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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATION OF THE PRESIDENT TO THE EXECUTIVE DIRECTORS ON PROPOSED LOANS TO MINERACOES BRASILEIRAS REUNIDAS, S.A. - MBR AND REDE FERROVIARIA FEDERAL, S.A. - RFFSA FOR AN IRON ORE MINING AND EXPORT PROJECT

July 21, 1971

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1. I submit the following report and recommendation on two proposed loans, both to be guaranteed by the Federative Republic of Brazil to:

(a) Mineracoes Brasileiras Reunidas, S.A. (MBR) for the equivalent of US$50 million for a term of 15 years including 3 years of grace with interest at 7-1/4 percent per annum, and

(b) Rede Ferroviaria Federal, S.A. (RFFSA) for the equivalent of US$46 million for a term of 18 years including 4 years of grace with interest at 7-1/4 percent per annum.

PART I - INTRODUCTION

2. Brazil has so far received US$998.3 million in loans from the Bank, net of cancellations. If the Executive Directors approve the proposed loans, Brazil will become the Bank's largest borrower. The undisbursed balance of effective loans at the end of May 1971 was US$385.9 million. These amounts reflect the significant increase in Bank lending in Brazil from US$74.9 million in FY69 to US$205 million in 1970 and US$160.4 million in 1971. The status of previous loans to Brazil is summarized in Annex I.

3. Two-thirds of the Bank's lending for Brazil has been for power. Since 1968, however, there has been a marked shift in the sector distribution of Bank loans. Less than 40 percent of Bank lending since FY68 has been for power and about 34 percent for transportation. In this period, loans were approved for agriculture, industry, education and water supply and pollution control, sectors in which the Bank had not lent before.

4. In financing projects in recent years and in selecting sectors and projects for financing, the Bank has been concerned, not simply with finding suitable vehicles for resource transfer, but also with identifying areas where Bank assistance would be particularly productive in promoting institution building and in supporting policies and actions of public and private agencies which would encourage Brazil's economic growth.

5. In power Bank lending has been crucial to new investment, particularly in the Center-South of Brazil, helping to finance the installation of over 6,000 MW of generation capacity and complementary transmission and distribution facilities. Furthermore, partly as a result of Bank association with the power sector, the utilities in Brazil have developed a sound tariff structure which enables them to earn a reasonable return on their investments and to generate a substantial part of their investment requirements.

6. The Bank's association with transportation started in 1965 with the Transport Survey, financed by the Bank, the UNDP and the USAID and supervised by the Bank. The Survey pointed to the need for substantial new investments in all modes of transportation and for major institutional and financial reforms. The Government is implementing the recommendations of the Transport Survey in railways, highways and ports. Bank lending for transportation has been in support of high priority investments and the reorganization and reform being undertaken by the Government.

7. Although relatively limited in scale, especially by comparison with support provided for transport and power, Bank lending for industry, agriculture, water supply and pollution control and education in Brazil has been significant and should be regarded as a prelude to additional support in these sectors. The Bank has lent for an industrial credit project in the Northeast in support of the Government's effort to encourage production and provide employment in this underdeveloped region and for an aluminum plant to exploit Brazil's bauxite resources. In agriculture, the only loan so far is for livestock production in the Center-South of Brazil. Loans for technical education, water supply and pollution control were signed recently.

8. In general, execution of Bank-financed projects in Brazil has been satisfactory, but has varied from sector to sector. Disbursements have been rising. Disbursements in FY69 were US$28 million, equivalent to about 11 percent of the undisbursed balance of effective loans at the beginning of the year, whereas in FY71 they were US$75 million or about 30 percent. In electric power, where the utilities are well-established and well-managed, the execution of projects is excellent, despite some initial delays in those financed in 1965 and 1966. Bank financing in recent years has been largely for hydroelectric projects and associated transmission lines and it is in the nature of these operations that disbursements are slow and bunched towards the end of the disbursement period. The experience in transportation has been satisfactory, although there have been minor delays in the first and the second Bank highway projects. In agriculture, the experience has been less than satisfactory. The Livestock Project which involves long-term lending based on farm development plans is a completely new concept in Brazil and has required considerable training of personnel, the establishment of new institutions and education of farmers. In the last year there has been an improvement in the execution of this project.

9. The institutional reforms and investment programming which the Government is undertaking in various sectors of the economy are designed, among other things, to improve the formulation and execution of projects and it is hoped that in the traditional sectors of Bank lending as well as in new areas there will be steady improvement.

10. The project sponsors, the CAEMI Group of Brazil and Hanna Mining Company of the U.S.A., first approached the Bank for financing in 1965, and numerous discussions took place over the next four years as the project concept evolved. Appraisal by the Bank could not begin, however, until early 1970, when MBR reached agreement with RFFSA on a rail freight contract and signed a long-term ore sales contract with Japanese buyers. The MBR Project was appraised by missions which visited Brazil in June, October-November, 1970 and in January, 1971. The Railway Project was appraised by a mission which visited Brazil in October-November, 1970. Negotiations for the MBR Project took place April 12 - June 4, 1971. MBR was represented by Dr. Arnaldo Blank, its President, Mr. Jack W. Buford, a Senior Vice-President of Hanna Mining Company and Mr. James Courtney, a partner of the law firm Jones, Day, Cockley and Reavis. RFFSA was represented by General Antonio Adolfo Manta, President of RFFSA and Dr. Pedro Rocha Santos, Director of RFFSA. The Guarantor was represented in both negotiations by Dr. Jayme Alipio de Barros, Attorney General of the Ministry of Finance.

PART II - THE ECONOMY

11. Since 1964 Brazil has been ruled by a leadership drawn from the Armed Forces, although periodically elections have been held for the National Congress and State legislatures. The Governments of Marshalls Castello Branco and Costa e Silva and General Medici have depended on support of the Armed Forces, but have entrusted economic leadership to well-trained and highly qualified civilians, whose main objectives have been to ensure the growth of the Brazilian economy, the improvement of the balance of payments and to a lesser extent the control of inflation.

12. Although there has been considerable progress towards these objectives, major problems await solution. Some of the most serious of these problems, such as unemployment, uneven income distribution, and differences in the prosperity and growth of different regions, can be resolved only if there is rapid economic growth. The Government, has in fact, taken specific measures to improve income distribution and alleviate regional disparities including, inter alia, social security reform, housing and urban development programs, a massive adult literacy campaign and other educational efforts and tax sharing and fiscal measures to transfer resources from the richer to the poorer regions of the country.

13. Prospects are that Brazil will continue to be guided, for some time to come, by the Armed Forces with the assistance of carefully selected civilians in the economic and social matters, and that both

military and civilian members of the Government will place major emphasis on the resolution of domestic economic and social problems.

14. An economic report on Brazil (WH-203a) dated January 22, 1971 has been distributed (R71-39). A summary of recent economic developments based, among other things, on some preliminary estimates of economic trends in 1970 was included in my report and recommendation on the Sao Paulo Water Supply and Pollution Control Project (P-927), dated May 6, 1971. A Country Data sheet is attached as Annex II.

15. An economic mission has just returned from Brazil and is preparing its report. The following is a brief summary of recent economic developments and prospects of the Brazilian economy, based on the mission's findings.

16. For three years in succession, 1968, 1969 and 1970, domestic product has maintained a rapid growth, averaging 9 percent during these years. The growth has been led, as in the past, by a rapid increase in industrial production. Agricultural production increased on the average by about 4.5 percent per annum, permitting higher per capita consumption and an increase in agricultural exports. The growth of employment has been more rapid than that of the labor force. Brazil appears to have resumed the rapid growth characteristics of the 1955-62 period although it is now more outward looking.

17. Concurrently with the rapid growth in production and employment, the Government has tried to increase and diversify exports. Merchandise exports, which stood at about US$1.9 billion in 1968, increased to about US$2.7 billion in 1970. Furthermore, despite the windfall from higher coffee prices in 1969 and 1970, the share of agricultural products in exports declined from 70 percent in 1968 to about 63 percent in 1970. Export promotion policies, such as the flexible exchange rate and tax subsidies for manufactured exports, and exploitation of rich natural resources, such as iron ore, have led to a significant diversification of exports. Between 1968 and 1970 exports of iron ore and manganese increased from US$130 million to US$240 million. Exports of manufactures increased from US$130 million to US$330 million. Brazil's manufactured exports range from sports cars to special steels. Markets for these products have been found in Europe, the United States and Asia as well as in the Latin American Free Trade Area countries. Although highly significant from the Brazilian point of view, these manufactured exports in no case account for more than one percent of the total manufactured imports of the various regions concerned. Thus, there appears to be ample room for additional expansion.

18. The rapid growth of output and investment has placed heavy demands on Brazil's capacity to pay for imports, particularly as production and investment accelerated further in the latter part of 1970. Imports were about US$1.9 billion in 1968 and US$2.5 billion in 1970. Most of the

increase was in the import of capital goods - a growth of about 50 percent over this period - and raw materials for Brazil's growing industry.

19. External capital requirements, averaging about US$800 million in the last three years, have been financed largely by medium and long-term borrowing which averaged about US$500 million per annum. For the rest, Brazil depended on direct investments and, much more substantially, on short-term credits which have increased significantly in recent years. Brazil has also been able to build up its external reserve and to maintain an adequate margin of liquidity. Net foreign exchange reserves increased from US$0.3 billion at the end of 1968, to about US$1.5 billion at the end of 1970. External debt, including short-term financial credits, was US$3.7 billion at the end of 1968 and about US$5.2 billion at the end of 1970. Including all interest payments and the amortization of medium and long-term debt, the debt service ratio was 21 percent in both years. While the Government's balance of payments management has been skillful there is need for constant attention to the structure of Brazil's external debt and its possible effect on Brazil's future liquidity. At the end of 1970 debts with maturities of up to three years amounted to more than 40 percent of Brazil's external debt. The Government is keenly aware of this and has taken steps to raise new financial credits for longer terms. In the next few years the management of Brazil's external indebtedness and capital flows will be a crucial element in Brazil's economic policies.

20. The Brazilian Government has not found a way to reduce significantly the rate of inflation while preserving its objective of ensuring continuous rapid growth. The annual rate of inflation was reduced to about 20 percent in 1970 from about 25 percent in 1968. The Government feels that a reduction of the rate of production and employment growth which may result from efforts for a more rapid decline in the rate of inflation, would be unacceptable socially and politically. Moreover, to some extent, the Government's efforts to reduce the distortion of prices, such as public utility tariffs, rents, agricultural prices and price of coffee for domestic consumption, have inevitably led to some "cost push." Nevertheless, the Government is committed to continue measures in various fields to minimize the adverse effects of inflation on resource use through flexible prices.

21. The Government is currently preparing a development plan for 1972-74. It is expected to be ready towards the end of this year. Unlike previous plans, this one will be detailed and specific and indicate economic goals, investment priorities and projects and resource mobilization. The Government's primary goal is a continuance of economic growth at around the rate achieved in recent years. Towards this end, it proposes to make large direct investments in infrastructure, such as transportation, power and in education and in primary industries, such as steel. To permit continued rapid growth of private industry and agriculture, the Government proposes to extend liberal credit, often directed to specific inputs such as fertilizers, and to specific areas,

such as the Northeast. To meet the problem of regional disparities, the Government's policy is not only to divert public and private resources for industrial, agricultural and infrastructure development within the Northeast, but also to use large public resources to open up new areas in the Amazon and the western part of Brazil for settlement by unemployed and landless Northeasterners. The construction of the Transamazonica Highway is a step in this direction.

22. The Government has undertaken a series of measures to increase domestic savings to ensure that the investment resources necessary to support rapid growth rates are available. The above mentioned adjustments of public utility tariffs have contributed substantially to the savings capacity of public enterprises in the energy and communications sectors. The current account deficit of the Central Government, which equalled 0.9 percent of GDP in 1967, has been transformed into a surplus equal to 3.3 percent of GDP in 1970, primarily as the result of improved tax performance. To encourage private savings the Government has taken measures to provide adequate returns to private investors channeling their savings into the capital market. Thus, the private savings captured by investment banks, mutual funds, finance companies and savings and loan associations increased by 175 percent in real terms over the 1967-70 period. Efforts to promote domestic savings are likely to continue as investment requirements increase.

23. Brazil's resources are plentiful. The Government's economic management has been efficient. The country has a vigorous private sector and a skilled managerial class. Continuance of growth achieved in the last few years should not, therefore, be beyond reach provided that the Government's efforts to rationalize policies affecting the use of key resources are continued and strengthened. However, a crucial factor in Brazil's ability to achieve its goal would be the extent and the quality of support it receives from external lenders. While the Government is keen on promoting the growth and diversification of exports and the prospects for Brazil's exports are bright, Brazil will continue, for quite some time, to depend heavily on foreign capital to meet its development objectives. The Bank's current estimate is that in the next few years Brazil will need more than US$1 billion annually to finance its current account deficit and to make amortization payments on its medium and long-term debt. Additional medium and long-term borrowing may be needed in order to improve the structure of the external debt, reducing the proportion of short-term debt in the total. External capital requirements may appear large, but relative to the size of the economy and the imaginative and ambitious developmental objectives which Brazil's economic managers have adopted, they are modest. Net capital inflow in 1970 was 10 percent of total investments. Brazil continues to be creditworthy for substantial amounts of Bank lending.

24. Brazil has made considerable progress in the last few years in formulating investment projects suitable for external financing. However, its gross external capital requirements, taking into account heavy charges for service on external debt, cannot be met if external assistance is tied entirely to the foreign exchange component of project

costs. Although the capital investment needed to support Brazil's economic growth targets is substantial, a large part of the capital equipment comprising this investment will be produced in Brazil, generating needs for raw material and intermediate goods imports not directly attributable to externally financed investment projects. Hence, it is appropriate for external lenders to finance some local expenditures in Brazil, especially on projects having a relatively low foreign exchange component.

PART III - PROSPECTS FOR BANK LENDING

25. Bank commitments to Brazil have increased sharply in the last two years. Nevertheless, Bank loans represented no more than 12 percent of total medium and long-term loan commitments in 1969 and 1970. With substantial new Bank lending for Brazil in prospect for the near future, the Bank's share in medium and long-term lending may well increase.

26. The very large investment requirements of the power sector will necessitate continuing financial assistance from international institutions and at least modest support from the Bank. The Bank is, therefore, working on a loan for the installation of generating facilities at Sao Simao on the Paranaiba River and complementary transmission lines. This project was developed within the framework of a very large power development program which has been formulated for South-Central Brazil. I also envisage continued substantial Bank support for the Government's efforts in transportation. A Bank loan is being prepared for the construction of a number of highways to which high priorities were attributed by the Trasnport Survey. Both of the aforementioned loans should be ready for presentation to the Executive Directors during the current fiscal year.

27. The largest component of the Bank's prospective lending to Brazil during that period consists, however, of the proposal to provide financing, jointly with the IDB, for the expansion of Brazil's three principal integrated steel mills. When completed, these projects will increase Brazil's steel production capacity by 3 million tons. The steel projects are designed to exploit Brazil's rich iron ore resources to meet the rapidly increasing demand for steel at economic costs. Another project likely to be ready for Bank financing during the next 12 months is the creation of a capital market fund designed both to improve the structure of the capital market and to channel private savings into industry. We have also for some time been working with the Government to develop additional projects in agriculture and I hope to have ready for consideration by the Executive Directors by mid- or late 1972 a loan for land settlement in the Northeast and one for financing agricultural storage facilities in the principal producing areas. As regards education, the recent Bank loan for technical education includes funds for a study of the education systems and manpower requirements in the two Northeastern states of Ceara and Pernambuco; this study may provide the basis for a future Bank project.

PART IV - THE PROJECTS

28. Brazil has immense deposits of high quality iron ore. Its reserves are estimated at over 30 billion metric tons, or 12 percent of known world reserves, and far exceed the needs of its steel industry. Iron ore has, therefore, become a major Brazilian export, now second only to coffee. The development of new ore deposits will make iron ore mining one of the most dynamic sectors during the 1970s. In 1970, Brazil exported about 28 million tons, valued at US$210 million. Current plans are to raise exports of iron ore to about 70 million tons annually by 1975. The long-term market outlook for iron ore is favorable and future prices are expected to remain relatively stable.

29. Although two separate Bank loans are being presented, one to MBR, a mining company, and another to RFFSA, the federally-owned railway corporation, the projects to be constructed by these enterprises are interrelated and serve a common purpose: to develop the large Aguas Claras iron ore deposit located near Belo Horizonte in the State of Minas Gerais and export the ore. This deposit contains proven and inferred reserves of over 375 million tons of high grade mineable open-pit hematite containing 68 percent iron and very low percentages of phosphorus, sulfur, silica and alumina. Facilities will be provided by MBR to mine and process the ore, and the railway system of RFFSA will be improved to carry the ore 640 km to a new marine terminal to be constructed by MBR at Sepetiba Bay, southwest of Rio de Janeiro. The railway project will be the responsibility of RFFSA and the mining project of MBR. RFFSA and MBR have already created a high-level committee consisting of representatives of the two organizations to coordinate the execution of the two projects. Furthermore, both RFFSA and MBR have agreed to retain a single consulting firm to supervise the construction of both projects.

30. The projects will result initially in the export of 10 million tons of ore annually. It is expected that the facilities provided in the first phase will later be expanded with little additional investment to produce and export 15 million tons or more of ore per year within five years of the start of operations. The Aguas Claras deposit has sufficient proven reserves to produce ore for export at the rate of 15 million tons per year for 17 years. MBR has entered into long-term ore sales agreements to sell annually 7.3 million long tons of Aguas Claras ore to five Japanese steel companies, 1.3 million tons to British Steel Corporation and 700,000 tons to SOMISA in Argentina. Each of these contracts provides for periodic renegotiation of the sales price. These contracts and a further 700,000 tons of expected spot sales will account for the initial planned

production of 10 million tons a year. MBR has been able to negotiate favorable contract terms, due primarily to the quality of its ore, which gives it a competitive advantage over most iron ore sources elsewhere in the world.

The MBR Project

31. A report, "Appraisal of the MBR Iron Ore Project" (PI-10) dated June 16, 1971 is being distributed separately. A summary of it is in Annex III.

32. Companhia Auxiliar de Empresas de Mineracao - CAEMI, a Brazilian holding company, and St. John D'el Rey, a British holding company 52 percent owned by the Hanna Mining Company of the United States, propose to consolidate their iron ore properties in MBR in accordance with a reorganization agreement which must be approved by the Government and which the MBR Loan Agreement makes a condition of effectiveness. Through holding companies and subsidiaries, MBR will be owned effectively about 31 percent by CAEMI, 25 percent by Hanna, 10 percent by several Japanese steel and trading companies, 10 percent by a Liberian subsidiary of a U. S. shipping company, National Bulk Carriers, and 24 percent by minority shareholders in St. John. MBR and its subsidiaries, following the consolidation, will possess mining rights over an area of 45 km^2 in the vicinity of Belo Horizonte containing 36 deposits of iron ore with reserves estimated at over 1.6 billion tons. Aguas Claras, the mine being developed, is the largest of these deposits. Planning for the project reflects the sponsors' extensive experience with iron ore mining in Brazil, Canada and the United States.

MBR Financing and Use of Proceeds

33. The cost of the project is equivalent to US$142.6 million to which has to be added US$12.6 million for financial charges on long-term debt during construction to give total financing requirements of US$155.2 million, of which US$86.4 million would be foreign and US$68.8 million local. This financing would come from the following sources:

Sponsors' New Equity		30.0
Long-Term Debt		
IBRD	50.0	
Japanese Trading Companies	50.0	
Japanese Suppliers' Credits (to be negotiated)	7.0 a/	
U.S. Eximbank and Commercial Banks	26.3 a/	133.3
Total Financing available to cover expenditure estimated at US$155.2 million		163.3

a/ The utilization of Japanese suppliers' credit and the U.S.Eximbank and commercial bank loans will not be known until contract awards have been made. Unused portions of these loans will remain available as additional contingency financing.

34. The proposed Bank loan to MBR of US$50 million would be for 15 years, including a grace period of about 3-1/2 years. The Government of Brazil would charge MBR a 2 percent per annum guarantee fee on the outstanding disbursed amount of the Bank loan, thereby bringing the cost of the Bank loan to MBR to 9-1/4 percent.

35. Since MBR has contracted to start shipping iron ore from its terminal in 1973, some orders for equipment are presently being placed and contracts are being awarded for some civil works, all in accordance with Bank guidelines. It is, therefore, proposed that the Bank loan cover expenditures from June 1, 1971; it is estimated that this would result in retroactive financing of about US$1 million.

36. All contracts in respect of items financed by the Bank will be subject to international competitive bidding. Brazilian manufacturers of equipment and materials will be given a 15 percent margin of preference. The proposed loan would provide some local expenditure financing, estimated not to exceed US$7 million.

37. The proposed Bank loan of US$50 million and the US$50 million loan being provided by Japanese banks and trading companies at an effective interest rate of about 9.6 percent and with a 15-year term, will be secured by a first mortgage on MBR's properties and other assets. MBR has agreed that US$0.60 per ton shall be withheld from payment for the first 84 million tons of ore shipped on the Japanese ore contracts in order to service the Japanese loan. This arrangement may result in full repayment in about 12-1/2 years after project completion. The proceeds of the Japanese loan may be spent anywhere including Brazil; the Japanese suppliers' credits would be used for purchases of equipment from Japan. Of the US$26.3 million commitment from the Eximbank and U.S. commercial banks, which has an effective interest rate of about 7.5 percent and a term of 12-1/2 years, US$22.5 million is available for purchase of U.S. goods, and US$3.8 million for local expenditures.

MBR-Overrun Undertaking; Financial Projections

38. Although it is considered that the project cost estimates include adequate allowances for price escalation and contingencies, and although the financing presently available or under negotiation would provide up to US$8 million over and above the cost estimates, CAEMI and St. John have severally agreed in the Shareholders' Agreement to provide up to US$20 million to finance cost overruns and working capital deficiencies until the Project is operational. The proportionate responsibilities of the primary sponsors are: CAEMI 51 percent and St. John 49 percent. CAEMI's obligation is secured by an agreement not to sell or pledge, so long as the Shareholders' Agreement is in effect, any of its share in

Industria e Comercio de Minerios, S.A. - ICOMI, CAEMI's major subsidiary and principal source of income. In the Security Agreement, Hanna Mining Company has agreed to provide US$7.5 million to meet St. John's obligation under the Shareholders' Agreement in case the latter is unable to do so. As further security, St. John has agreed to a pledge of its MBR shares in favor of the Bank.

39. Projections of MBR's financial statements for the Aguas Claras operation, assuming sales of 10 million tons per annum, indicate an internal financial rate of return, after taxes, of about 19 percent. They also show long-term debt service coverage after capacity is reached, ranging from 1.8 to 2.5 times. The MBR Loan Agreement contains provisions to protect MBR's liquidity through restrictions on dividends, borrowings, and non-project investments. The Bank, the Eximbank and the Japanese lenders would be protected proportionately by a provision that if MBR pays out dividends in excess of US$7.5 million in any year, MBR will apply an equivalent amount to repayment of their loans. However, to the extent that dividend payments by MBR are less than an aggregate of US$15 million in any two successive years, in the third year MBR would be able to pay dividends in the amount of US$7.5 million and in addition the above mentioned difference between US$15 million and actual dividends paid, without having to prepay long-term debt. In the case of the Bank loan this could mean pre-payments starting in or after 1979 leading to full repayment two or three years ahead of the scheduled final maturity date.

Ecology

40. The findings of a special ecological mission sent by the Bank to the project sites were discussed with the project sponsors and agreement was reached during negotiations that the execution and operation of the project would be carried out with due regard to ecological and environmental factors. The iron ore terminal proposed to be built by MBR at Sepetiba Bay is in the vicinity of beaches used for recreation and waters used for fishing. During loan negotiations MBR has agreed to take measures acceptable to the Government and the Bank to deal with oil and other slops from incoming ships, as well as accidental oil spills. Furthermore, MBR has agreed to consult with the Bank before any decision is made to establish a pelletizing plant at the terminal.

The RFFSA Project

41. A report, "RFFSA - Appraisal of the First Railway Project" (PTR-77a) dated June 14, 1971 is being distributed separately. A summary of it is included in Annex III.

42. RFFSA was created in 1957 as a publicly-owned corporation grouping 13 railways which formerly had been publicly-owned but under separate managements. The States and Municipalities hold preference shares representing 23 percent of total capital, while the Federal Government holds the controlling interest. Management is undertaken by a board of six

members, chaired by the President. In 1968, RFFSA's organization was re-shaped to provide for four regional systems. Economies in administration are being sought by concentrating responsibility in regional headquarters for financial and personnel matters and statistics. Government control of RFFSA is exercised in respect of capital expenditures, overall budget and tariffs.

43. In 1965 the Government undertook with Bank assistance a Transport Survey, including the railways. The Survey pointed to the need for major institutional, financial and managerial reforms in RFFSA, in addition to substantial new investments. In 1968 and 1970 the Government formulated so-called Plans of Action to implement in RFFSA and other transport entities the major recommendation of the Transport Survey. Progress in the reform of RFFSA has been satisfactory. The operating deficit of RFFSA, which was US$200 million in 1964, was reduced to US$100 million in 1970. In this perid some 6,000 km of uneconomic lines were closed and the labor force reduced by 25,000 persons. RFFSA is currently preparing a 5-year corporate plan which would cover investments and a detailed program for the improvement of management, operations and finances in order to eliminate its operating deficits by the middle of the decade. This plan may provide a basis for Bank financing of further railway investments.

44. To provide transport of iron ore for the MBR mining project between the Aguas Claras mine and the Sepetiba Bay terminal, RFFSA will acquire 78 locomotives and 1230 ore cars. RFFSA will also construct a new rail connection to the mine and a bypass line to avoid dense traffic in the Rio de Janeiro area. The existing main line will be improved by track works, resignalling and bridge and tunnel works. The iron ore traffic is expected to make a significant contribution to RFFSA's revenues: transportation of 12 million tons per annum 1/ over the 15-year period ending in 1988 is expected to result in net cash generation to RFFSA of US$117 million after meeting debt service.

RFFSA Financing and Use of Proceeds

45. The cost of the project is equivalent to US$128.9 million to which has to be added interest on external loans during construction of US$4.3 million to give total financing requirements of US$133.2 million. This financing would come from the following sources:

IBRD	46.0
Suppliers Credits	26.7
Brazilian Government	60.5
Total Financing	133.2

1/ Whereas the MBR projections have covered a build-up from 10 to 15 million tons annually, projections for RFFSA are based on the present projects which covers a build-up to 12 million tons only, beyond which further investment in equipment would be necessary.

46. The proposed US$46 million Bank loan would finance 100 percent of the cost of freight cars, rails, workshop and track equipment and the foreign exchange cost of consultant services, thereby covering about 35 percent of the costs of the project. It would have a maturity of 18 years, including a grace period of four years. A longer grace period for the RFFSA loan than for the MBR loan is being recommended because some improvements of the main railway line to be financed from the proposed loan would continue until the end of 1974, and disbursements are likely to continue into 1975. Shipments of iron ore would begin, however, in 1973. The longer term of the proposed loan to RFFSA is based on the economic life of assets financed under the loan and the projected cash flow of RFFSA. All Bank financed items, other than consultants services, would be purchased under international competitive bidding, in which Brazilian suppliers would participate with a 15 percent margin of preference. Insofar as some orders for equipment are placed with Brazilian suppliers, a part of the loan, estimated not to exceed US$23 million, would finance local expenditures. The proposed loan would also include retroactive financing of US$100,000 for consulting services incurred since June 1, 1970 in connection with project preparation.

47. Suppliers credits will be used to finance about 80 diesel locomotives in the United States. The Brazilian Government's contribution, about 45 percent of total project cost, will be provided as a capital grant, and will be used for civil works and other expenditures.

RFFSA-MBR: Iron Ore Transport Contract

48. RFFSA has signed a 15-year contract with MBR for the transport from the Aguas Claras mine to MBR's Sepetiba Bay terminal of a minimum of 9 million tons of ore per year, with provision for higher tonnages if necessary. The contract initially negotiated between RFFSA and MBR provided for a fixed tariff (depending on tonnage transported) in dollars for the life of the contract, and thus provided no protection against price increases in the United States. MBR and RFFSA have now agreed to modify the contract, providing for an annual adjustment of RFFSA's tariff beginning in 1974 on the basis of increases in the U. S. Wholesale Price Index since 1970. To protect MBR against an open ended commitment to tariff adjustments, RFFSA's tariff would not exceed specified percentages (depending upon tonnages shipped) of iron ore prices obtained by MBR. The escalation formula agreed upon by MBR and RFFSA would provide reasonable protection to RFFSA against cost increases while protecting MBR in case of a substantial lag of world iron ore prices behind prices in the United States.

49. The iron ore transport contract includes a broad force majeure provision, but MBR has agreed that it will not in any lawsuit, arbitration, or other proceeding take the position that the force majeure clause extends to any commercial risks of MBR, such as a decline in demand or in the price of iron ore, or any increase in the cost of production thereof.

50. With the above mentioned adjustment of tariffs and assuming iron ore shipment of 10 million tons per annum, RFFSA's internal financial rate of return on its investment in this project should be some 8 to 9 percent. Since about 45 percent of RFFSA's financing will be from the Brazilian Government grant, the return on the new investment should be more than adequate to cover service on the Bank loan and suppliers credits.

Benefits to Brazil

51. MBR and RFFSA together propose to invest close to US$290 million in these projects. The economic return on this investment, making the conservative assumption that exports will not exceed 10 million tons of iron ore per year, is expected to be of the order of 18 percent. Net foreign exchange earnings for Brazil, after allowing for debt service, overseas dividend payments and the foreign exchange component of operating costs of MBR and RFFSA, will average about US$50 million per annum. About 84 percent of net financial benefits will accrue to Brazil, 73 percent to the Brazilian Government through various taxes and the guarantee fee and 11 percent to Brazilian shareholders. Total direct revenues accruing to the Brazilian Government over the assumed 15-year period with only 10 million tons per year exported are projected to be US$215 million. Net cash generation from MBR ore traffic would reduce the annual operating deficit of RFFSA, currently estimated at about US$100 million, by an average of about US$10 million per annum during this period. Total revenues accruing to the Government and RFFSA taken together over 15 years are thus estimated at US$339 million. With a 50 percent increase in ore sales to 15 million tons annually, total revenues accruing to the Government and RFFSA from the MBR-RFFSA projects would come to about US$585 million. A notable feature of these projects is that the share of total benefits received by the Government is substantially higher than that received by the host country in other mining projects financed by the Bank.

PART V - LEGAL INSTRUMENTS AND AUTHORITY

52. The draft Loan Agreements between the Bank and Mineracoes Brasileiras Reunidas, S.A. and Rede Ferroviaria Federal, S.A.; the draft Guarantee Agreements between the Federative Republic of Brazil and the Bank for both loans; the Shareholders Agreement between the Bank and Mineracoes Brasileiras Reunidas, S.A., and Companhia Auxiliar de Empresas de Mineracao - CAEMI and St. John D'el Rey Mining Company, Ltd.; the Security Agreement between the Bank and Mineracoes Brasileiras Reunidas, S.A., and St. John D'el Rey Mining Company, Ltd., and Hanna Mining Company; and the Reports of the Committee provided for in Article III, Section 4 (iii), of the Article of Agreement and draft Resolutions approving the proposed loans, are being distributed to the Executive Directors separately.

53. Most of the major features of these agreements have already been described in this report. In addition, the Loan Agreement with MBR contains debt limitation and dividend and investment restriction covenants which are usual for this type of transaction. As already mentioned the Bank's loan and the Japanese loans will be secured by a first mortgage on all of MBR's properties and assets. A Lender's Agreement between the Bank and the Japanese Group will provide for consultation before either party acts to enforce the mortgage.

54. I am satisfied that the proposed loans will comply with the Articles of Agreement of the Bank.

PART VI - RECOMMENDATION

55. I recommend that the Executive Directors approve the proposed loans.

Robert S. McNamara
President

Attachments.

Washington D. C.
July 21, 1971

SUMMARY STATEMENT OF LOANS AND CREDITS
As of June 30, 1971

Loan No.	Year	Borrower	Purpose	Amount Less Cancellations (US$ million)	Undisbursed (US$ million)
		Loans fully disbursed		288.9	
403	1965	Central Eletrica de Furnas - Estreito I	Power	57.0	3.5
404	1965	Centrais Eletricas de Sao Paulo - Xavantes	Power	22.5	8.3
442	1966	Centrais Eletricas de Minas Gerais - Jaguara	Power	49.0	16.9
474	1966	Central Eletrica de Furnas - Estreito II	Power	39.0	35.5
475	1966	Cia. Brasileira de Energia Eletrica	Power	6.2	3.2
476	1966	Cia. Forca e Luz do Parana	Power	8.1	3.3
477	1966	Cia. Paulista de Forca e Luz	Power	41.0	14.9
478	1966	Cia. Forca e Luz de Minas Gerais	Power	6.3	2.7
516	1967	Brazil	Livestock	40.0	34.5
565	1968	Central Eletrica de Furnas - Porto Colombia	Power	22.3	20.0
566	1968	Central Eletrica de Minas Gerais - Volta Grande	Power	26.6	23.6
567	1968	Brazil	Roads	26.0	13.1
656	1970	Banco do Nordeste do Brasil	Industry	25.0	23.9
676	1970	Brazil	Roads	100.0	95.2

Loan No.	Year	Borrower	Purpose	Amount less Cancellations (US$ million)	Undisbursed (US$ million)
677	1970	Central Eletrica de Furnas - Marimbondo	Power	80.0	79.1
728	1971	Centrais Eletricas do Sul do Brasil	Power	70.0	
755	1971	Brazil	Education	8.4 1/	1/
756	1971	Brazil	Ports	45.0 1/	1/
757	1971	Superintendencia de Agua e Esgotos da Capital	Water Supply	22.0 1/	1/
758	1971	Companhia Metropolitana de Saneamento de Sao Paulo	Pollution Control	15.0 1/	1/
		Total (less cancellations)		998.3	
		of which has been repaid to Bank and others:		168.9	
		Total now outstanding		829.4	
		Amount sold 10.3; of which has been repaid 8.2		2.1	
		Total now held by Bank		827.3	
		Total undisbursed			377.7

1/ Signed but not yet effective.

No IDA credits have been made to Brazil. As of June 30, 1971 IFC has made commitments to companies in Brazil for a total of US$61.8 million and presently holds US$42.3 million for its own account.

SUMMARY STATEMENT OF IFC INVESTMENTS

As of June 30, 1971

Year	Borrower	Purpose	Amount less Cancellations (US$ thousand)	Undisbursed
	Completed Investments		5,607	
1958	D.L.R. Plasticos do Brasil S.A.	Automotive parts	450	
1959	Champion Celulose, S.A.	Pulp	4,000	
1966 1968	Acos Villares, S.A.	Steel	4,959	
1966 1969	Papel e Celulose Catarinense S.A.	Pulp and Paper	7,117	
1967	Ultrafertil, S.A.	Fertilizer	10,657	
1969	Petroquimica Uniao, S.A.	Petro-chemicals	8,380	1,542
1970	Poliolefinas, S.A.	Petro-chemicals	8,377	3,077
1971	Oxiteno, S.A.	Petro-chemicals	6,040	6,040
1971	Industrial de Celulose Borregaard, S.A.	Pulp	4,900	4,900
	Total (less cancellations)		60,487	
	Repaid to IFC		4,770	
	Total now outstanding		55,717	
	Of which Amount sold to others		13,393	
	Held by IFC Loans 30,618 Equity 11,706		42,324	
	Total undisbursed			15,559

BRAZIL - COUNTRY DATA

Area: 8,512,000 km^2, 3,286,000 sq mi

Population: Estimate, mid-1970: 92.3 million

Social Indicators:

Population Growth Rate, % 1960-70	2.6
Urban Population Growth Rate, % 1960-70	4.3 1/
Birth Rate, per 1,000 (1970)	39.0
Urban Unemployment Rate, %	Not available

Gross Domestic Product:

GDP at market prices 1970	Cr$167.9 billion
Approximate US$ equivalent	US$ 36.5 billion
Real Growth in 1970	9.5 percent
Average Real Growth, 1965-70	7.3 percent
Per Capital GDP in 1970	US$396

Percentage Contribution to GDP	1960	1970
Agriculture	23.4	20.2
Industry	32.1	34.7
Services	44.5	45.1

Saving and Investment:

	1968	1969	1970
Gross Fixed Domestic Investment as Percentage of GDP	17.0	17.1	18.0

Percentage Composition of Investment and Savings in 1968

Gross Fixed Domestic Investment		95.9
Construction	39.1	
Capital Equipment	56.8	
Inventory Change		4.1
Gross Domestic Investment		100.0
Private Sector Savings		72.7
Government Savings		18.1
Current Account Deficit		9.2

Central Government Finances:
(Millions of Cruzeiros)

	1968	1969	1970
Revenues	8,930	12,802	17,661
Total	(10,390)	(13,953)	(19,194)
Minus: Revenue Sharing	(1,460)	(1,151)	(1,533)
Current Expenditures	6,628	8,956	11,629
Current Account Surplus	2,302	3,846	6,032
Investment Outlays	3,465	4,602	6,770
Overall Cash Deficit	1,163	756	738

1/ State capitals only.

Money Supply	End 1968	End 1969	End 1970
Millions of Cruzeiros	20,230	26,691	34,318

Prices	1967	1968	1969	1970
General Price Index (Annual Averages)	128	159	192	230
Guanabara Cost of Living Index (Annual Averages)	130	159	194	238

Exchange Rate	End 1968	End 1969	End 1970
Principal Exchange Rate, Selling (Cruzeiros per U.S.Dollar)	3.830	4.350	4.950

Balance of Payments 1968-70 (Millions of U.S.Dollars)	1968	1969	1970
FOB Merchandise Exports	1,881	2,311	2,739
(of which coffee)	(797)	(846)	(982)
FOB Merchandise Imports	-1,855	-1,993	-2,526
Net Services	-328	-369	-494
Factor Payments to Foreigners	-228	-261	-351
Net Transfers	22	31	10
Current Account Balance	-508	-281	-622
Foreign Direct Investment	61	124	85
Import Financing	106	182	278
Financial Credits	412	591	653
Errors and Omissions	-104	5	164
Change in Central Bank Reserves	-33	621	518
Change in Commercial Bank Reserves	24	-36	-11

External Public Debt (Millions of U.S. Dollars)	End 1969 IBRD	End 1969 Total	End 1970 IBRD	End 1970 Total
Disbursed	198.8	4406.9	258.2	5203.6
Import Financing	198.8	2802.2	258.2	2945.9
Financial Credits	-	1604.7	-	2257.7
Undisbursed	284.0	2010.0	415.7	2473.2
Import Financing	284.0	2010.0	415.7	2473.2
Financial Credits	-	-	-	-
TOTAL	482.8	6416.9	673.9	7676.8

	1969	1970
Debt Service Ratio (excl. rollover of financial credits)	18.8	21.3

	End 1968	End 1969	End 1970
Net External Reserves of the Central Bank (Millions of U. S. Dollars) 1/	342	955	1,473

IMF Position at End of 1970	
Quota	US$440 million
Net Drawings	US$ 25 million
Fund Holdings of Cruzeiros	Cr$1,484
Fund Holdings of Cruzeiros as percentage of Quota	73 percent
Rate of Exchange as of May 20, 1971	Cr$5.19/US$1.00

1/ Excludes all external debts of the monetary authorities of more than one year term.

LOAN AND PROJECT DATA SHEET

I. LOAN SUMMARY

	MBR Project	Railway Project
Borrower:	Mineracoes Brasileiras Reunidas, S.A.	Rede Ferroviaria Federal, S.A.
Guarantor:	Federative Republic of Brazil.	Federative Republic of Brazil.
Amount:	US$50 million equivalent; 32 percent of total cost of MBR Iron Ore Project.	US$46 million equivalent; 35 percent of total cost of RFFSA Project.
Terms and Conditions:	Payable in 15 years with 3½ year grace period and 7¼ percent interest. Guarantee fee - 2% per annum.	Payable in 18 years with 4-year grace period and 7¼ percent interest.
Disbursement:	1971/2 US$12 million 1972/3 US$28 million 1973/4 US$10 million	1971/2 US$ 3.0 million 1972/3 US$10.6 million 1973/4 US$19.1 million 1974/5 US$13.3 million

II. PROJECT DATA

Brief Description: Exploitation of iron ore deposit near Belo Horizonte by construction of facilities for open pit mining, of an ore preparation plant and installation of loading equipment at the mine. Improvement of way and structure and purchase and operation of rolling stock of RFFSA to transport ore 640 kms from the mine to a terminal to be constructed at Sepetiba Bay by MBR. The terminal facilities will include machinery for mechanical loading of vessels of 250,000 DWT and the dredging of a channel in Sepetiba Bay.

MBR PROJECT

MBR Estimated Cost	US$ million Foreign Expenditure	Local Expenditure	Total
Mine and Preparation Plant	22.4	21.4	43.8
Ocean Terminal	27.3	15.0	42.3
Engineering and Project Management	6.4	8.5	14.9
Administration during Construction, Design and Engineering, Working Capital	6.1	10.6	16.7
Contingencies	11.6	13.3	24.9
Total Cost	73.8	68.8	142.6
Interest during construction	12.6	-	12.6
Total Financing Required	86.4	68.8	155.2

MBR Financing Sources

Long-Term Debt	(US$ millions)
IBRD	50.0
Japanese Trading Companies	50.0
Japanese Suppliers' Credits (to be negotiated)	7.0 a/
U.S. Eximbank and Commercial Banks	26.3 a/
Total	133.3
New Equity	30.0
Total Financing Available	163.3

a/ Unused portions of these loans will be available as contingency financing.

Expenditure to be Financed by Bank Loan			US$ millions
a)	Equipment	100 percent of specified equipment submitted to international competitive bidding.	25.4
b)	Construction Materials	100 percent of specified construction materials purchased under international competitive bidding.	4.0
c)	Civil Works	54 percent of civil works expenditures submitted to international competitive bidding, this fraction representing their estimated average foreign exchange component.	12.6
d)	Unallocated	US$5 million to finance equipment materials or civil works as in a), b) and c) above.	5.0
e)	Interest during Construction on Bank Loan	US$3 million	3.0
		TOTAL	50.0

RAILWAY PROJECT

RFFSA Estimated Cost	US$ millions Foreign Expenditure	Local Expenditure	Total
Civil Works	5.0	24.8	29.8
Equipment	70.8	9.2	80.0
Engineering and Supervision	0.5	4.9	5.4
Contingencies	7.6	6.1	13.7
Total Cost	83.9	45.0	128.9
Interest during Construction	4.3	-	4.3
Total Financing Required	88.2	45.0	133.2

RFFSA Financing Sources	(US$ millions)
IBRD	46.0
Bilateral Lenders	26.7
Brazilian Government	60.5
Total	133.2

Procurement

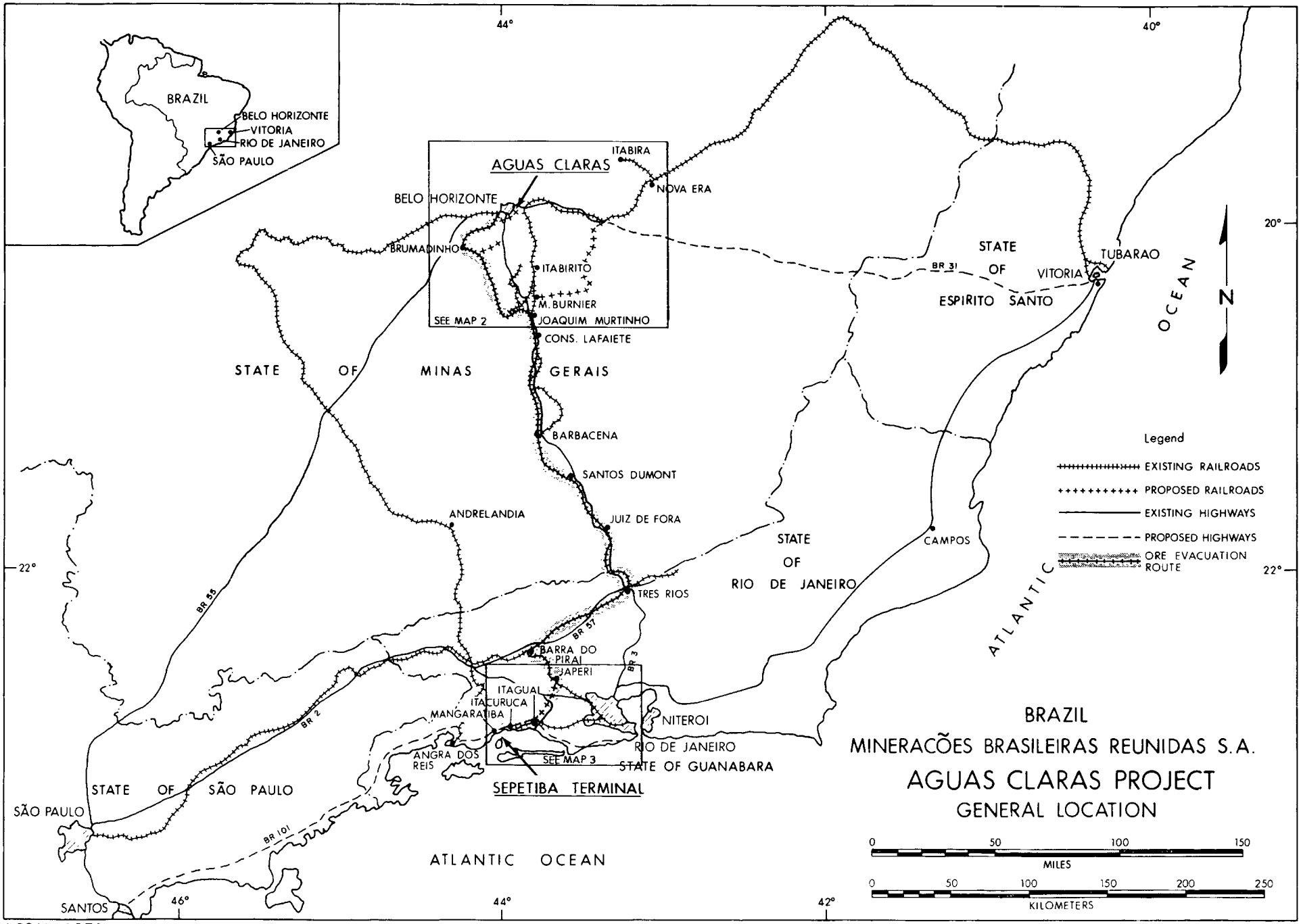
MBR: As shown above.

RFFSA: US$46 million will be used to purchase equipment (excluding locomotives) under international competitive bidding. Retroactive financing: (US$100,000) for consulting services.

Under both loans Brazilian manufacturers of equipment and materials will be given a 15 percent margin of preference which may result in some local expenditure financing; perhaps US$7 million in the case of MBR; perhaps US$23 million in the case of RFFSA.

	10 MM tons/yr.	15 MM tons/yr.
Combined Internal Economic Rate of Return	18.3%	22.8%
MBR Internal Financial Rate of Return	18.8%	24.5%
RFFSA Internal Financial Rate of Return	11.1%	11.8%

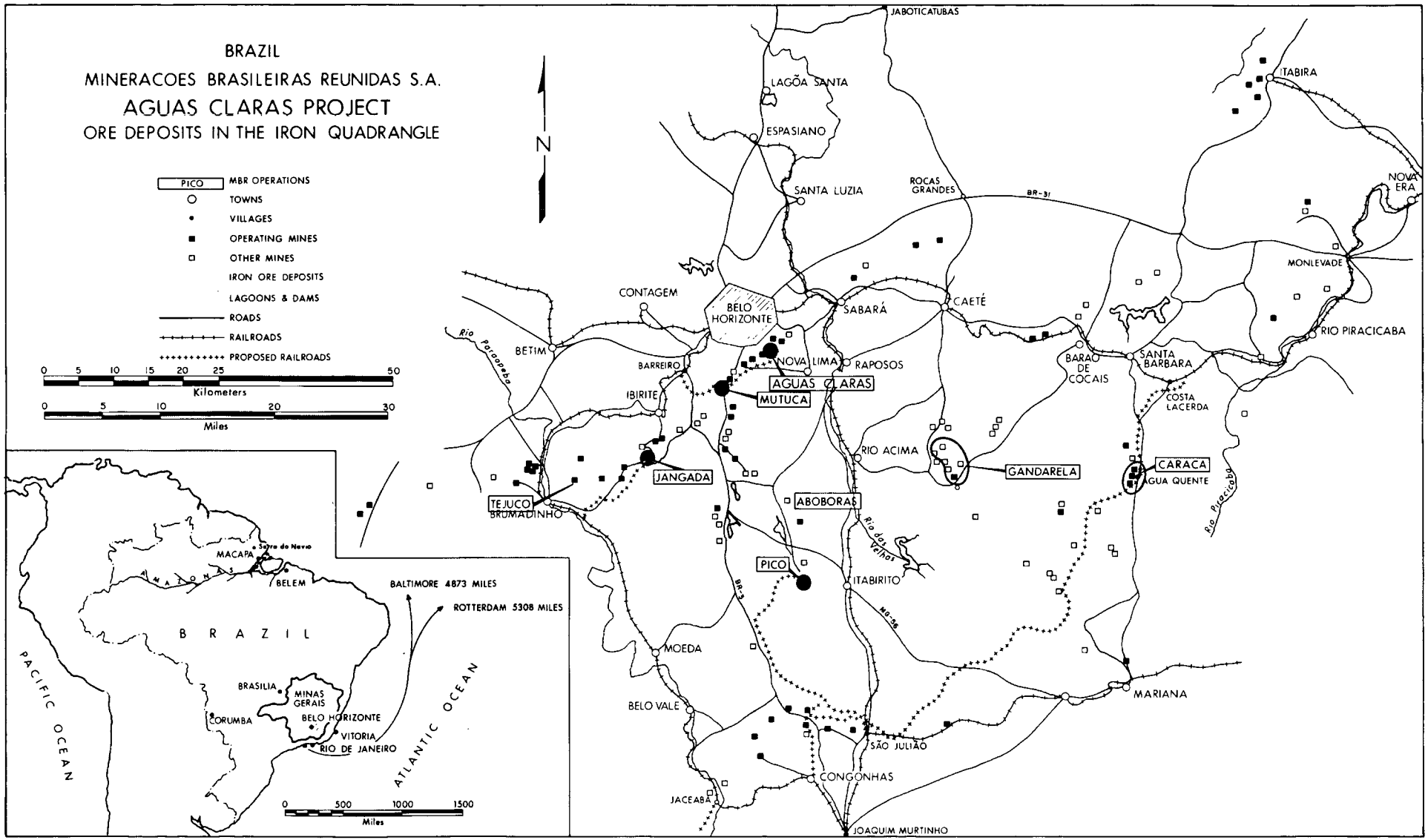
Estimated Projects Completion Date: October 1973



APRIL 1971

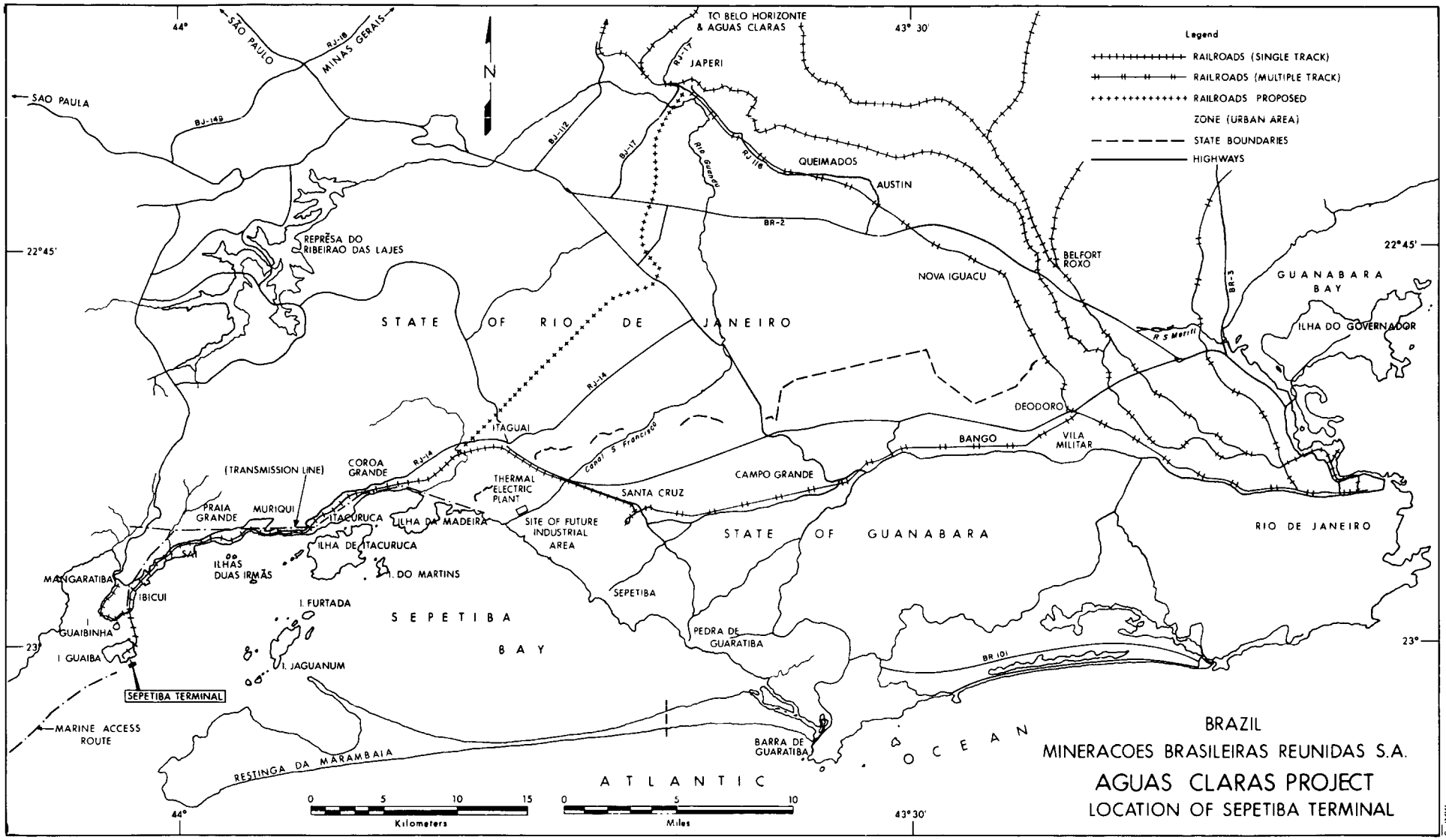
IBRD 3295R

MAP 1



APRIL 1971

IBRD 3296R



APRIL 1971

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