the eastern and northern lowlands of Bolivia have profuse stands of tropical timber. The growth is variegated, and commercially useful trees such as cedar and mahogany are widely separated. Mahogany is so cheap and of such good quality that it is commonly used for all practical purposes, from furniture to scaffolding, throughout the country. The buttressed "berdolaga" tree, above, in Santa Cruz, is of little commercial value, but is often spared for ornamental purposes, when land is cleared.





Before the construction of the highway from Cochabamba, the city of Santa Cruz was culturally and economically almost isolated from the rest of Bolivia. The population is of largely Spanish descent, and there has always been much commerce with Brazil, to the East. The girls behind the Spanish "reja" live at Lagunillas, far south of the city of Santa Cruz, near the oil region of Camiri.



The aerial view of Santa Cruz, opposite, shows the main plaza and airport. Like most cities of the Amazon basin, streets are unpaved for lack of rock. Juan and Julia Gutierrez, brother and sister, operate the Hacienda Itaguazurenda where these pumpkins and squashes are used to feed their cattle. They employ numerous Izazog indians, of race and tongue similar to the Guarani of Paraguay. The girl carrying the water jug is of Izazog ancestry.





For most of his life, this old man sought odd jobs as a "cargador", carrying heavy burdens on his back about the city of Santa Cruz.

Then, some five years ago, the Rada brothers of that city obtained an Agricultural Credit loan through Point Four, and soon they brought a new crop to the region: coffee.

Until that time, the people of Santa Cruz had always imported their coffee from Brazil.

Now the Rada brothers' business is good.

In 1950, they exported coffee to Switzerland.

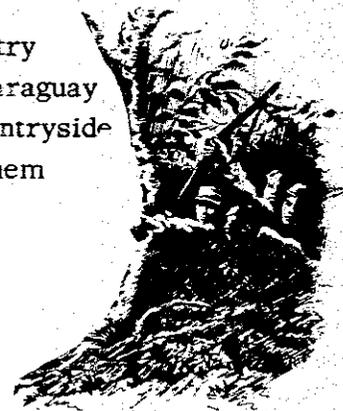
And now the old man has a steady job gathering coffee on the Rada ranch.



78



Eulogio Heredia Torres is a war hero. He lives at Charagua, some 200 kilometers south of Santa Cruz, in the dry scrub country called the Chaco. During the Chaco War between Bolivia and Paraguay in the 1930s, don Eulogio used his intimate knowledge of the countryside to lead 5000 Bolivian soldiers out of encirclement and to save them from death by thirst by leading them to water. With the help of his wife and son he operates a small "trapiche" for grinding sugar cane. Here he is preparing "chancaca", or molasses cake.





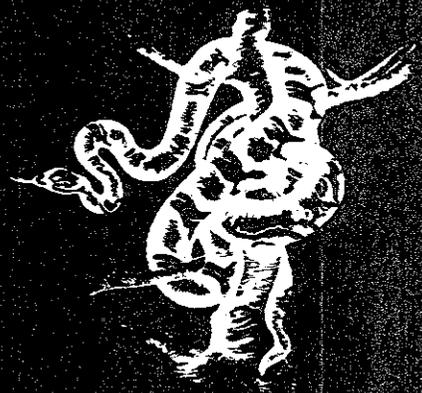
The largest and least settled "Departamento" of Bolivia is the Beni. Much of the region is savanna: grassy and sometimes swampy flatlands. The Beni is good cattle country, but export of beef is a logistics headache. Some is shipped by river to Brazil; much is flown to Bolivian highland markets.



In the dense jungle of the northern Beni toward the Brazilian border live isolated tribes of Amazonian indians, like this Chacobo household on the River Yata.



This Chacobo brave
does not participate
in the social and economic structure of the nation
as presented in this report.
He is, nevertheless, a citizen of Bolivia.





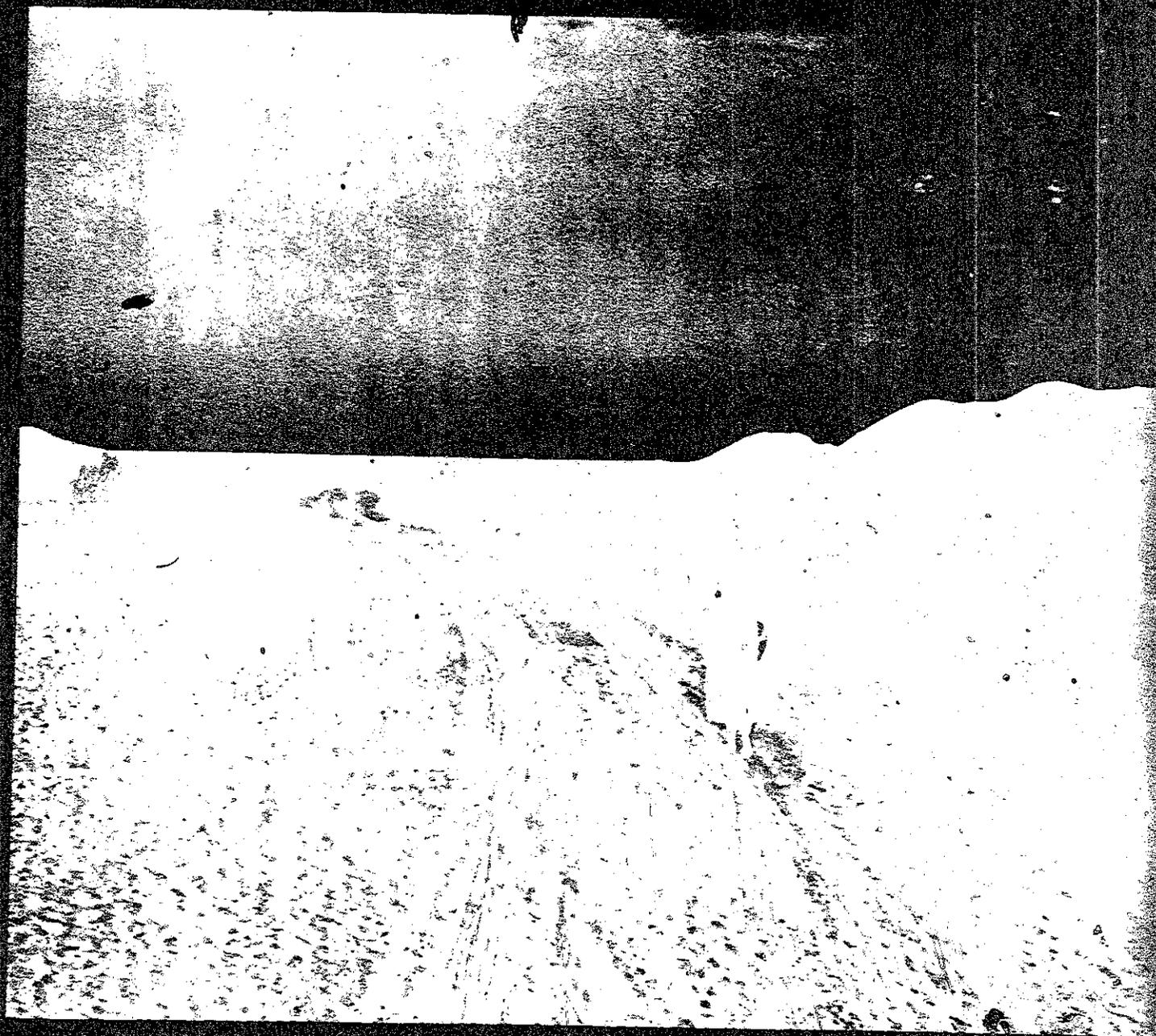
The Altiplano is an austere land, and barren though not sterile. In these highlands live most of the people of Bolivia, yet the landscape is often nearly empty of life. Isolation and underpopulation hinder economic progress.

A demographic comparison might be made between Bolivia - the country with the largest ICA program in this hemisphere - and Haiti, which gets the second largest share, as shown by the chart on the last page of this report.

Both countries have small and nearly equal populations: three and one-half millions, by loose count.

But while Haiti has more than 320 persons to the square mile, crowding the land as in many countries where Point Four operates, Bolivia's people are scattered over a 40 times greater area.

The population density of only 8 persons to the square mile is one of the lowest of any nation on earth.



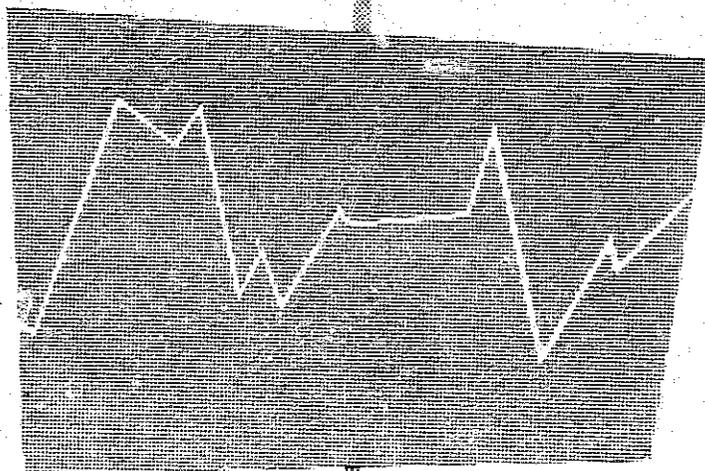
In the shrinking world of the space age, few peoples walk alone. The journey toward a place of progress in the community of Western nations will be more swift and satisfying for Bolivia if the way is paved by international understanding for mutual benefit. This goal cannot be reached through a passive or nihilistic policy of "peaceful coexistence", but rather through a dynamic program of friendly cooperation.

SECTION IV

APPENDIX



STATISTICAL DATA



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TABLE A-I
SUMMARY OF PROJECT EXPENDITURES
BY FIELD OF ACTIVITY, 1952-1960
IN BOLIVIA
(In thousands of dollars)

<u>Field of Activity</u>	<u>Technical Cooperation</u>	<u>Counterpart</u>	<u>Economic Aid Equip. & Supp.</u>	<u>Total</u>
Agriculture	9,073	4,498	6,946	20,517
Transportation	4,585	2,953	6,406	13,944
Health and Sanitation	3,045	1,671	494	5,210
Education	3,427	1,020	221	4,668
Industry and Mining	1,015	2,547		3,562
Public Administration	3,120	303		3,423
Land Settlement	323	1,500	487	2,310
General and Miscellaneous	299	812	441	1,552
Budgetary Support		32,056		32,056
TOTAL	24,887	47,360	14,995	87,242

1/ See Appendix Table A-IV Adjusted Totals.

2/ Transport of aid commodities.

Note: The difference between the dollar equivalent value of counterpart expenditures (\$47,360,000) and the total Disbursements for the U. S. Economic Aid Program (\$117,087,000) is accounted for as follows:

1. Economic Aid funds spent for commodities which were donated rather than sold, hence not generating counterpart. (See Table 3 of Appendix) *	\$13,797,000
2. The disparate value between Economic Aid commodities and boliviano sale proceeds caused by prices set below the value of the goods based on artificial exchange rates prior to 1958.	38,500,000
3. Dollar Equivalent of Unspent Counterpart balances (September 30, 1960).	9,300,000
4. Dollar Equivalent of Counterpart Arrears (September 30, 1960).	4,500,000
5. Dollar Equivalent of the decrease in value of counterpart holdings and delayed payments caused by inflation (September 30, 1960).	3,630,000
6. DOLLAR EQUIVALENT OF COUNTERPART EXPENDITURES	47,360,000
TOTAL: VALUE OF ECONOMIC AID DISBURSEMENTS	\$117,087,000

* Should read "Table A-IV of Appendix".

Source: Controller and Program Office, USOM/Bolivia, TC Obligations and Economic Aid equipment as of June 30, 1960; Counterpart expenditures as of September 30, 1960.

TABLE A-II

U.S. TECHNICAL COOPERATION PROJECTS IN BOLIVIA 1952-1960

BY PROJECT AND FIELD OF ACTIVITY
(Obligations in thousands of dollars)

Agriculture		Industry, Mining and Labor	
Agriculture Servicio - Joint Fund	3,652	Industrial Development	19
Agriculture Servicio - Administration	797	Mining	184
Research and Technical Services	855	Industry and Mining	540
Agricultural Extension	764	Petroleum Code	59
Development Operations and Services	670	Labor Training and Advisory Program	213
Supervised Agricultural Credit	547	TOTAL	<u>1,015</u>
Other	1,788		
TOTAL	<u>9,973</u>	Public Administration	
		Government Management Assistance	328
Health & Sanitation		Financial Advisory Services	219
Public Health Service - Joint Fund	1,626	School of Public Administration	500
Public Health Servicio - Administration	140	Audio Visual Center	437
Operation of Health Facilities	346	Public Safety Program	572
Environmental Sanitation	169	USOM Administration	
Control of Specific Diseases	27	(Technical Support)	1,002
Health Education and Welfare	112	Other	62
Occupational Health	66	TOTAL	<u>3,120</u>
Other	559		
TOTAL	<u>3,045</u>	Community Development	
		Community Development	
Education		(Land Settlement)	323
Education Servicio - Joint Fund	1,362	General and Miscellaneous	
Education Servicio - Administration	199	General and Miscellaneous	<u>299</u>
Rural Education	584		
Industrial Education	273		
Vocational Agricultural Education	222		
Other	787		
TOTAL	<u>3,427</u>		
		Grand Total.....	<u>24,887</u>
Transportation			
Roads Servicio - Joint Fund	895		
Roads Servicio - Administration	312		
Demonstration Road Maintenance and Betterment	577		
Equipment Operators Training	65		
Engineering Construction Units	554		
Piray River Bridge	451		
Santa Cruz-Cochabamba Road Construction and Maintenance	1,256		
Civil Aviation	257		
Other	218		
TOTAL	<u>4,585</u>		

(US \$ 24,887,000.)

Source: Controller, USOM/Bolivia, D-8 Report, June 30, 1960.

U.S. obligations listed above include cost of U. S. technicians, foreign training, technical cooperation project commodities, and "other costs", including U. S. contributions to Servicio joint funds. The obligations include regular Technical Cooperation funds, \$72,000 of regional funds, and \$3,873,000 of Special Assistance Funds.

TABLE A-III

EXPENDITURES FOR LOCAL CURRENCY PROJECTS IN BOLIVIA 1954-1960

AGRICULTURE	Bolivianos (millions)	Dollar* Equivalent (thousands)	EDUCATION	Bolivianos (millions)	Dollar* Equivalent (thousands)
<u>Livestock</u>			<u>School Construction and Repair (Except Agricultural School)</u>		
Breeding - Reyes and Villamontes Sheep Ranch	120	40	Industrial School (P.D.M.)	1,935	282
Animal Vaccine Laboratory	410	38	Mineros Rural School	75	17
Sheep Shearing Pool	745	126	Warisata and Canasmoro		
TOTAL: Livestock	<u>1,310</u>	<u>208</u>	Normal Schools	215	26
<u>Sugar</u>			Paracaya Normal School	100	10
Sugar Development	2,844	240	School Repair	5,500	514
Sugar Mill - Guabira	680	294	TOTAL: School Construction and Repair	<u>7,825</u>	<u>849</u>
National Sugar Commission	63	6	<u>Teacher and Language Training</u>		
TOTAL: Sugar	<u>3,587</u>	<u>540</u>	Emergency Teacher Training	1,000	105
<u>Loan Programs</u>			Teacher Training Course	50	6
Supervised Agricultural Credit	16,311	1,415	Language Training	178	17
Sugar Marketing	12,255	1,031	Andean Handicraft	445	43
TOTAL: Loan Program	<u>28,566</u>	<u>2,446</u>	Total: Teacher & Language Training	<u>1,673</u>	<u>171</u>
<u>Irrigation</u>			TOTAL: EDUCATION	9,498	1,020
Cochabamba-Oruro	1,606	309	<u>HEALTH AND HOUSING</u>		
Villamontes	530	207	<u>Eradication of diseases</u>		
Small works	30	8	Malaria Eradication	14,522	1,319
TOTAL: Irrigation	<u>2,166</u>	<u>524</u>	Smallpox Eradication	586	49
<u>Muyurina Agricultural School</u>			Yaws Eradication	165	14
Construction Muyurina	1,069	163	TOTAL: Eradication of diseases	<u>15,273</u>	<u>1,382</u>
Operation and Maintenance	400	42	<u>Hospital and Health Center Construction</u>		
TOTAL: Muyurina Agr. School	<u>1,469</u>	<u>205</u>	Construction of Health Centers	485	76
<u>Milk Plant</u>			Health Offices Rehabilitation	300	25
Potato Production	154	20	Environmental Sanitation	261	51
<u>Erection of Grain Storage Silos</u>			TOTAL: Hospital & Health Center Construction	<u>1,046</u>	<u>152</u>
Experimental Stations	100	33	<u>Other Medical Facilities</u>		
Research and Development Station	600	63	School of Nursing	100	13
SAI Various Services	676	177	Construction Medical School and Health Facilities (Thorax Institute)	400	34
TOTAL: Experimental Stations	<u>1,276</u>	<u>240</u>	Bacteriological Institute	592	56
<u>Other</u>			TOTAL: Other Medical Facilities	<u>1,092</u>	<u>103</u>
SAI Special Supplementary Contribution	2,325	243	<u>Housing</u>		
TOTAL: AGRICULTURE	41,103	4,498	Ministry of Finance	400	34
<u>INDUSTRY and LABOR</u>			TOTAL: HEALTH and HOUSING	17,811	1,671
Industrial Credit	22,781	1,988	<u>MINING</u>		
Cement Plant Sucre	90	12	Transport of Mining Equipment	201	24
Brazil Nuts Loan Program	800	67	Mineral Deposits Development	4,258	440
Productivity Center	21	2	TOTAL: MINING	4,459	464
Employment Services	145	14			
TOTAL: INDUSTRY and LABOR	23,837	2,083			

TABLE A-III
(CONTINUED FROM OPPOSITE PAGE)

TRANSPORT	Bolivianos (millions)	Dollar* Equivalent (thousands)	LAND SETTLEMENT	Bolivianos (millions)	Dollar* Equivalent (thousands)
<u>Santa Cruz Roads</u>			Okinawa Immigration	35	23
Access Roads - Santa Cruz	280	137	Resettlement and Internal Migration	614	72
Cochabamba - Santa Cruz	45	30	Colonization and Resettlement	364	47
Maintenance Cochabamba-Santa Cruz-Montero	7,224	608	Colonization	36	5
Sugar Access	1,005	85	<u>(Alto Beni Settlement)</u>		
North of Santa Cruz	500	42	Agrological Studies	96	8
TOTAL: Caminos Santa Cruz	9,054	902	Special Project Caranavi-Alto Beni Road	8,311	845
<u>La Paz Roads</u>			Legal Survey of Alto Beni Area	40	3
Construction San Pedro-Caranavi	5,105	575	Aerial Survey and Construction	70	13
Caranavi Construction	850	175	Caranavi-Alto Beni Road	5,280	444
Caranavi-Altamarani Study	20	13	Caranavi-Alto Beni Road Supervision	442	37
Licoma-Cañamina (CBF)	5,762	485	Health Survey Caranavi-Alto Beni	39	3
TOTAL: Caminos La Paz	11,737	1,248	TOTAL: LAND SETTLEMENT	15,327	1,500
<u>Other Roads</u>			TRANSPORT of AID COMMODITIES		
Urban Access Road	6,391	645	Transportation of Section "402"		
Maintenance and Repair	220	43	Commodities	4,000	414
Cochabamba Access Roads (CBF)	20	2	Transportation of other commodities	4,000	398
Highway Bridge Construction	689	58	TOTAL: TRANSPORT of AID COMMODITIES	8,000	812
TOTAL: Other Roads	7,320	748			
<u>Air Transport</u>			BUDGETARY SUPPORT		
Airfield Studies	30	10	National Agrarian Reform	3,282	370
National Institution of Aeronautics	10	1	Ministry of Agriculture	2,823	295
TOTAL: Air Transport	40	11	Ministry of Mines and Petroleum	649	73
<u>Warehouses</u>			Ministry of Communications	11,442	1,148
Procurement Warehouse	425	44	Contracts and Constructions	25,912	2,995
TOTAL: TRANSPORTATION	28,576	2,953	Ministry of Labor	7,360	828
			Ministry of Health	16,768	1,890
PUBLIC ADMINISTRATION			Ministry of Rural Affairs	25,371	2,853
School of Public Administration	1,166	112	Ministry of Education	54,590	5,958
Training Public Administration			National Commission of Planning and Coordination	243	27
Research Center	85	7	Bolivian Development Corporation	5,104	601
Department of Supply	380	41	Office of the Controller General	1,792	202
Audit Services	119	12	Ministry of Public Works	2,241	251
Bolivian Accounts	178	15	Ministry of Economy	508	53
Public Safety	760	64	Ministry of Finance	6,753	753
Audio Visual Center	580	49	Budgetary Support - General	158,717	13,355
Assistance Program Support	30	3	Administrative Support - U. S. Government Agencies	4,126	404
TOTAL: PUBLIC ADMINISTRATION	3,298	303	TOTAL: BUDGETARY SUPPORT	327,681	32,056
GRAND TOTAL:	Bs. 479,590,000,000,	equivalent to U.S. \$ 47,360,000.		479,590	47,360

*The average yearly free rate of exchange was used to convert Boliviano expenditures to U.S. dollars equivalents in 1954, 1955 and 1956, as follows:

1954 : 1497 bolivianos per U.S. dollar
1955 : 3001 " " " "
1956 : 7698 " " " "

In subsequent years the rate of exchange used for conversion was derived by dividing the yearly Boliviano amount billed to the Government of Bolivia by the yearly U.S. dollar disbursements as recorded in Schedule A, attached to USOM/Bolivia letter MC-1/121, to the Minister of Economy, August 19, 1960.

These rates were as follows: 1957 : 8243 bolivianos per U.S. dollar
1958 : 9558 " " " "
1959 : 11885 " " " "
1960 : 11885 " " " "

Controller, USOM/Bolivia, Report, Status of Local Currency Funded Projects, Fiscal Years 1954-1961 Inclusive, as of 9-30-60.

TABLE A-IV

**VALUE OF ECONOMIC AID EQUIPMENT
& SUPPLIES NOT GENERATING COUNTERPART
IN BOLIVIA**

As of June 30, 1960

<u>Recipient</u>	<u>Gross Value</u>		<u>Adjusted Value</u> <u>1/</u>
Agriculture Servicio	\$ 5,683,643	Agriculture	\$ 6,946,000
Road Servicio	3,895,632	Transportation	6,406,000
Bolivian Development Corporation	1,969,188		
Lloyd Aereo Boliviano	606,317		
Health Servicio	493,723	Health	494,000
Education Servicio	220,830	Education	221,000
Joint Servicios (Caranavi-Inquisivi Settlement)	486,558	Settlement	487,000
Other	441,484	Other	441,000
Ministry of Defense	145,765		
Ministry of Public Works	108,539		
Ministry of Economy	9,345		
Unidentified	177,835		
TOTAL	\$13,797,375		\$14,995,000

1/ Adjustments to arrive at net value of donated goods presented in Column 3 of Table A-I.

AGRICULTURE

Agriculture Servicio		
Non Project Equipment	\$ 5,684,000	
Cash Grant Used for Equipment Purchases	1,865,000	
TOTAL	\$ 7,549,000	
Counterpart Receipts from Surplus Sales	- 603,000	
TOTAL AGRICULTURE	\$ 6,946,000	

TRANSPORTATION

Roads Servicio		
Non Project Equipment	3,895,632	
Counterpart Receipts from Surplus Sales	- 65,391	
TOTAL	3,830,241	\$ 3,830,241
Bolivian Development Corporation		
Non Project Equipment		\$ 1,969,188
Lloyd Aereo Boliviano		
Non Project Equipment		606,317
TOTAL TRANSPORTATION		\$ 6,405,746

Source: Controller, USOM/Bolivia
(Does not include commodities included in the Technical Cooperation Program)

TABLE A-V

**U.S. AND BOLIVIAN CONTRIBUTIONS
TO COOPERATIVE SERVICIO JOINT FUNDS**

		42-51	1952	1953	1954	1955	1956	1957	1958	1959	1960 ^{a/}
Education Servicio (SCIDE)											
Bolivia	Bs. millions	46	8	36	50	128	290	1300	1300	2000	1800
U.S.	\$ thousands	466	105	75	100	150	150	200	150	150	113
Health Servicio (SCISP)											
Bolivia	Bs. millions	146	33	67	78	285	660	2135	2135	3000	2600
U.S.	\$ thousands	2035	175	150	200	170	210	220	190	190	0
Agriculture Servicio (SA)											
Bolivia	Bs. millions		24	436 ^{b/}	48	128	910	5351	5351	5000	5000
U.S.	\$ thousands	33	200	2053 ^{c/}	125	175	275	275	275	275	0
Roads Servicio (SCBAC)											
Bolivia	Bs. millions					75	418	13186	13186	20300	9000 ^{d/}
U.S.	\$ thousands					65	80	250	250	250	0

^{a/} U. S. Contributions were not made in 1960 to those Servicios with large amounts of accumulated dollar funds.

^{b/} Includes Bs. 56 million regular contribution plus Bs. 380 million special contribution for program of emergency food production.

^{c/} Includes U. S. \$188,000 regular contribution plus \$1,865,000 special contribution for program of emergency food production.

^{d/} Transfer of the Servicio to the Ministry of Public Works and Communications was postponed from June 1960 to January 1961, and the Bolivian contribution for 1960 was increased to Bs. 18,000 million.

FIGURE A-I

**NUMBER OF US EMPLOYEES
USOM TO BOLIVIA 1950-1960**

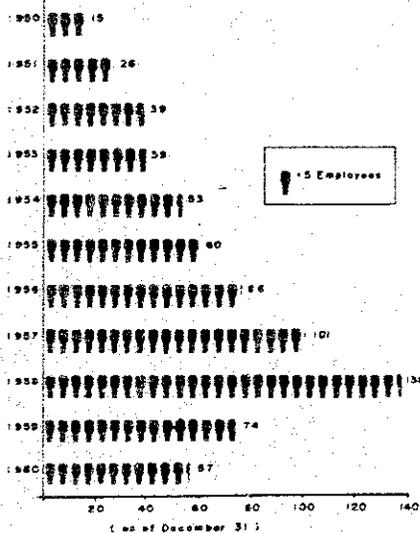
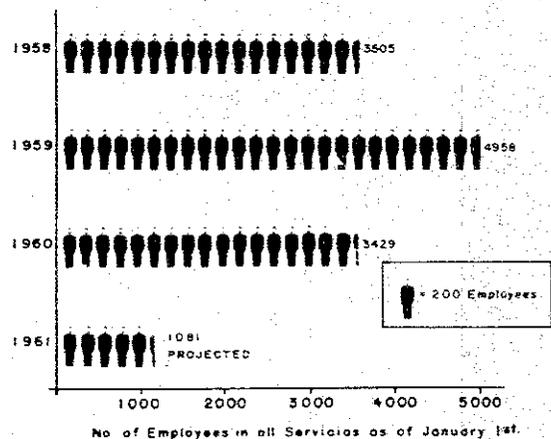


FIGURE A-II

**EMPLOYEES-BOLIVIAN NATIONALS
(SERVICIOS ONLY)**



HEALTH	AGRICULTURE	ROADS	EDUCATION	TOTAL
1958 - 567	1958 - 793	1958 - 1662	1958 - 163	3505
1959 - 880	1959 - 615	1959 - 3314	1959 - 149	4958
1960 - 486	1960 - 620	1960 - 2135	1960 - 125	3429
1961 - 506*	1961 - 450*	1961 - 500*	1961 - 131*	1627*

*Projected

FIGURE A-III
FOREIGN EXCHANGE INCOME
BOLIVIA-1959

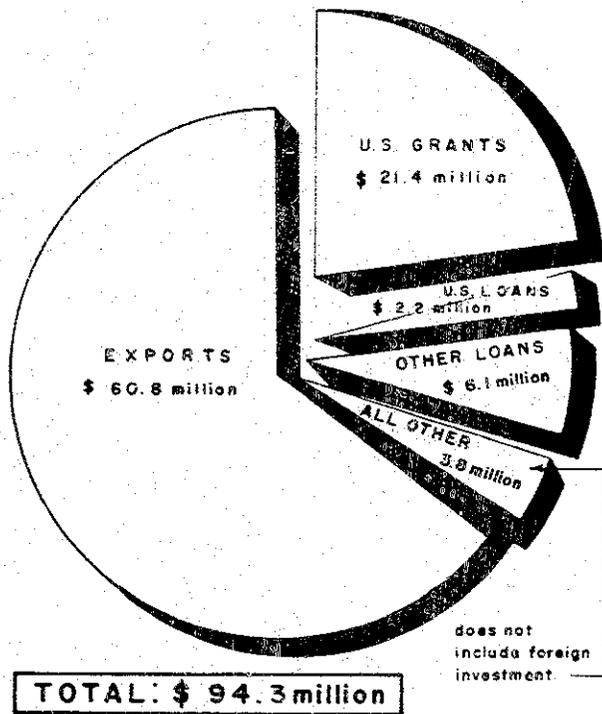


FIGURE A-IV
VALUE OF EXPORTS
BOLIVIA 1960 (ESTIMATED)

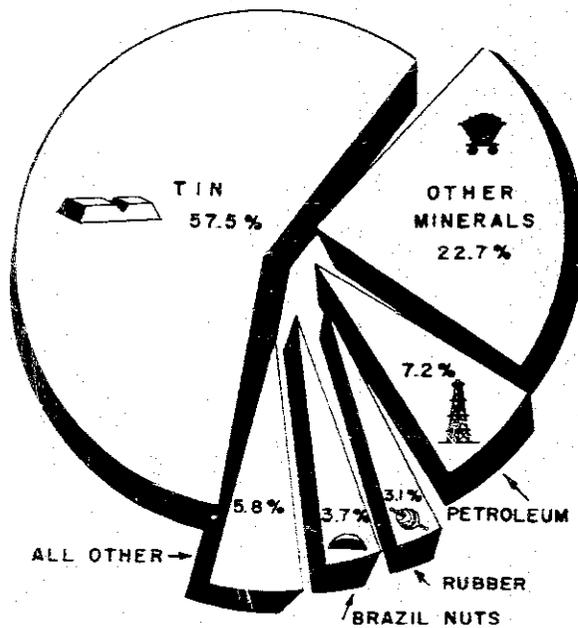
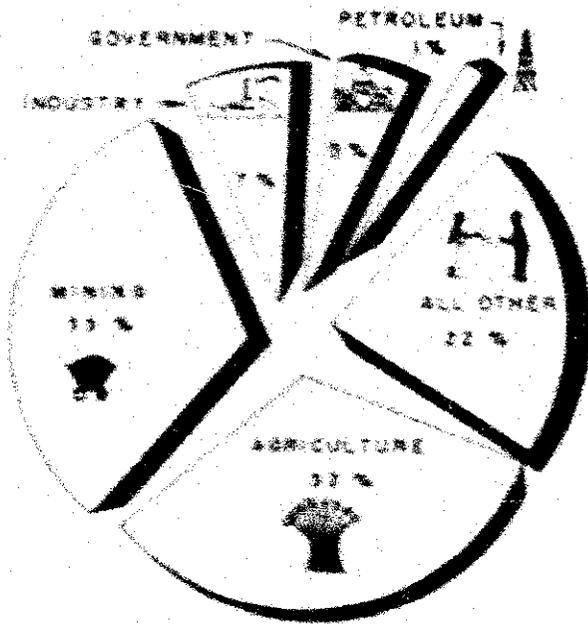


FIGURE A-7
GROSS NATIONAL PRODUCT
BOLIVIA 1950 (ESTIMATED)



(millions of dollars)

MINING	70
AGRICULTURE	66
INDUSTRY	14
GOVERNMENT	12
PETROLEUM	2
OTHER	46
TOTAL	210

U.S. \$ 210,000,000.

FIGURE A-7a
GROSS NATIONAL PRODUCT
BOLIVIA 1960 (ESTIMATED)

(millions of dollars)

MINING	28
AGRICULTURE	67
INDUSTRY	21
GOVERNMENT	12
PETROLEUM	2
OTHER	53
TOTAL	193

U.S. \$ 193,000,000.

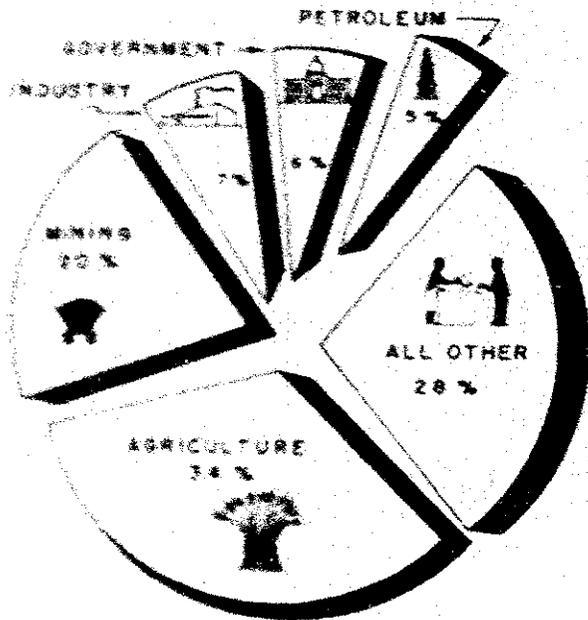


TABLE A-VI

**SUMMARY OF U.S. ECONOMIC AID
AND TECHNICAL COOPERATION PROGRAMS
IN BOLIVIA 1942-1960**

Net Obligations by Fiscal Year Programs
(millions of dollars)

	<u>Technical Cooperation*</u>	<u>Economic Assistance°</u>	<u>Total</u>
1942 - 1951	3.2		3.2
1952	1.4		1.4
1953	1.3		1.3
1954	3.1	12.1	15.2
1955	2.2	23.8	26.0
1956	4.3	20.4	24.7
1957	3.3	21.8	25.1
1958	4.1	17.4	21.5
1959	3.3	16.4	19.7
1960	<u>1.9</u>	<u>15.1</u>	<u>17.0</u>
All years	28.1	127.0	<u>155.1</u>

TOTAL Obligations \$155.100,000

*Includes \$72,000 of regional funds and \$3,573,000 of Special Assistance project funds.

°Includes U.S. Public Laws 480 and 216 funds.

Source: Controller, USOM, Bolivia

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ICA PROGRAMS IN LATIN AMERICA

FIGURE A-VII

FISCAL YEARS 1959 AND 1960 *

(THOUSANDS OF DOLLARS)

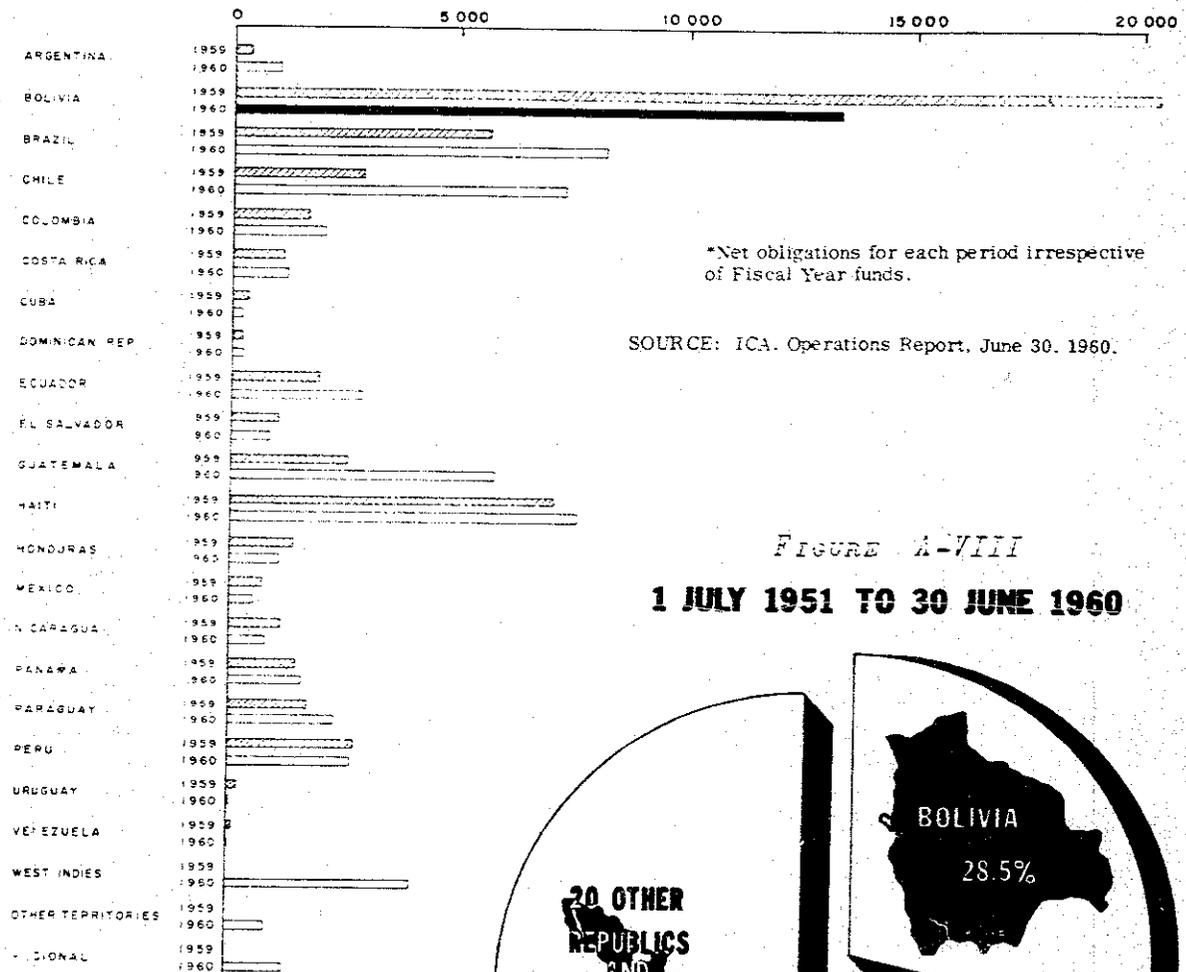


FIGURE A-VIII

1 JULY 1951 TO 30 JUNE 1960

