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Report No. 13973

PROJECT COMPLETION REPORT

ZAIRE

SECOND GECAMINES TECHNICAL ASSISTANCE PROJECT
(CREDIT 2051-ZR)

FEBRUARY 15, 1995

Industry and Energy Operations Division
South Central and Indian Ocean Department
Africa Region

MEASUREMENT

One metric ton = 2205 pounds

ABBREVIATIONS AND ACRONYMS

CA	-	Credit Agreement
EIB	-	European Investment Bank
Gécamines	-	Générale des Carrières et des Mines (state-owned copper co.)
KfW	-	German Development Agency
PA	-	Project Agreement
PCR	-	Project Completion Report
SAR	-	Staff Appraisal Report
SNCZ	-	Société Nationale des Chemins de Fer Zairois (Railways company)
Sysmin	-	Mining Systems Unit, European Community
TA	-	Technical Assistance
tpa	-	tons per annum

FISCAL YEAR

January 1 - December 31

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THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

February 15, 1995

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: **Project Completion Report on Zaire - Second Gécamines Technical Assistance Project (Credit 2051-ZR)**

Attached is the Project Completion Report on Zaire - Second Gécamines Technical Assistance Project prepared by the Africa Regional Office, with Part II prepared by the Borrower.

Coming three years after the Rehabilitation Project (Loan 2682-ZR), this project was designed to assist Gécamines in reducing costs, improving operating efficiency, accelerating the rehabilitation program and preparing the next stage of rehabilitation through the preparation of a five year investment program aimed at increasing productivity. But with the onset of a serious macroeconomic crisis and the civil strife in 1990/91, the implementation of this project was virtually abandoned as the company's performance deteriorated rapidly (e.g. production of copper dropped to 43 thousand tons in 1993 from 424 thousand tons in 1989). By the time this credit was eventually closed in February 1994, only 11.5% of its amount had been disbursed.

The PCR traces the dismal outcome of this project to substantially the same factors discussed in the previous PCR for the Rehabilitation Project (Report No. 12106). While it is plausible, as stated in the PCR, that: "Eventually, the Bank could not shield the company from its institutional environment, and a Technical Assistance operation aimed at improving management practices supporting international competitiveness, however well designed, has a limited chance to succeed if the enterprise involved is severely constrained in its business decisions and is saddled with excessive fiscal, infrastructure, procurement and social costs", it is also clear that Gécamines lacked an efficient and dynamic management. Although this fact was recognized in the PCR for the Expansion Project (Report 5460), the Bank appears to have pursued a belief that, through its involvement with Gécamines, it could protect the company against predatory rent extraction and other disruptive interferences by the Government. This was unrealistic and proved very costly both for the Bank and Gécamines.

The project outcome is rated as highly unsatisfactory and its sustainability is rated as unlikely. Institutional development impact is rated as negligible.

The PCR is of satisfactory quality. No audit is planned.

Attachment

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PROJECT COMPLETION REPORT

ZAIRE

SECOND GECAMINES TECHNICAL ASSISTANCE PROJECT (CREDIT 2051-ZR)

TABLE OF CONTENTS

PROJECT COMPLETION REPORT

ZAIRE

SECOND GECAMINES TECHNICAL ASSISTANCE PROJECT (CREDIT 2051-ZR)

PREFACE

This is the Project Completion Report (PCR) for the *Second Gécamines Technical Assistance Project*, for which Credit 2051-ZR in the sum of $20[1] million was approved on June 27, 1989. The Industry and Energy Division of the South Central and Indian Ocean Department prepared Parts I and III of this report based, *inter alia*, on the following sources: President's Report and Recommendation to the Executive Directors; Credit and Project Agreements; supervision and back-to-office reports; audit reports; correspondence between the Bank and the Borrower; internal Bank memoranda; Project Completion Reports for the Gécamines Expansion Loan (Ln. 1090-ZR), the Gécamines Technical Assistance Credit (Cr. 1336-ZR), the Structural Adjustment Credit (Cr. 1831-ZR), and the Gécamines Rehabilitation Loan (Ln. 2682-ZR); and discussions with staff involved in the project.

Given the extensive discussion of the situation at Gécamines, the state mining company, and in Zaire in the recent PCR for the Rehabilitation Project (Report No. 12106, dated June 29, 1993), as well as the fact that only 11.5 percent of the Credit had been disbursed before cancellation ($2.3 million), a brief Project Completion Report in the form of an evaluation summary was prepared for this TA Credit. Part II of the report was prepared by Gécamines.

[1]Throughout this report, $ refers to United States dollars.

PROJECT COMPLETION REPORT

ZAIRE

SECOND GECAMINES TECHNICAL ASSISTANCE PROJECT (CREDIT 2051-ZR)

EVALUATION SUMMARY

Project Objectives and Design

1. Copper and cobalt mining has been the cornerstone of Zaire's economy. Gécamines, the national copper and cobalt mining company, has been a core element of the Bank's assistance to Zaire because of its strategic importance for the country. In an effort to improve the company's competitive position, Gécamines has received since the mid 1970s two Bank Loans and the proceeds of two IDA Credits totaling $237 million. The Second Gécamines Technical Assistance Project described in this report was the fourth of these operations. In keeping with Gécamines' strategy at the time of project appraisal (namely, halt the decline in output, improve its cost-competitiveness, and diversify into higher value-added products) the objectives of the second Technical Assistance project were to (i) reduce costs and increase operating efficiency; and (ii) accelerate the ongoing rehabilitation program, while preparing its next stage. In line with its objectives, the project had six major components: (a) restructuring and improving Gécamines' purchasing and materials management; (b) improving maintenance; (c) improving Gécamines' personnel and training functions; (d) continuing assistance to the finance department; (e) strengthening the information technology group; and (f) carrying out strategic studies. Total project cost was estimated at $30 million with a foreign exchange component of $25 million. Gécamines was to finance $10 million (Paras. 8 and 11).

Implementation Experience

2. The Credit became effective in March 1990 in a period characterized by fast economic decline and political turmoil. Given the rapid deterioration of Gécamines' situation during this period, only the restructuring of purchasing and materials management component was actually implemented and for a short time only. In June 1990, Gécamines started implementing the recommendations of a report (prepared by the consulting firm McKinsey and Company, Inc.) on the company's procurement and operating procedures, and during the following twelve months achieved encouraging results. However, Gécamines' initial progress in improving procurement, inventory, and materials management was reversed during 1991, with the resumption of high-cost procurement practices, large-scale illicit exports of cobalt, and ineffective internal controls. The implementation of the technical assistance for the personnel and training functions component had a good start, but it was too short to be sustainable. Gécamines' training facilities were destroyed during riots in 1991 and, as a result, the implementation of the training component was disrupted. Only $40,000 of the $2.7 million allocated for training were disbursed (Paras. 12 and 13).

3. Despite the early positive results in the area of procurement and materials management, the project had a minimal impact on Gécamines' overall situation. In fact, the company's cash operating expenses continued to increase, from $1,075 million in 1989 to $1,166 in 1990, as the management was not able to reduce overhead and fixed costs, including the wage bill. During the same period, copper output declined from 425,000 to 339,000 tons. As a result, from $191 million in pre-tax profits in 1989 (92 percent of which were extracted by the Government as income tax) the company acquired losses of $125 million in 1990. Even though the wage bill

began to shrink after 1990 (following staff cutbacks and the depreciation of the Zairian currency), as output continued to decline, revenues fell even faster. As a result, total losses increased to $248 million in 1993 (Para. 15).

4. The context of the project was changed substantially when Zaire discontinued its structural adjustment program in April 1990, one month after Credit effectiveness. At that time the World Bank adopted a "core program" strategy taking into consideration the lack of government commitment to reform. The goal was to maintain key institutional relationships, limit the deterioration of key physical infrastructure, minimize to the extent possible the impact of ill-advised economic policies in the social sectors, and preserve the country's long-term development potential. The Second Gécamines TA project became an important component of the core program. From that time, the focus of Bank supervision shifted from a close follow-up of project implementation to the goal of saving the company. Specifically, the Bank tried to reduce the diversion of funds out of Gécamines, maintain a dialogue on strategic issues (including privatization and crisis management), and protect key productive assets. Between 1989 and 1991, the Bank repeatedly urged Gécamines' management and the Government to take a series of emergency measures to prevent a collapse (Paras. 22 and 23).

5. During a co-financiers meeting in October 1991, the Bank delegation offered Gécamines to use the TA Credit for legal and other technical assistance to examine the implications of a suspension of payments, reform the legal framework to allow the privatization of the company in the context of a modern mining code, and accelerate the search for private partners. The Bank's proposals did not elicit a positive response until December 1992. As the company's financial situation became increasingly desperate, Gécamines, following a Bank supervision mission, indicated interest in a crash program to restructure and privatize the company. Gécamines solicited offers from consultants and received three valid proposals, which it evaluated in accordance with World Bank procurement guidelines. However, the Bank eventually could not finance this contract due to general suspension of disbursements on July 15, 1993. In any case, it is unlikely that such a plan would have been approved or implemented by the Government given the political turmoil prevailing in Zaire. On November 15, 1993, Zaire was placed in non-accrual. The undisbursed balance of the Credit was cancelled on December 2, 1993, and the Credit was closed on February 8, 1994 (Paras. 16, 17 and 27).

Project Results

6. The project was closed because it became clear that it could not achieve its objectives. However, when discussing the overall results, caution is need since only 11.5 percent of the Credit was disbursed. In the few months following project effectiveness in March 1990, the company's implementation performance was encouraging. In the area of procurement, Gécamines discontinued its contracts with high-cost traders, negotiated price reductions with strategic suppliers, and centralized re-ordering, thus reducing considerably the shortages of strategic spare-parts and materials. In the area of materials management, the company was able to reduce the number of items from 330,000 to 92,000 and changed the previous re-ordering algorithm which generated $6 million of obsolete supplies monthly. The throughput time of requisitions was cut from 9 months to 6 weeks. During this initial period corresponding cost savings reached about $20 million, ten times the cost of the underlying technical assistance provided under the Credit (Para. 25).

7. These early results indicate that the project was on the right track and that it held early promise. Unfortunately, the results were not sustainable. Despite a substantial bonus from the

associated cobalt sales, the unit cost of copper soared from $1.15 in 1989 to $1.64 in 1992 partly due to Gécamines' inability to cut its fixed costs. Mining operations were crippled by the collapse, in September 1990, of the central section of Kamoto (Gécamines' largest underground mine), as well as continued flooding at Kov (Gécamines' largest open-pit mine). Following the collapse of production, and despite high cobalt prices, sales fell 60 percent from $1,447 million in 1989 to $583 million in 1992. In 1990-1992, the company officially accumulated losses of $338 million. In 1993, Gécamines operated at 10 percent capacity, and as of end-1993, mining production had virtually been suspended (Para. 18).

Sustainability and Lessons Learned

8. The project reviewed in this PCR was part of an overall Bank strategy in Zaire and, therefore, should not be seen in isolation. The overall Zaire program was based on the judgment that a combination of adjustment operations and investments in key sectors could improve governance and economic management in the country. Even though this strategy did not succeed, it seemed a reasonable risk at that time (Para. 30).

9. Sustainability was a key concern of the Bank in its relations with Gécamines throughout the 1980s. Since the 1970s, unsustainable rent extraction (preempting funds required for essential repairs, replacement, and capital investment), led to the physical deterioration of Gécamines which both the Rehabilitation and the Second Technical Assistance Projects tried to reverse. Until the late 1980s, the Bank's strategy was to improve Gécamines' competitive position through investment and technical assistance, while attempting to protect the company from disruptive government interference. In retrospect, this was not a sustainable strategy, particularly given the weak governance in Zaire. Sustainability was also a central concern of the Bank when it adopted the core program strategy in April 1990. Even though it was then unlikely that the project could achieve its stated objectives, the Credit was nevertheless kept open (i) to provide a means for the Bank to extent pressure directly on Gécamines; (ii) to provide the necessary financial support once the company was ready to implement the restructuring and privatization strategy; and (iii) as a low-cost instrument to protect key productive assets and carry on a constructive dialogue with the company until Zairian authorities were convinced of the need to take drastic action to restore Gécamines' viability and competitiveness. Although this approach was unsuccessful, it was the most logical course of action in the context of the core program strategy (Paras. 28 and 29).

10. Despite the unfavorable conditions under which the project was implemented and the fact that the Credit was closed seventeen months ahead of schedule, with only $2.3 million disbursed, there are, nevertheless, several important lessons to learn from this project. First, audits, covenants and supervision cannot make up for the absence of a firm Government commitment and responsiveness to the objectives and requirements of a large mining operation. Second, a Technical Assistance operation aimed at improving management practices supporting international competitiveness, however well designed, has a limited chance to succeed if the enterprise involved is severely constrained in its business decisions and is saddled with excessive fiscal, infrastructure, procurement, and social costs. Finally, with respect to covenants, the Bank should adopt in future operations a stricter audit policy, including (i) legal arrangements whereby auditors copy directly to the Bank all relevant communications and reports without going through the project entity; and (ii) suspension of disbursements for failure to submit an appropriate audit report on time (Paras. 31 and 32).

11. In conclusion, over the last two decades the Bank, through four successive operations, has attempted to help Gécamines transform from an inward-looking state-owned enterprise under intense political pressure, into an internationally competitive company. While the equipment, consultants, training, and studies financed by the Bank helped reduce operating inefficiencies, no outsider could reasonably be expected to provide the key ingredients required to establish international competitiveness namely, a committed and experienced management sanctioned on its operating and financial performance, a motivated labor force, a conducive corporate culture, and a favorable political, institutional, economic and social environment. It is now difficult to envisage a future for Gécamines without the presence of a private sector partner/operator in charge of key business decisions with no government interference (Para. 33).

PROJECT COMPLETION REPORT

ZAIRE

SECOND GECAMINES TECHNICAL ASSISTANCE PROJECT
(CREDIT 2051-ZR)

PART I: PROJECT REVIEW FROM BANK'S PERSPECTIVE

Project Identity

Project Name:	Second Gecamines Technical Assistance Project
Credit No.:	2051-ZR
RVP Unit:	Africa Region, South Central and Indian Ocean Department
Country:	Zaire
Sector:	Technical Assistance

Introduction

1. Copper and cobalt mining has been the cornerstone of Zaire's economy. Gécamines, the national copper and cobalt mining company, historically generated over half of the nation's foreign exchange and provided basic public services such as housing, medical care, schooling and food in the Shaba region, where the copper is located. Because of its strategic importance for the country, Gécamines has been a core element of the Bank's assistance to Zaire. Since the mid 1970s, Gécamines has received two Bank Loans and the proceeds of two IDA Credits totaling $237 million. The first three operations, an Expansion Loan (1975), a Technical Assistance Credit (1983) and a Rehabilitation Loan (1986) have been completed.

2. This PCR reviews the fourth of these operations, the $20 million *Second Gécamines Technical Assistance Credit* (Cr. 2051-ZR), approved in June 1989. The undisbursed balance of the Credit was cancelled on December 2, 1993, and the Credit was closed on February 8, 1994, seventeen months ahead of schedule, with only $2.3 million disbursed, representing 11.5 percent of the Credit.

Project Setting

3. Since the mid 1970s Zaire experienced protracted economic deterioration due to ill-conceived policies and a decline in the terms of trade (copper prices in particular). In the 1980s Zaire undertook several short-lived stabilization and adjustment programs with the assistance of the IMF and World Bank. However, these programs were affected by non-developmental expenditures crowding out public expenditures on social and physical infrastructure, thus causing the economic, social and political situation of Zaire to worsen dramatically. In 1987, Zaire adopted a reform program supported by Bank Structural Adjustment lending, which was discontinued in 1990, shortly after the project under review was approved. Chronic economic mismanagement was further exacerbated by the constitutional crisis and political gridlock since 1990, and economic and social conditions have now reached unprecedented lows.

4. In the late 1970s the decline in copper prices prompted international mining companies to undertake large-scale technology investments to increase productivity and trim costs. Meanwhile, Gécamines could barely maintain its productive capacity by undertaking rehabilitation programs financed by international donors. These programs, however, were unable to provide Gécamines with the competitive edge required to prosper in a global industry. During the 1980s, the company's international competitiveness eroded further. The main reasons for this erosion

include: (i) Gécamines' management and its shareholder (the Government) focused on short-term rent extraction, preempting funds required for essential repairs, replacement, and capital investment; (ii) key management positions were held by political appointees whose performance was not measured against economic criteria, thus allowing costs to rise sharply. Also, top management was not able to resist large-scale diversion of funds by Zairian authorities through supply contracts at inflated prices and other irregular schemes; and (iii) in keeping with the paternalistic attitudes inherited from colonial times, Gécamines continued to provide social services and infrastructure well beyond its role as a mining company. The inability of the Government to fund and provide basic public services reinforced this practice. To a lesser extent, the continuing lack of access to the Benguela rail line since 1975, as well as the collapse of the railways company (SNCZ) and other national infrastructure also affected the company's international competitiveness.

5. In an effort to improve Gécamines' competitive position, over the last two decades the Bank, in cooperation with other international donors, has financed four Gécamines operations with a total cost of $1.2 billion. The first of these operations, the *Gécamines Expansion Loan* (Ln. 1090-ZR), approved in 1975, was thwarted by intense interference and rent extraction by the Government as well as inadequate implementation arrangements and capabilities. It was also disrupted by various external events such as the closing of the Benguela rail line and the Shaba invasions. The Loan was closed in 1981, 30 months behind schedule. The PCR for this project stressed that Gécamines lacked an independent, outward-looking management and the support of a shareholder committed to maintaining the competitiveness of the company.

6. A $7 million *Gécamines Technical Assistance Credit* (Cr. 1336-ZR), was approved in 1983 to help strengthen management in production, accounting and finance, as well as control operating costs. The project improved financial management and accounting systems, but failed to arrest the decline in productive efficiency or build durable capacity for management. The PCR emphasized that public authorities lacked the technical and administrative capacity to oversee the company, and noted the conflict between the objectives of rent extraction and corporate efficiency. The PCR advocated an increased role for foreign expertise.

7. In 1986, the Bank approved a $110 million *Gécamines Rehabilitation Loan* (Ln. 2682-ZR). The project was co-financed with the African Development Bank, the European Investment Bank, the Mining Systems Unit of the European Community, KfW, and Caisse Française de Développement. Total project cost was estimated at $822 million. The project did not achieve its objectives. Between 1986 and 1991, copper output declined by over half, while unit copper cost more than doubled, with losses of $159 million in 1991 alone. Beyond macroeconomic problems, the collapse of public infrastructure, and the civil strife prevailing in Zaire, the PCR traced the failure of the project to the weak governance and the rent-seeking culture entrenched in many Zairian institutions. Project implementation and the performance of Gécamines were seriously affected by confiscatory taxation, diversion of production, and diversion of funds through purchasing contracts. The PCR pointed out that the future of Gécamines would lie in privatization.

Project Objectives, Rationale, and Risks

8. **Objectives.** The objectives of Gécamines at the time of appraisal were to halt the decline in output, improve its cost-competitiveness, and diversify into higher value-added products. In order to increase efficiency and finance the development of new deposits, the Bank had recommended that the company strategy include the participation of foreign investors, but Gécamines and the Government adamantly opposed considering this option. In keeping with Gécamines' strategy, the objectives of the second Technical Assistance project were to help (i)

reduce costs and increase operating efficiency; and (ii) accelerate the rehabilitation program, while preparing its next stage.

9. **Rationale.** At appraisal, Gécamines still enjoyed relatively high profitability and a healthy balance sheet, and could have financed the project on its own resources, but for the on-going rent extraction schemes (in 1988, official transfers to the Government including underpriced currency transfers, totalled about $400 million). However, apart from the concern with the eroding international competitiveness of the company and the increased world copper supply and competition, there were several strong reasons for the World Bank to finance this project. First, it was felt that without the Bank's assistance and insistence, political considerations in Zaire would make it unlikely that Gécamines' management could execute the project or follow-up on subsequent implementation. Second, the project would support the Bank's continuing close involvement with the company, help protect its autonomy and financial integrity, and contribute to overall fiscal discipline in Zaire in the context of the then on-going adjustment program. Third, at the time the project was appraised and approved, the expectations were that Zaire would continue the reform process in which Gécamines' role was central. The year 1989 was seen as a good year in terms of both macroeconomic management (as measured by fiscal deficit and inflation) and adjustment, and it was only in early 1990 that the scope of fiscal mismanagement took a decided turn for the worse. In addition, the considerable investment by the Bank and other donors in Gécamines' physical rehabilitation seemed to justify relatively marginal expenditure to strengthen the company's management.

10. **Risks.** Three major risks were identified at appraisal. First, there was the possibility of a sharp decline in copper prices to levels at which the company would have difficulty surviving. The project mainly aimed at reducing this risk by reducing production costs. Another risk was the possibility of a breakdown in the various transportation systems on which the company relied for moving intermediate products among its plants and mines, and for importing supplies and exporting copper and cobalt. According to the Memorandum and Recommendations of the President, "this risk [was] being reduced by the Association's assistance to the Zairian state railroad company (SNCZ)." In any case, the company was to benefit from having skilled technical experts, hired under this project, to assist it in addressing these problems. Third, there was a concern that "chronic government interference in Gécamines' management and draining of its financial resources [were] obstacles over which a small technical assistance project (or perhaps any project in Zaire) would have little control." In this respect, the Bank believed that close monitoring of the financial situation at Gécamines and an active country dialogue would reduce this risk. It was felt that the on-going adjustment credit would provide the necessary leverage. Although in hindsight, the manageability of these risks was over estimated, they were well perceived and not ignored (i.e., there was a deliberate and well thought-through decision, consistent with the Bank's evaluation and general posture at the time, to take calculated risks).

Project Design and Implementation

11. **Design.** In line with its objectives, the project had six major components: (a) restructuring and improving Gécamines' purchasing and materials management; (b) improving maintenance; (c) improving Gécamines' personnel and training functions; (d) continuing assistance to the finance department; (e) strengthening the information technology group; and (f) carrying out strategic studies. The project was to be carried out over five years providing funds for technical assistance by consulting firms as well as individual experts. The total cost of the project was estimated at $30 million with a foreign exchange component of $25 million. Gécamines was to finance $10 million, representing one third of project cost.

12. **Implementation.** The Credit became effective in March 1990 almost exactly when Zaire started the political transition which was intended to lead to more democratic government. This period was characterized by fast economic decline. Given the rapid deterioration of Gécamines' situation in a context of political turmoil, only the restructuring of procurement and materials management component was actually implemented, and for a short period only. The implementation of the technical assistance for the personnel and training functions component had a good start, but it was too short to be sustainable.

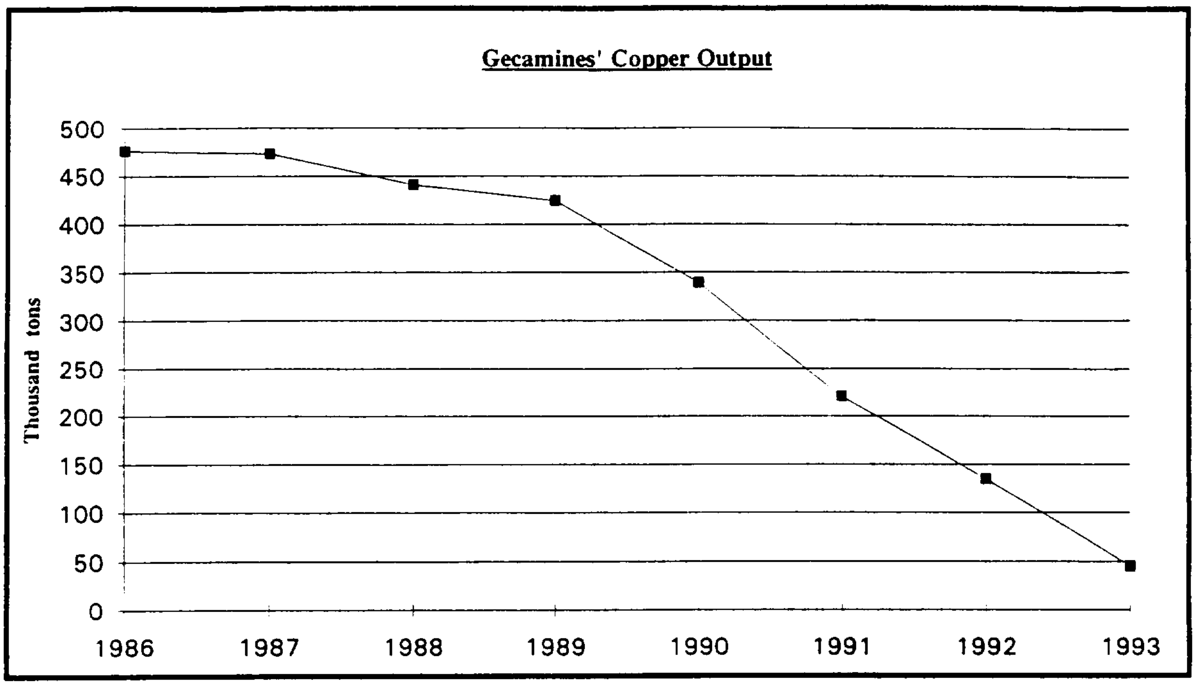
13. In January 1990, the consultants (McKinsey and Company, Inc.) previously hired under the Rehabilitation Project, completed a report recommending various changes in Gécamines' procurement and operating procedures, with an estimated one-time gain of $120 million and $75 million on an annual basis. Key recommendations were for Gécamines to simplify the classification of its stocks and decentralize their control; centralize procurement; standardize its equipment fleet; and reorganize and improve skills in procurement operations. In June 1990, Gécamines started implementing these recommendations with the assistance of individual consultants hired under the TA Credit. This undertaking initially benefitted from the support of many Gécamines' managers, and achieved encouraging results during the following twelve months. Most disbursements under the Credit occurred in the last quarter of 1990. During 1991, Gécamines' initial progress in improving procurement, inventory, and materials management was reversed with the resumption of high-cost procurement practices, large-scale illicit exports of cobalt, and ineffective internal controls.

14. Following up on work initiated under the Gécamines Rehabilitation Project, studies to establish a new job evaluation arrangement and prepare an overall manpower planning system (specifically a new job classification system and a general remuneration policy for the company) were completed in 1992. By that time, however, Gécamines' situation had worsened considerably and the thrust of these studies was not any longer meaningful particularly in view of the social strife. Implementation of the training component was also disrupted in 1991 when Gécamines' training facilities were destroyed during riots. Of the $2.7 million allocated for training costs, only $40,000 were disbursed.

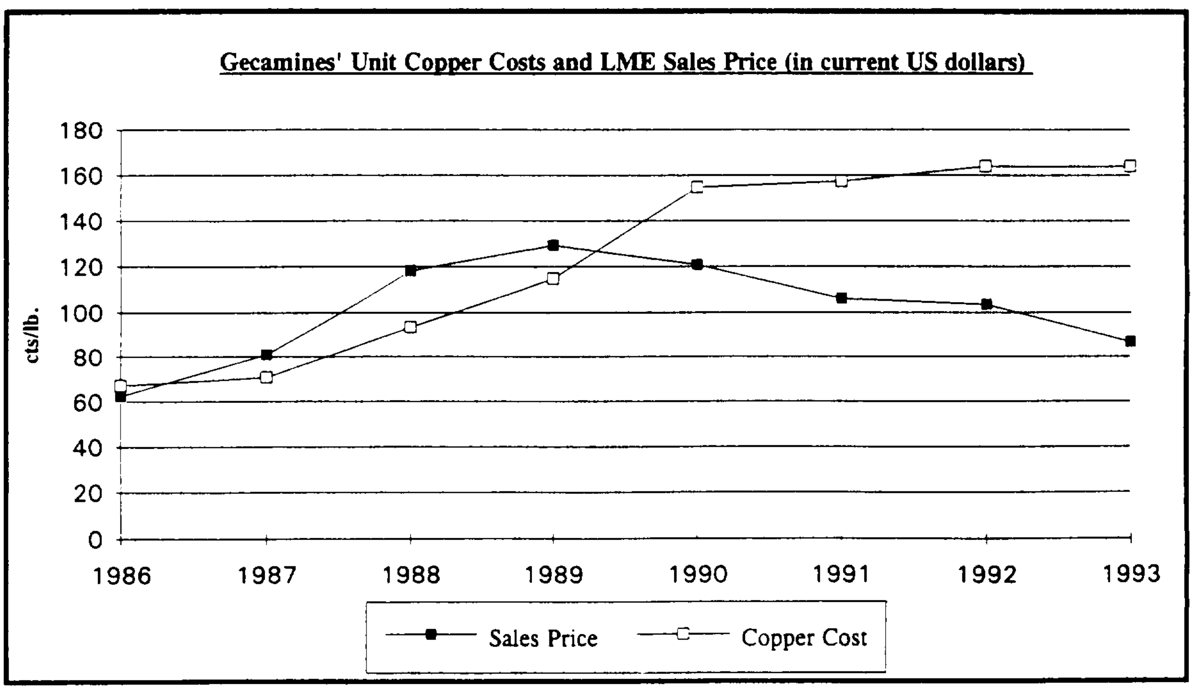
15. Despite promising initial results in the area of procurement and materials management, the project had a marginal impact on Gécamines' overall situation and in fact, Gécamines' cash operating expenses continued to increase, from $1075 million in 1989 to $1166 in 1990, as the management was unable to reduce overhead and fixed costs, including the wage bill (see graph 3). During the same period, copper output declined from 425,000 to 339,000 tons after the cave-in of the Kamoto mine, inadequate drainage of the Kolwezi open-pit mines, and availability problems with major production equipment (see graphs 1 and 2). Gécamines' difficulties were further compounded by ethnic strife in Shaba and the insolvency of SNCZ, the public railways company. As a result, pre-tax profits of $191 million in 1989 (92 percent of which were extracted by the Government as income tax) gave way to losses of $125 million in 1990. Although the wage bill began to shrink after 1990, as a result of staff cutbacks and the depreciation of the Zairian currency, as output continued to decline, revenues fell even faster (see graph 4). Consequently, total losses increased to $248 million in 1993 (see graph 5). Due to the fall in output, Gécamines informed its buyers that it would not honor its export contracts due to "force majeure."

16. Increasingly concerned with the sharp deterioration of the situation, the co-financiers urged Zairian authorities to reduce the tax burden on Gécamines so as to restore the company's liquidity, and asked Gécamines to prepare an emergency recovery plan. Gécamines prepared such a plan which was reviewed during a co-financiers meeting in October 1991. The plan

Graph 1

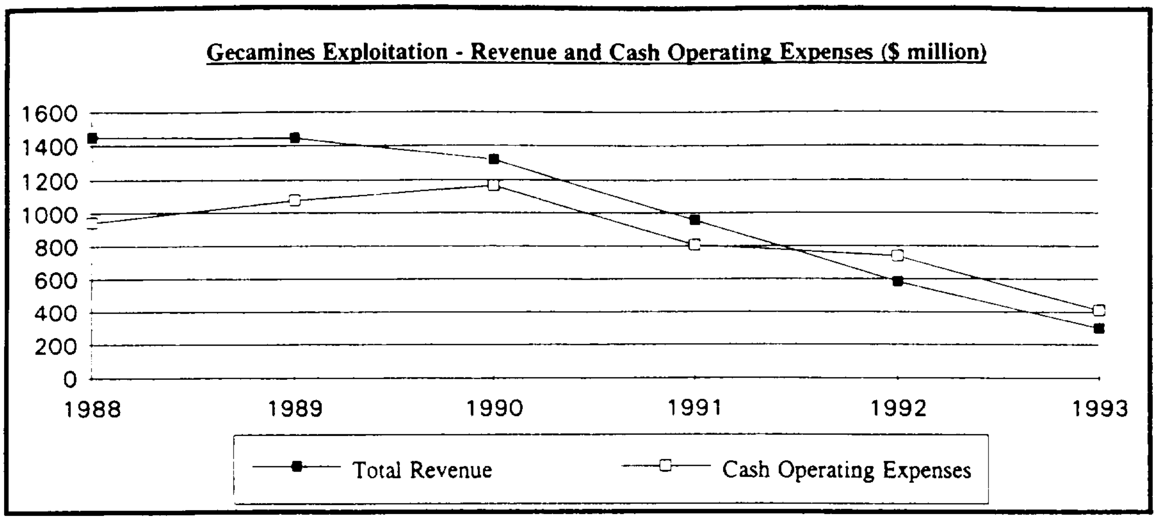


Graph 2

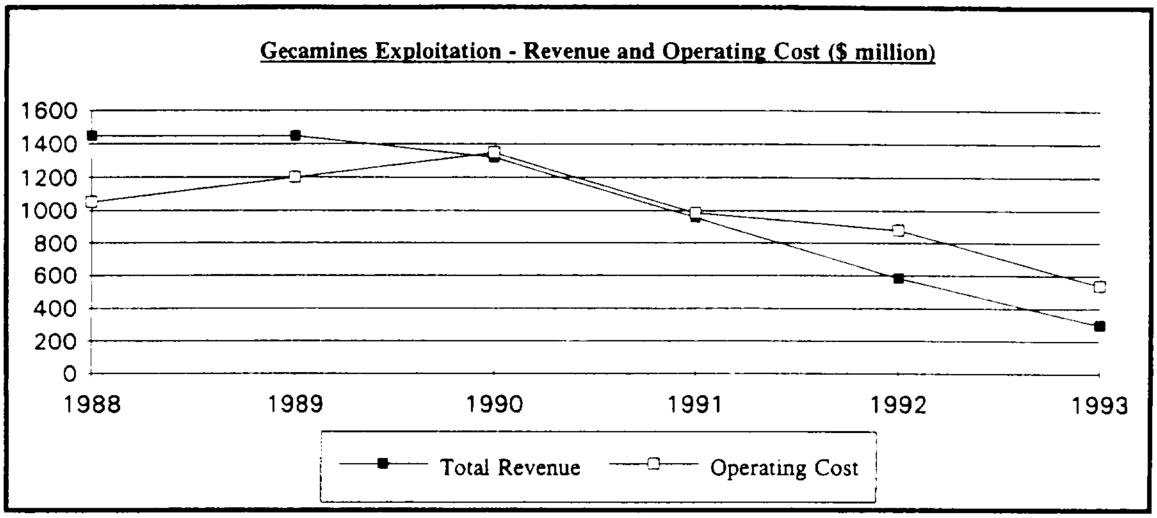


Note: LME = London Metal Exchange

Graph 3

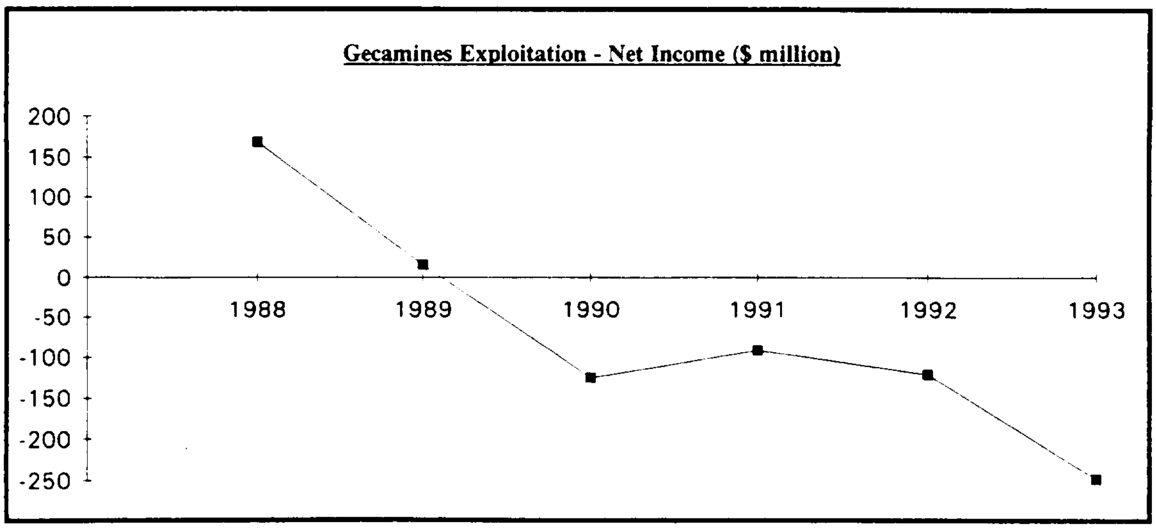


Graph 4



Note: Operating Cost = Cash Operating Expenses + Depreciation + Provisions

Graph 5



Source: Table 5. Gécamines Exploitation - Statement of Financial Accounts contained positive elements, but was not up to the magnitude of the crisis faced by the company. At that time, the Bank delegation offered Gécamines to use the TA Credit for legal and other technical assistance to examine the implications of a suspension of payments, reform the legal framework to allow the privatization of the company in the context of a modern mining code, and accelerate the search for private partners. The withdrawal of most donors from all activities in Zaire because of the political instability and arrears, as well as the Bank's reduced role in the country (affecting the Government's ability to maintain essential infrastructure - SNCZ in particular) did not favor this dialogue. Also, the weak and short-lived Governments (particularly after April 1990) meant that there was no strong government pressure to deal effectively with the company's problems.

17. The Bank's proposals did not elicit a positive response until December 1992, when Gécamines' management, as the company's financial situation became increasingly desperate, indicated interest in the crash restructuring/privatization program proposed by a Bank supervision mission. The company's management prepared terms of reference and organized a bid for consultants to prepare the restructuring and privatization of the company. Gécamines received three valid proposals and evaluated them in accordance with World Bank procurement guidelines. However, Gécamines and Zaire had been in arrears since May 15, 1993, which led to a general suspension of disbursements on July 15, 1993. As a result, the Bank eventually could not finance this contract. On November 15, 1993, Zaire was placed in non-accrual. The undisbursed balance of the Credit was cancelled on December 2, 1993, and the Credit was closed on February 8, 1994.

18. **Overall results.** The project was closed because it became clear that the stated objectives could not be achieved. With only 11.5 percent of the Credit disbursed, caution is needed when discussing the overall results. The project's early results (discussed in paragraph 25) indicate that the project was on the right track and that it held early promise. During the first few months of implementation, cost savings reached about $20 million. Unfortunately, these early results were not sustainable. Despite a substantial bonus from the associated cobalt sales, the unit cost of copper soared from $1.15 in 1989 to $1.64 in 1992 (with an average sales price of $1.03/lb.), partly due to Gécamines' inability to cut its fixed costs. Mining operations were crippled by the collapse of the central section of Kamoto (Gécamines' largest underground mine) in September 1990, and continued flooding at Kov (Gécamines' largest open-pit mine). In 1993, the company operated at 10 percent capacity. Following the collapse of production, sales fell 60 percent from $1,447 million in 1989 to $583 million in 1992, despite buoyant cobalt prices. Officially, the company accumulated losses of $338 million in 1990-1992. As of end-1993, Gécamines had virtually suspended mining production (see graphs 1 and 2).

Compliance with covenants

19. Compliance with the covenants of the Credit Agreement (CA) and the Project Agreement (PA) was deemed unsatisfactory by supervision missions, especially after 1990 when it deteriorated sharply. The covenants breached are related to obligations in respect to audits, marketing arrangements, commercial and industrial practices, and the setting up of a strategic planning unit, as outlined below.

(a) **Audit requirements.** Gécamines has submitted annual financial statements audited by international audit firms. However, the auditors (Coopers & Lybrand) issued a qualified opinion in FY 1991 and a disclaimer in FY 1992, which led the Bank to suspend the Special Account in April 1993. At the request of the Bank, Gécamines acted to improve formal compliance with covenants related to audits. For example, while the audit reports for 1991 did not cover the Special Account and did not include a memorandum on internal control (PA 4.01 and CA 4.01), this was corrected for 1992, after the Bank had suspended the Special Account.

(b) **Arm's length marketing.** Various unofficial sources have pointed to systematic diversions of Gécamines' cobalt production since 1991, which violates the Government's commitment to ensure that the products of Gécamines are commercialized only through arm's length transactions and normal marketing channels (CA 4.03).

(c) **Sound commercial and administrative practices.** Although some high-cost contracts have been discontinued, funds reportedly continue to be diverted out of Gécamines through procurement at inflated prices, a situation that does not conform with sound commercial and administrative practices (PA 3.01).

(d) **Sound industrial and engineering practices.** A difficult cash position, due mainly to excessive cash-flow demands, made it impossible for Gécamines to keep up adequate stocks of spare-parts, subsets, and diesel fuel. This in turn prevented it from operating and maintaining its mines and installations in accordance with normal industrial and engineering practices (PA 3.02). This explains, among other things, the collapse of the Kamoto mine in 1990, as well as the backlog in overburden removal and the ineffective pumping operations at the Kolwezi open-pit mines.

(e) **Strategic Planning Unit.** Gécamines failed to set up a strategic planning unit (PA 3.07).

Bank Performance

20. **Project design.** The areas targeted by the project were of high priority and called for drastic improvements to preserve the competitiveness of Gécamines. This project was also necessary to facilitate the implementation of the Gécamines Rehabilitation Project, which was facing numerous setbacks. When the project was appraised in 1989, the Bank realized that public ownership and control of Gécamines was not an optimal policy given Zaire's weak governance. In this respect, as the PCR for the Gécamines Rehabilitation Project pointed out, while the consultants, training and studies financed by the Bank helped reduce operating inefficiencies, no outsider could reasonably be expected to provide the key ingredients required to establish international competitiveness namely, a committed and experienced management sanctioned on its operating and financial performance, a motivated labor force, and a conducive corporate culture. In retrospect, a technical assistance project, however well designed, had limited chances to achieve its stated objective of preserving the international competitiveness of a Zairian public enterprise subject to intense government interference and rent extraction. A key prerequisite for maintaining the competitiveness of Gécamines was the presence of a private sector partner/operator in charge of key business decisions without government interference.

21. Unfortunately, Zairian authorities adamantly opposed even discussing privatization issues. In early 1990, Gécamines was a key item in the adjustment dialogue between the Bank and Zaire. However, the Government's (more precisely, the President's) explicit refusal to privatize the company, or at least its management, was one of the key factors which determined the change in Bank strategy in mid-1990 and led to discontinuation of adjustment lending. Under these circumstances, the Bank appraisal probably identified the best feasible project design. The Credit was also a useful instrument through which the Bank could attempt a constructive dialogue on

privatization and other strategic issues. In any case, whatever the wisdom (in retrospect) of the Bank's constructive support to Zaire, it is hard to conceive now how it could have been meaningful without a close involvement in Gécamines, given its central role in the economy.

22. **Core program strategy.** The context of the project was substantially altered when Zaire discontinued its structural adjustment program in April 1990, one month after Credit effectiveness. At that time, the World Bank adopted a "core program" strategy taking into account the lack of government commitment to reform. This strategy aimed to maintain key institutional relationships, limit the deterioration of key physical infrastructure, minimize to the extent possible the impact of ill-advised economic policies in the social sectors, and preserve the country's long-term development potential. The alternative "zero program" strategy (cutting down completely on operations in Zaire) was also considered but rejected, opting instead for gradual and escalating response to keep pressure for better economic management, and preserve key investments and institutions.

23. The Gécamines TA project became an important component of the core program. From that time, the focus of Bank supervision shifted from a close follow-up of project implementation to the goal of saving the company. Specifically, the Bank aimed to reduce the diversion of funds out of Gécamines, maintain a dialogue on strategic issues (including privatization and crisis management), and protect key productive assets whose deterioration would be very costly to reverse, so as to preserve the possibility of a quick transition to a full-fledged program when Zaire returned to governance and macro-economic stability. Between 1989 and 1991, the Bank urged in numerous occasions Gécamines' management and the Government to take a series of emergency measures to avert a collapse. Since 1991, the Bank repeatedly offered Gécamines and the successive Governments of Zaire to use the project to prepare the complete restructuring and privatization of the company.

24. Despite the unfortunate outcome, and taking into consideration the difficulties to supervise the project (given the security situation and the lack of valid interlocutor at the government level), as well as difficulties due to the absence of a macro-economic dialogue, the Bank had a reasonable record in project design and supervision. In particular, during all three supervision missions in March 1990, November 1990, and December 1992 (supervision missions were suspended for two years due to security reasons and subsequent travel restrictions on UN and World Bank staff), the Bank appropriately focussed on key strategic and governance issues, and during the last mission reoriented the project towards the complete restructuring and privatization of Gécamines. Unfortunately, the Zairian authorities failed to seize this opportunity.

Borrower Performance

25. Gécamines' implementation performance was encouraging in the few months following project effectiveness in March 1990. In the area of procurement, Gécamines discontinued its contracts with high-cost traders, negotiated price reductions with strategic suppliers, and centralized re-ordering, which reduced considerably the shortages of strategic spare-parts and materials. In the area of materials management, Gécamines was able to reduce the number of items from 330,000 to 92,000 and changed the previous re-ordering algorithm which generated $6 million of obsolete supplies monthly. The throughput time of requisitions was cut from 9 months to 6 weeks. Corresponding cost savings achieved during this initial period are estimated at about $20 million, ten times the cost of the underlying technical assistance provided under the Credit.

26. These improvements, however, were short-lived. Since 1991 considerable resources have reportedly been extracted from Gécamines through high-cost procurement, consolidation of local debts at unsuitable exchange rates, and large-scale diversion of cobalt production. Gécamines' shareholder and management consistently focussed on short-term cash generation and failed to grasp the severity of the situation. In 1991, Gécamines was unable to prepare and present a coherent emergency recovery program requested by the donors to prevent the impending collapse. In 1992, due to its disastrous financial situation the company stopped paying taxes to the state. In that year, the Zairian Treasury insisted unsuccessfully that Gécamines pay the Government an outrageous $3 billion in fiscal liabilities.

27. Following the Bank supervision mission in December 1992, Gécamines accepted the idea of a crash program to restructure and privatize the company. Gécamines solicited offers from consultants and received three valid proposals, which it evaluated in accordance with World Bank procurement guidelines. However, the Bank eventually could not finance this contract due to a general suspension of disbursements on July 15, 1993. In any case, it is unlikely that such a plan would have been approved or implemented by the Government given the political turmoil prevailing in Zaire.

Sustainability and Lessons Learned

28. Throughout the 1980s, sustainability was a central concern of the Bank in its relations with Gécamines. Unsustainable rent extraction, occurring in Gécamines since the 1970s, led to the physical deterioration which both the Rehabilitation and the Second Technical Assistance Projects aimed to reverse. Until the late 1980s, the Bank's strategy was to prop up Gécamines' competitive position through investment and technical assistance, while attempting to shield the company against disruptive interference by Zairian authorities. As pointed out in the PCR for the Gécamines Rehabilitation Project, this in retrospect was not a sustainable strategy, particularly so given the weak governance in Zaire. In this respect, the PCR for the Gécamines Rehabilitation Loan noted that:

> "Beyond Zaire's adverse institutional environment, studies carried out by the World Bank have shown that the confusion of identity between the shareholder and fiscal authorities results in a structural conflict between the objective of short-term cash generation, preferred by fiscal authorities, and the corporate objective of long-term growth and profitability. In order to step up short-term cash generation, state-owned companies defer investment in state-of-the-art technology, and engage in unsound operating practices which undermine their competitiveness and viability. Another problem with state-owned mining companies is uneven management and technical competence. Top management and Board directors are appointed based on political merit and are assessed on their ability to achieve fiscal targets and social objectives, such as employment generation, rather than strict corporate performance."

29. Sustainability was also a central concern of the Bank when it adopted the core program strategy in April 1990. It was then unlikely that the project could achieve its stated objectives, and a question that might arise here is whether the Bank should have closed it sooner given the Government's refusal to proceed with the proposed restructuring and privatization strategy. The answer to this question is no. After all donors withdrew from Gécamines, the Bank was the only organization in a position to affect the company and help it in its privatization efforts. It was believed that the withdrawal of all the other donors would have put pressure on both Gécamines'

management and Zairian authorities to comply with the restructuring and privatization strategy proposed by the Bank. Therefore, the Credit was kept open to provide a means for the Bank to extend pressure directly on Gécamines, but also to provide the necessary financial support once the company was ready to move on with the restructuring and privatization strategy. In addition, the Bank also maintained the Credit as a low-cost instrument to protect key productive assets, carry on a constructive dialogue with the company until Zairian authorities were convinced of the need to take drastic action to restore Gécamines' viability and competitiveness, and maximize the benefits that Zaire could derive from its exceptional mining potential. Although this approach did not succeed, it was the most logical course of action in the context of the core program strategy.

30. The project reviewed in this PCR was part of an overall Bank strategy in Zaire and should not be seen in isolation. The overall Zaire program was based on the judgment that governance and economic management in the country could be improved with a combination of adjustment operations and investments in key sectors. Although this strategy did not succeed, it seemed a reasonable risk at that time.

31. There are, however, several important lessons to learn from this project. The experience of this project also confirms the conclusion drawn in the PCR for the earlier Gécamines operations that audits, covenants and supervision cannot make up for the absence of a firm Government commitment and responsiveness to the objectives and requirements of a large mining operation. Eventually, the Bank could not shield the company from its institutional environment. A Technical Assistance operation aimed at improving management practices supporting international competitiveness, however well designed, has a limited chance to succeed if the enterprise involved is severely constrained in its business decisions and is saddled with excessive fiscal, infrastructure, procurement, and social costs.

32. With respect to covenants, the Bank hesitated in sanctioning violations given the negative impact of a suspension on the Zairian economy and on the country dialogue. After 1989, audit reports failed to single out notorious cash diversion schemes. In future operations, the Bank should adopt a stricter audit policy including: legal arrangements whereby auditors copy directly to the Bank all relevant communications and reports without going through the project entity; and suspension of disbursements for failure to submit an appropriate audit report on time.

33. In sum, the Bank has attempted to help transform Gécamines, an inward-looking state-owned entity under intense political pressure, into an internationally competitive company through four successive operations. While the equipment, consultants, training, and studies financed by the Bank helped reduce operating inefficiencies, no outsider could reasonably be expected to provide the key ingredients required to establish international competitiveness: a committed and experienced management sanctioned on its operating and financial performance, a motivated labor force, a conducive corporate culture, and a favorable political, institutional, economic and social environment. It could be argued, however, that although the attempt to save Gécamines failed, the support provided by various Bank projects did postpone the collapse of the company and resulted in short-term economic benefits for the country. In any event, it is now difficult to envisage a future for Gécamines without the presence of a private sector partner/operator in charge of key business decisions with no government interference.

PART II: PROJECT REVIEW FROM BORROWER'S PERSPECTIVE

1. INTRODUCTION

This document is a review from the Borrower's perspective of the Second Gécamines Technical Assistance Project, negotiated between the World Bank and Gécamines Exploitation. The project was funded under Credit 2051-ZR. The document sets out the Borrower's opinions and comments on:

- Part I of the PCR, which is a review of the project from the Bank's perspective;
- project setting (objectives, rationale, start-up, etc.);
- project implementation and management (stages reached, costs, etc.);
- project performance (compliance with covenants, overall results, etc.); and
- survival measures.

No presentation on Gécamines Exploitation is made in this document (corporate purposes, history, importance in the macro-economic arena, development plan, etc.) because there have been no changes regarding these areas since the PCR for the Gécamines Rehabilitation Loan (Ln. 2682-ZR) was issued on June 29, 1993 (Report No. 12106).

2. COMMENTS ON PROJECT REVIEW FROM BANK'S PERSPECTIVE

The review of the project from the Bank's standpoint gives no cause for objections, except in the following specific instances. Should the Bank accept the comments set forth below, some amendments to the text of Part I of the PCR may be necessary:

2.1. Page 4, para. 15

1. The Bank indicates that cash operating costs (including the wage bill) continued to increase over the 1989-1990 period. Since we are able to supplement the data in the Bank's possession (Table 5. Gécamines Exploitation - Statement of Financial Accounts) with the full range of figures for 1992, and in addition provide estimated figures for 1993, we wish to note that:[2]

- The table indeed shows that while the wage bill increased from 1989 to 1990, it began to shrink after 1990, as a result of staff cutbacks and depreciation of the Zairian currency.

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[2]Bank's note: The supplementary data provided by Gécamines regarding the company's Financial Accounts were incorporated into Table 5, which was modified after this information was made available to the Bank. The updated version is presented on page 39.

- The downward trend in expenses has been mainly a result of the prevailing circumstances, particularly the worrying revenue situation since 1992.

- Resources have been allocated rationally, in accordance with the main lines laid down in the 1994 budget. Funds have been channeled toward the most profitable activities, in particular production of cobalt and the higher-priced types of copper, while production activity in other units has been reduced.

2. In the same paragraph (i.e., para. 15, page 4), the Bank refers to Graph 2, which shows changes in Gécamines' unit cost of copper production and the LME sales price. A better understanding of Gécamines' production cost is obtained by using the concept of production cost as a function of the copper equivalent. The copper equivalent is calculated by converting cobalt and zinc output figures into copper equivalent. This is done by applying a conversion coefficient equal to the ratio between their respective actual selling prices. Beginning in 1992, revenue from cobalt sales began to draw closer to copper revenues. Using the concept of copper equivalent, the reworked graph, given on page 14, which reflects actual figures for 1988-1992, a provisional estimate for 1993, and budget projections for 1994 (94PRa and 94PRb), can be interpreted as follows:

> The effect of the price of cobalt on the copper equivalent production cost expressed in cents/lb is obvious. Compared to 1993, the results so far for 1994 are significantly better, in the sense that the 1994 program (on which the projections are based) is being adhered to, and the actual selling price of cobalt is at least $18/lb. However, financial equilibrium will not be achieved through this survival program. The equilibrium achieved in 1992 can be ascribed to non-operating income.

3. The Bank's review then continues as follows:

> "During the same period, copper output declined from 425,000 to 339,000 tons due to inadequate drainage of open-pit mines (resulting in flooding) and poor maintenance of trucks and shovels (see graphs 1 and 2). In addition, the central portion of Kamoto, Gécamines' largest underground mine, collapsed in September 1990."

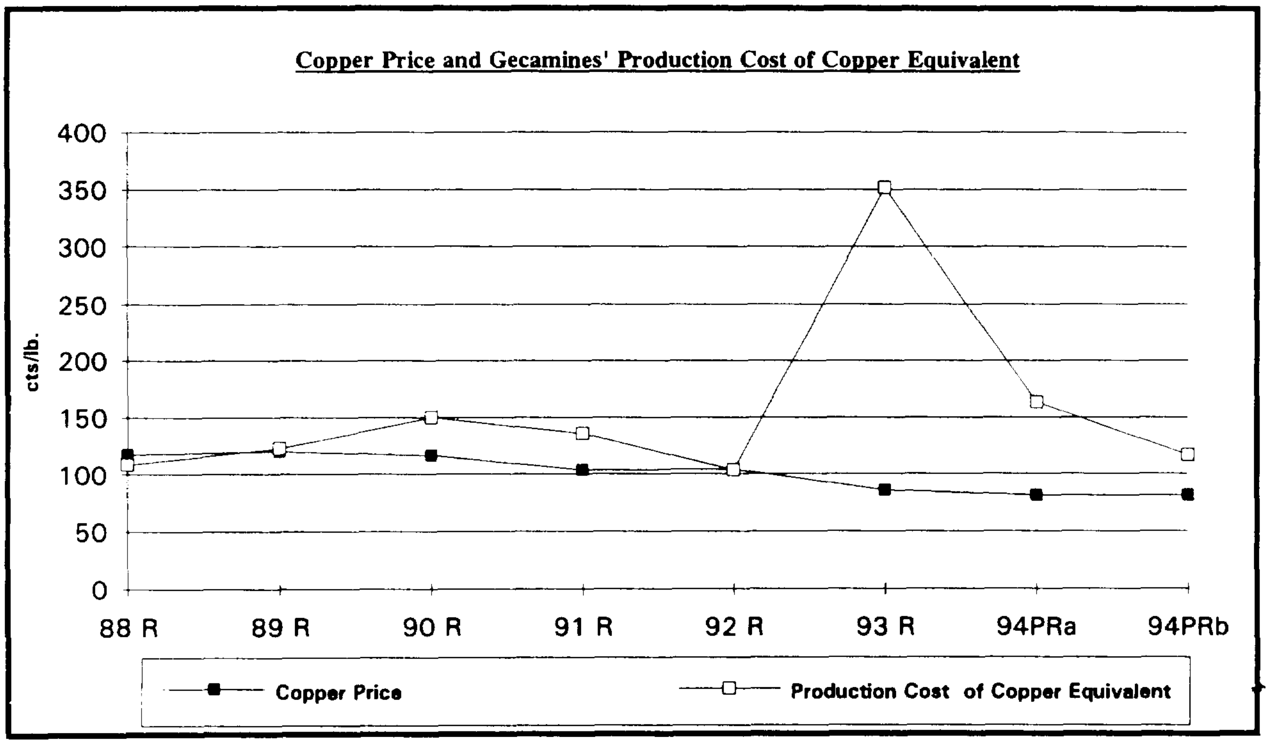
We propose that this statement be rewritten as follows: "During the same period, copper output declined from 425,000 to 339,000 tons after the cave-in of the Kamoto mine, inadequate drainage of the Kolwezi open-pit mines, and availability problems with major production equipment (see graphs 1 and 2)."

Bank's note: Following Gécamines' comment the statement was rewritten as suggested.

2.2. Page 8, para. 19(d)

The Bank's review states: "Due to the excessive cash-flow demands placed on Gécamines, the company was not able to operate and maintain its mines and installations in accordance with sound industrial and engineering practices (PA 3.02). This could explain for instance the collapse of the underground mine at Kamoto in 1990. Other examples of unsound industrial practice include ineffective pumping operations and the considerable backlog in overburden removal in the open pit mines."

	88 R	89 R	90 R	91 R	92 R	93 R	94PRa	94PRb
copper price (cts/lb)	117.4	120.1	116.3	103.3	103.9	85.4	81.1	81.1
cobalt price ($/lb)	6.4	7.2	7.5	11.4	22.6	12.7	10.8	18.0
zinc price ($/ton)	1,088	1,512	1,319	1,020	1,163	936	900	900
copper output (tons)	440,894	423,967	338,583	222,124	137,864	43,500	50,000	50,000
cobalt output (tons)	8,847	8,314	9,550	8,562	6,428	1,420	6,200	6,200
zinc output (tons)	61,085	54,041	38,203	28,317	18,830	4,200	8,200	8,200
coef. equivalence cobalt/copper	5.48	6.01	6.41	1.99	21.78	14.89	13.32	22.19
coef. equivalence zinc/copper	0.42	0.57	0.51	0.45	0.51	0.50	0.50	0.50
copper (tons)	440,894	423,967	338,583	222,124	137,864	43,500	50,000	50,000
processed cobalt (tons)	48,518	49,985	61,197	94,092	140,027	21,144	82,555	137,591
processed zinc (tons)	25,671	30,863	19,660	12,685	9,558	2,089	4,127	4,127
output of copper equivalent	515,083	504,815	419,440	328,902	287,449	66,733	136,682	191,718
production cost	108.3	122.8	150.0	135.8	103.5	351.5	162.5	116.5



We believe a statement in the following terms would give a clearer picture: "A difficult cash position, due mainly to excessive cash-flow demands, made it impossible for Gécamines to keep up adequate stocks of spare-parts, subsets, and diesel fuel. This in turn prevented it from operating and maintaining its mines and installations in accordance with normal industrial and engineering practices. This explains, among other things, the collapse of the Kamoto mine in 1990, as well as the backlog in overburden removal and the ineffective pumping operations at the Kolwezi open-pit mines."

Bank's note: Following Gécamines' comment the statement was rewritten as suggested.

2.3. Page 10, para. 26

The Bank asserts in this paragraph that in 1991 Gécamines was unable to prepare and present an emergency recovery program. However, paragraph 16 includes the following statement: "[T]he co-financiers urged Zairian authorities to reduce the tax burden on Gécamines so as to restore the company's liquidity, and asked Gécamines to prepare an emergency recovery plan. Gécamines prepared such a plan which was reviewed during a co-financiers meeting in October 1991. The plan contained positive elements, but was not up to the magnitude of the crisis faced by the company."

These two paragraphs need to be reconciled.

Bank's note: Paragraph 26 refers to a coherent emergency recovery program and it is thus consistent with paragraph 16, which states that a plan with positive elements was prepared but fell short of dealing with the severe crisis faced by Gécamines.

3. PROJECT SETTING

3.1. Overall project objectives

The Borrower's general aims were to: (a) halt decline in output; (b) improve cost-competitiveness; and (c) diversify into products with higher value added.

The specific objectives of the Second Technical Assistance Project (or IDA 2) were to:

- help Gécamines reduce costs and increase operating efficiency; and
- accelerate the rehabilitation program, while preparing its next stage.

Thus, IDA 2 served as a support to Loan 2682-ZR, which was in the course of execution.

3.2. Sector objectives

3.2.1. Purchasing and materials management

3.2.1.1. The 1973 oil crisis caused a series of cash-flow difficulties for the company. The situation has been deteriorating from year to year, creating such increasingly complex management problems as:

- a steady increase in shortages of inventory items;

- increasing loss of standardization as a result of external financing arrangements associated with limitations in specifying the countries of origin of the ordered equipment. This resulted in poor maintenance of an increasingly wider range of equipment and materials; and

- delays in withdrawing deteriorating equipment from service, leading to higher expenditures on maintenance and supplies.

In this complex situation, operating units ascribed a high proportion of equipment availability failures to lack of spare-parts, while the Directorate of Procurement and Transportation attributed the lack of spares to year-to-year shrinkage of budget allocations to the point where any better reordering algorithm would have been rendered ineffective. These problems in the operating units and procurement divisions led senior management to award, through competitive bidding procedures, a contract for a diagnostic study of Gécamines' procurement system to a consulting firm (McKinsey and Company, Inc.) in August 1989.

3.2.1.2. The consultants (with assistance from operations and procurement specialists at Gécamines) concluded that the company's problems went beyond the procurement area and, in fact, sprang from the whole decision-making process as it affected procurement, maintenance, rehabilitation, and withdrawal of deteriorating equipment from service. According to the consultants, these problems could only be resolved by introducing an integrated logistical system. McKinsey and Company, Inc. presented their recommendations in January 1990. The Gécamines Board accepted them, and the implementation process (known as Operation Phoenix) began the following April.

In 1979 and 1980, the consulting firm Coopers & Lybrand were commissioned to carry out a study toward the restructuring of Gécamines. The reorganization process selected as a result of this study was based on the following main lines of action:

- decentralizing the production entities;
- vesting in these entities the responsibility/accountability for the resources needed to achieve their production objectives; and
- giving the entities the central control of the use of these resources.

While Coopers & Lybrand recommended a specific study for the Directorate of Finances and the Directorate of Procurement and Transportation, they had also set up three new functional units (import-export, traffic, tracking of orders) and proposed that procurement and spare-parts manufacturing operations be brought together in a single unit to be named as "Directorate of Procurement and Services." The key reason for this regrouping was the need to coordinate procurement and manufacturing decisions so as to keep the classic "make or buy" types of choice as sound as possible.

However, the need remained for a far-reaching reorganization of procurement operations. As a result, McKinsey and Company Inc., made a more in-depth diagnostic study between August 1989 and January 1990 and identified 11 areas of difficulty:

1. shortcomings in contract administration;
2. excessive reliance on intermediaries;

3. failure to exploit full bargaining powers;
4. gaps in inventories;
5. significant obsolescence in inventories;
6. reordering according to very complex statistical parameters;
7. unreliable databases;
8. need to standardize equipment fleet;
9. late and random withdrawals of deteriorating equipment from service;
10. uneconomical renovation and rehabilitation decisions; and
11. uneconomical subcontracting decisions.

Based on this list of problem areas, McKinsey and Company Inc. proposed a program of changes centered around three main areas of action and eight key recommendations.

The three main areas of action were:

- **Strategy:** To seek optimum financial balance in all decision-making processes;
- **Jurisdiction:** To develop appropriate decision-making rules and operating structures; and
- **Culture:** To develop a professional sense of responsibility and strengthen accountability.

The eight key recommendations were:

- Classify inventory stocks according to their technical and financial importance;
- Take full command of purchases and suppliers;
- Ensure database reliability;
- Model financial decisions;
- Standardize equipment purchases;
- Reshape the equipment fleet;
- Decentralize under controls; and
- Motivate and make accountable operations staff.

As far as the company's logistics were concerned, the consultants' recommendations were interpreted to indicate that the following principles should be followed:

- Decentralize inventory management;
- Centralize purchasing;
- Centralize management of strategic articles; and
- Integrate logistical arrangements.

Although the responsibility for implementation of the reorganization project was originally given to a separate entity, toward the end of 1991 it was assigned to the Directorate of Procurement and Transportation. The reason for this change was to eliminate the problems of duplication and overlapping, which very soon surfaced in connection with the execution of certain decisions and the contract award process.

The concept of integrated logistics advocated by the consultants was never clear enough to win the support of Gécamines Exploitation. This created additional difficulties in the implementation of the reorganization project. A team of individual experts, wishing to go beyond the initial objectives, put forward a series of proposals to reorganize the company and create an ambitious integrated logistics unit. The responsibilities of the latter were to include, for example,

- management of flows of materials;
- management of information flows (including information technology); and
- management of production (including planning).

This went disproportionally beyond the McKinsey recommendations.

3.2.1.3. The reorganization project was to be launched in January 1990 under the umbrella of a separate entity set up to handle three sub-projects:

- a **decentralization** project covering "management of stocks;"
- a **centralization** project covering "management of purchases;" and
- an **investments** project covering "management of equipment and subsets."

A team of individual experts (including the coordinator of Operation Phoenix and a group of Gécamines staff associated from the outset with the McKinsey diagnostic study) was to work together on this venture.

3.2.2. Management of Maintenance, Repairs, and Spare Parts Manufacturing

3.2.2.1. The main concerns under each of these areas were as follows:

- Maintenance

  1. Utilizing materials correctly;
  2. Keeping equipment in good repair; and
  3. Reducing consumption of spare-parts and subsets.

- Repairs

  Providing a maximum of subsets and quality service at minimum cost and as promptly as possible.

- Spare-Parts Manufacturing

  Supplying operating centers with items manufactured locally from foundry materials, but of the same quality and performance as imported ones. This was to be done on the basis of new manufacturing studies and sound technical and financial choices.

3.2.2.2. Given the shortcomings and inefficiencies observed in the above areas, diagnostic studies were carried out to identify remedial actions. Gécamines requested the assistance of the World Bank in financing a separate sub-project to upgrade supervision and training in connection with maintenance and spare-parts manufacturing operations.

The goals of this sub-project were:

- To evaluate the company's organizational and technical capacity in the area of maintenance and spare-parts manufacturing operations from the institutional standpoint, as well as to evaluate the professional/vocational abilities of trainers to determine the steps required to meet the retraining needs of permanent trainers.

- To enable CFC, the Professional and Supervisory Staff Training Center (*Centre de formation de cadres et agents de maîtrise*), to take on responsibility for a management consulting program that would consist of organizing and setting up development units.

- To assist CFC in setting up these pilot development units.

Implementation of sub-project activities was to be spread out over a twelve-month period.

3.2.3. Personnel Management and Training

3.2.3.1. Job grading and compensation policy

In view of the shortcomings of Gécamines' job classification method (which was better suited for a less skilled work force using simple operating techniques under the direction of primarily expatriate supervisors), it was decided to commission consultants to undertake a study focused on:

- instituting an integrated job classification system covering executive posts up to the level of Division Chief;

- formulating a salary policy to fit the proposed job classification system; and

- introducing a system of bonuses.

Subsequently, the consultants were also asked to outline a master plan for manpower planning at Gécamines. Invitations to bid were issued to a short list of five firms or organizations specializing in the fields of classification and qualifications. The firm CADIC-GOMBERT was awarded the contract. The project, launched in 1988, was originally expected to take four years, but the consultants followed an accelerated work program which reduced the period to two years. Their final report was presented in January 1991 and its major recommendations were accepted by Gécamines.

3.2.3.2. Training of trainers

- In order to obtain an evaluation of the achievements of CFC since its inception, Gécamines decided to commission a study with the following objectives:

  1. To make a critical assessment of CFC after its first 10 years of existence;
  2. To identify CFC's needs for institutional and technical reinforcement; and
  3. To train CFC professionals in how to provide advisory services.

- The study was to be carried out by the firm FRANCOIS LESSARD under a contract approved by the donor. The study (requiring a total of 135 consultant-days spread over a year) was launched in January 1991.

- An addendum to the contract was signed after the first two of the above objectives had been met. Under its terms, the consultants were to assist CFC and FRT (Gécamines'

Technical Training Division) with projects focused on raising mining output and improving maintenance workshop performance.

3.2.3.3. MDPA Project

The objective of this project was to train staff at the Kambove Technical Training Center (FRT) and at Gécamines production centers in hydropneumatics, boilermaking, and industrial electronics.

3.2.4. Financial Management

Gécamines Exploitation has obtained long-term financing from various donors for the investment projects forming part of its Five-Year Investment Program. One of the prior conditions for disbursement of funds by both the World Bank and the European Investment Bank was that Gécamines would present a program to expand the use of cost accounting, accounting controls, and cost reduction measures. Donors were to give their reactions to this program. In order to be able to meet this prior condition, Gécamines began, in 1990, a reorganization of its Finance Directorate to which there were two components:

- Creation of a General Treasury Division responsible for:

  (a) Optimal management of the funds generated by the company;
  (b) The company's short- and long-term financing strategies and reduction of financing costs; and
  (c) Computerization of cash management operations.

- Creation of a General Audit Division with the following major functions:

  (a) Decentralization of financial management; and
  (b) Introduction of new management information and accounting management systems.

It is important to emphasize that the company's old financial systems had become outdated, complex, and slow. As a result, they were no longer sources of financial and accounting information essential for the analysis and reduction of costs. Of the various systems planned as part of this reorganization, the intended cost accounting system could not be finalized since it required major financial resources. As a result, Gécamines applied to the World Bank for additional financing. The reorganization of the units making up the Finance Directorate, together with the introduction of new accounting systems, required the services of highly qualified personnel. The costs of their recruitment and remuneration were met with assistance from international banks.

The specific objectives of the cost accounting system provided under the terms of Credit 2051-ZR were to allow:

- monitoring and control of the costs of production and maintenance operations;
- computation of the cost price of operations which, with the help of management performance indicators, would enable managers at all levels to choose the least cost solutions when making technical decisions;
- assessment of the value of stocks of products whether finished or in production; and

- preparation of monthly financial statements.

In the medium- and long-run the specific objectives were to generate:

- financial information required for investment decisions;
- data and projections required for strategic decisions; and
- annual and longer-term financial statements.

Introduction of such a system was the most important component of the reorganization, mainly because it would permit the generation of reliable monthly statements of condition, which was the best tool for effective management and reduction of costs.

3.2.5. Information Technology

The main objective in this area was to go ahead with the implementation of the recommendations contained in the Information Technology Master Plan by taking the steps which Coopers & Lybrand had advocated in the financial and procurement/materials management spheres. Technical assistance to achieve this objective consisted mainly of recruitment of expatriate personnel in the company's Information Technology and Telecommunications Department. Recruitment led to new contracts with the consultants Stolz, Mortier, van Hamme, Pire, and Boller (later replaced by Hennus) and extension of existing ones with Bourgeois, Loosfelt, and van Onderbergen.

3.2.6. Environmental Protection

The company's pyrometallurgical plants, outmoded in design and physically antiquated, have been sources of pollution and environmentally harmful gases and particles. The same has been true for its hydrometallurgical plants, which have been sources of wastes that pollute groundwater resources. Aware of this state of affairs and anxious to put an end to it, Gécamines launched an environmental protection project designed to lead to formulation of an action plan for conservation of the environment. The company has been determined to keep pollution levels from its operations within the limits set by increasingly stringent international norms.

4. PROJECT IMPLEMENTATION AND MANAGEMENT

4.1. Overall Project Implementation

The IDA 2 project, which was negotiated in June 1984 and became effective on March 13, 1990, entered the implementation phase behind schedule owing to delays on the part of the World Bank in disbursing funds. The reason for this delay was because the Bank was hesitant for a long period to accept evidence submitted by Gécamines and the Zairian Government in support of their ability to meet the preliminary conditions for project effectiveness.

4.2. Implementation of Sub-projects by Sector

4.2.1. Procurement

Although scheduled to begin in January 1990, the project was actually launched in April 1990, as preliminary work was needed to:

- define the ideal structure for implementing the McKinsey recommendations; and
- define the final structure, various resource requirements, and the action plan.

4.2.1.1. Implementation schedule and appraisal

4.2.1.1.1. Purchasing: Centralization Project

Contract items

(a) Negotiations

- A framework for negotiations was developed.
- Some negotiations anticipated by McKinsey did not take place for certain high-cost products used in large volumes such as maize, diesel fuel, oil, gasoline, sulfur, lubricants, coke, coal, and steel.
- The political environment and the company's accounts receivable situation prevented the successful completion of certain negotiations.

(b) Contracts initiated under Operation Phoenix

- In the context of Operation Phoenix, 15 contracts were concluded: three five-year contracts for the period 1990-1995 and 12 three-year contracts for either 1990-1993 or 1991-1994.
- Gécamines did not terminate these contacts.
- As a result of the company's cash flow problems, suppliers discontinued to fulfill orders under certain contracts.

(c) Contracts not negotiated under Operation Phoenix

- Four major products, which were not covered by contracts, were submitted to competitive bidding. For each product the successful bidder was the lowest.
- The changes in minimum C & F prices for these items after negotiation were:

		1990	1991	1992	1993	1994
Maize	US$/ton	326	326	380	300 (a) 240 (b)	300
Diesel fuel (*)	US$/cubic meter	405	382	339	342	270
Gasoline (*)	US$/cubic meter	470	383	369	330	340
Sulfur	US$/ton	259	280	280	235	320

(*) C&F Sakania (a) White maize (b) Yellow maize

- Despite the company's weak bargaining position, due to partners' lack of confidence in its ability to pay, price levels continued. However, the ideal situation in which they would have declined was not attained, even though the monopoly held by certain traders on some markets was lifted.

- The company continued to purchase lubricants and fuel from traditional suppliers:

  * fuel from the two closest producers in the South African sub-region, namely WANKIE and MAAMBA; and

  * lubricants from local oil companies under the public price structure.

(d) <u>Intermediaries</u>

Cash flow problems forced the company to deal with intermediaries who were willing to provide some credit facilities.

Interactive purchasing system

- From the administrative/bureaucratic standpoint, the objective of cutting throughput time for requisitions was met through the development and adoption of the so-called Interactive Purchasing System.

- This system allows requisitions authorized by the various divisions of the company to be validated electronically and recorded directly at central headquarters.

- Crisis management measures included adoption of restrictive audit procedures requiring that requisitions be checked manually at several levels, with the inevitable accompanying bureaucratic delays.

- Thus, the impact of crisis management methods on bureaucratic delays runs counter to the thrust of an application like the Interactive Purchasing System, which is now ready to be introduced and it is designed to cut such delays. However, this is a factor beyond company control.

Central warehouses

- Using a modular building plan, approved by the company's three geographical divisions, the western division built part of its Kolwezi central warehouse. Completion of the remainder of the process is contingent on the availability of financing, and would involve:

- Completion of the central warehouse in Kolwezi — US$2.2 million

  Construction of the central warehouses for the southern and central divisions — US$3.1 million

- Thus, construction of the central warehouses can be resumed and completed with an investment of US$5.3 million.

Market database

Because of difficulties in acquiring the SAP software package, even in modular form, the company has been unable to build up a market database. This has kept its capacity to conduct market studies at sub-optimum levels.

Establishment of Units

- Of the 14 units initially planned, seven had been set up under the supervision of the individual experts, and another, the "Road Equipment and Materials" unit, was established after their departure.

- The six remaining units are to be developed and set up under the umbrella of the recently created Department of Studies and Monitoring. However, difficulties associated with the prevailing situation have delayed the project.

Partnerships

The current financial and socio-political environment in which the company is obliged to operate does not help to attract interest from prospective partners. However, development of partnerships is high on the company's agenda, and the issue will be addressed as soon as financial resources are available.

4.2.1.1.2. Inventory Management: Decentralization Project

Classification

- The classification of inventory items, which is now completed, has led to identification of approximately 228,000 obsolete items and 98,000 current items. 30% of the latter group are items with a major financial impact.

- With regard to the specific policies on management of these items, we note the following:

  (a) Items with major financial impact are managed centrally within the units initially grouped to form the Product Management Office, which has since been raised to the rank of a division, called the Strategic Items Management Division.

  (b) Because decentralization could not be initiated, other current inventory items are still managed by the old main warehouses in the context of an arrangement under which operating, financial, and procurement departments consult together at the central level.

- Although new re-ordering algorithms were introduced, use of the automated management system was almost completely discontinued after a series of trails in early 1992 in order to avoid generating additional commitments that the company could not meet.

- Not surprisingly, service performance continues to deteriorate except where a few strategic items are concerned.

- So far, it has not been possible to replenish inventories of current items on a steady basis.

Decentralization

- Decentralization cannot be initiated due to non-availability of the required computer tools.

- The cost of the SAP software package, selected after a normal search process and on the recommendation of an expert from McKinsey is estimated at US$4 million.

- Considerable expenses have already been incurred in connection with selection of this software:

  * search/investigation missions abroad; and
  * contracts for MAD staff at the Information Technology and Telecommunications Department.

- The leader of the MAD staff team fails completely to follow any know-how transfer policy.

Central control

The principles and organization of a control system as recommended by McKinsey have taken material form through the intermediate, modular structure recently set up as part of the Procurement and Transportation Department. This is an indication of Gécamines' resolve to decentralize procurement but under central control.

API+ Application

The API+ application, which is a simplified version of API, has virtually not been used due to cash flow problems. Its effectiveness is measurable only in the context of regular re-ordering.

4.2.1.1.3. Materials Management

- The Investment Project came to a halt due to cash flow problems. However, the following work was accomplished:

  * the DER (Economic Rehabilitation Decision) Data Processing Module was brought into service in workshops in the western division;

  * a subcontracting control matrix was developed, but it will need to be adjusted to the functional lines directly involved in the decision-making process.

  The other project components have been discontinued due to lack of field personnel.

- In any event, only when the company's cash flow situation improves will the advantages of planned developments materialize. Such developments cannot continue under the prevailing circumstances, as they will be doomed to failure.

4.2.2. Maintenance, Repairs, and Spare-Parts Manufacturing

This project never reached the implementation stage for administrative reasons, mainly inability to agree, after the maintenance audit, on the content of its final version. However, the need for this project was underscored by foreign firms, which pointed to certain deficiencies in the Maintenance and Workshops Department, rehabilitation of which is still an imperative.

4.2.3. Personnel Management and Training

4.2.3.1. Job grading and compensation policy

Work on the job classification system and remuneration policy was initiated in 1988 and an amendment to the initial contract pertaining to manpower planning was later signed. A second amendment to the contract was also signed, extending technical assistance for job classification and remuneration policy to personnel at departmental and directorate levels.

4.2.3.2. Training of trainers

This project was initiated in January 1991 and progressed normally until CFC facilities were destroyed in the September 1991 riots. The consultants returned in March 1992 to provide advisory and technical assistance services, but the project was discontinued after the World Bank suspended financing.

4.2.3.3. MDPA project

The consultants' services for this project were suspended after the events of October 1991. Work accomplished as of that date can be broken down as follows (time spent):

- Boiler works: 4 out of 12 months;
- Electronics: 4 out of 6 months;
- Hydropneumatics: 2 out of 6 months.

4.2.4. Finances

For the purposes of this Project Completion Report, we have mainly evaluated the execution of the project in regards to the development and introduction of the GLI system of cost accounting. Initially, the project designer planned to study and install the new system throughout the company. However, this approach proved impractical since Gécamines consists of nearly 25 production units and as many functional units. Another approach was then adopted, namely to develop pilot projects in the most representative areas of the company. This was a step which naturally delayed implementation of the project as a whole. According to the initial schedule, implementation was to begin in 1987 and to be completed within 18 months. Because a number of difficulties were underestimated at the outset, the implementation schedule was revised in 1989 to extend over a three-year period.

The project was launched with the following personnel teams provided under the new schedule:

- Mines 1 project manager, 4 analysts;
- Workshops 1 project manager, 4 analysts;

- Metallurgy 1 project manager, 3 analysts;
- Functional sector 2 analysts.

Two computer specialists were also assigned to the project. The three project managers and one functional sector analyst received training in the GLI system in Europe. The budget allocated for this project was almost entirely spent in the initial phases — analysis of the existing system, and design and definition of operating procedures for the new system. There were a number of reasons for this including:

- the diversity of the company's business activities, products, and services;
- deficiencies in the quality of data entry in many areas;
- inadequate staff (in terms of both their qualifications and their number) for a project of this magnitude, especially in the sphere of information technology assistance; and
- faulty command of the new MacCormack & Dodge software.

In 1990, the contract of the manager of the Metallurgy component was not renewed and, as a consequence, the implementation of this component was temporarily suspended. Subsequently, the overall responsibility for this implementation was taken over by the manager of the Mines component. In mid-1991, the contract of the manager of the Workshops component expired, and the analysts (Zairian nationals) continued the implementation of the component on their own. During the uprisings in October 1991, the manager of the Mines component and several computer specialists returned to Europe permanently. The managers of the various components of this project left without handing over properly. Moreover, they did not leave in the company any records of the project. This meant that the team of national analysts had to tackle the job of drafting new functional analysis documents.

In June 1992, two new entities were set up within DFI to revitalize implementation of this project:

- the Financial Systems Division, in charge of finalizing functional analysis, data-processing, development follow-up, and testing; and
- the Cost Accounting Systems Division, in charge of placing completed modules in service and implementing new procedures.

Despite this new organization, problems were encountered with the functional installation of certain modules which the previous team was responsible to complete. Therefore, this work had to be redone. In addition, continued progress with this project was hindered by the following problems:

- lack of a project manager familiar with the documentation;
- lack of functional analysis documentation;
- revisions and additions of functions omitted at the time of the basic analysis;
- inadequately trained analysts;
- deficiencies in project management techniques; and
- lack of experience in modern management techniques.

4.2.5. Information Technology

To start up the financial applications under the millennium monitor, MAD personnel were needed to strengthen the team of analysts/programmers. In addition, the contract of Mr.

Loosfelt, who was at the time manager of the information technology project, was extended and new contracts were drawn up for Mr. Mortier and Mr. Pire. This project was initiated at the request of the Finance Directorate, which was firmly resolved to make optimum use of the AP:M and GL:M software, purchased from MacCormack & Dodge on the recommendation of Coopers & Lybrand. Assistance from the team of analysts/programmers was also needed to develop the purchasing management applications as recommended by McKinsey & Company Inc. The contracts of Mr. Bourgeois and Mr. van Onderbergen were extended, and new contracts were drawn up for Messrs. Stolz, van Hamme and Boller, specifically for taking charge of the SAP software.

The implementation of the Financial Project got off to a quick start but then slowed down after the initiators left. The Information Technology Directorate was left without a correspondent/user familiar with the objectives of the applications to be installed. Work on the project was suspended until qualified nationals could assume responsibility. All MAD personnel left after 1993. At the present time, the project is nearly complete.

The SEPEA procurement, rehabilitation and sub-assemblies project was not initiated since the SAP software was never acquired. Personnel hired to work on it were thus assigned other duties, mainly related to maintenance of several existing applications. Some problems encountered in the implementation of this project stemmed from the fact that employees were brought on board before the tools they were hired to work with were acquired. Among others, we cite the cases of Mr. Stolz and Mr. van Hamme, insofar as the work they performed was not satisfactory.

4.2.6. Environmental Protection

Work has never begun on this project due to lack of an expert to review the draft Terms of Reference which were prepared approximately three years ago.

5. PERFORMANCE AND OVERALL RESULTS

5.1. Overall Project Performance

Initial objectives were not met due to delays on the part of the World Bank in mobilizing and releasing funds, as well as to the small percentage (11.5%) of Credit proceeds committed for project implementation.

5.2 Performance by Sector

5.2.1. Procurement

5.2.1.1. Consultants' performance

- McKinsey's approach, which was on the strategic level, failed to solve major tactical problems, such as calculation of an economical method to order quantities for inventory management.

- The development of this concept had to be carried out entirely under Operation Phoenix.

Individual consultants

- The personal involvement of certain individual experts in contract negotiations distorted the role of the consulting firm retained, and was responsible for duplication and overlapping that affected certain decisions, as well as the contract award process.

- The lack of tact in social contacts, as well as the development of a special-interest group undermined incentives to cooperate, and generated conflicts with local managers.

5.2.1.2. Technical performance

Relative to initial objectives, Gécamines' evaluation of the results is as follows:

(a) Restructuring

Long after the individual consultants left, an intermediate, modular organization implemented in stages was finally developed along the general lines of the McKinsey recommendations. This structure is still centralized, but it is flexible to allow for decentralization. Gécamines' compliance with McKinsey's fundamental recommendations is confirmed by:

- the Inventory Management Divisions which were created within each of the company's operating territories to prepare for effective decentralization;

- the creation of a Division responsible for the centralized management of strategic items;

- the creation within the Purchasing Department of a unit responsible for contract management and high-cost contracts; and

- the creation of a unit responsible for central audit and for continuing the studies initiated by McKinsey and Company Inc., as well as under Operation Phoenix.

(b) Centralization Project

- Development of a contract database: This objective was not met, as it was impossible to introduce the SAP software.

- Development of partnerships: These objectives were not achieved because the company's financial position and misinformation on its true situation were not conducive to eliciting interest from suppliers.

(c) Decentralization Project

- Classification with definition of category-specific policies: These objectives were met on the theoretical level. Their effects in the field are contingent on the availability of financial resources for re-ordering on a steady basis. The inventory shortage ratio for staple items deteriorated after 1990, rising that year from 15% to 29% (compared to 5% in 1973).

- Improving the effectiveness of the inventory management system: These objectives have not been achieved. They are contingent on development of the supporting computer applications by the Information Technology and Telecommunications Department.

- Auxiliary development of storage sites: These objectives have not been met. They are contingent on the availability of financing, totaling an estimated US$22 million over an implementation period of approximately 44 months.

- Cleanup: Some of these objectives have been met. They are contingent not only on the availability of the SAP software package, at an estimated cost of US$4 million, but also on the completion of construction of the central warehouses, at an estimated cost of US$ 5.3 million.

- Decentralization objectives have not been achieved. They are contingent not only on the availability of the SAP software package, but also on the completion of construction of the central warehouses.

- Introduction of Central Audit: These objectives have been partially achieved. They are contingent on the availability of the various resources needed for operation at optimum efficiency.

(d) Investment Project

- Cutting operating costs: These objectives have been met only to a very limited extent, and only at the theoretical level. While the DER (Economic Rehabilitation Decision) application was placed in service in workshops in the company's western geographical division (it now requires improvement in response time), the worsening financial crisis cannot be resolved by focusing on costs alone. In addition, this application has yet to be installed in other workshops, such as ACE, KTO and KHI.

- Improving returns on invested capital: These objectives have been achieved only to a limited extent. In fact, standard criteria were defined only for underground shovels and vertical drilling equipment at Kamoto. Benefits from these standard criteria can be reaped only after Gécamines is on a sound enough footing to apply them in making future capital investment decisions. The problem remains unresolved for most equipment.

- As a result of the high proportion of objectives which were not achieved in the area of improved returns on capital invested, the following problems have not been resolved:

  Brand proliferation, with the following consequences:

  * complexity of maintenance and rehabilitation; and
  * reduced control over these operations, resulting in a lower availability ratio.

  Outdated equipment, with the following consequences:

  * difficulty in controlling costs due to non-standard procurement requests; and
  * excessive maintenance cost burden.

- Development and implementation of cost-effective decision-making systems for purchasing, rehabilitation, sub-contracting, and development of investment procedures: These objectives have not been met.

5.2.2. Maintenance

The implementation of this project component, which started on September 18, 1991, was suspended on the 21st of that month following riots in the Shaba Province. Subsequently, CFC took over after the consultants left. However, after the events in Kolwezi, several Zairian technicians attached to SKM headquarters left, thus making it impossible to continue the implementation of the component.

5.2.3. Personnel

5.2.3.1. Job grading system and compensation policy

The consultant's report indicated that the objectives assigned to him were only partly completed. He managed to review no more than two-thirds of the jobs indicated in the organization chart. The consultant's recommendations were not applied because they were not consistent with the company's corporate culture.

The task of implementing a remuneration policy based on conclusions reported previously was assigned to another expert, who never completed the work due to a variety of difficulties (methodology, technology, logistics, etc.). One reason the proposed remuneration policy was ineffective was that it was based on a tool (job control curve) which was not well defined and, more importantly, which the consultant had never tested elsewhere. Consequently, at this time, no conclusion can be drawn on the remuneration policy or on substitution of salary for social benefits.

5.2.3.2. Manpower planning

The final report on this project appears to be of no use to the company because the management believes that the objectives (implementation of a manpower planning process at Gécamines, evaluation of corporate staff, and training of employees in manpower planning methods) do not seem to have been met. The consultant recognized this in his report, in which he indicated that it was impossible for him to prepare a manpower plan for Gécamines under the prevailing conditions.

5.2.3.3. Training of trainers

Generally, the initial objectives (CFC audit and retraining of CFC professionals) were achieved. Contractual conditions were met until financing was discontinued. The results were excellent and highly appreciated.

5.2.3.4. MDPA

Project objectives were not met as a result of the 1991 riots.

5.2.4. Finances

Overall, the cost accounting system component of the project did not meet the company's expectations. The reasons for this failure can be summarized as follows:

(a) Nationals did not participate in the design of the new system or in the decisions affecting its implementation, with the result that Zairian personnel lacked comprehensive knowledge of all aspects of project documentation and history;

(b) There was lack of analytical documents, clearly describing the procedures and logical stages for implementing the various project phases;

(c) The expatriate project managers were not completely familiar with the MacCormack software. This entailed many months of on-the-job training and work by trial and error before and during project implementation;

(d) There was lack of cooperation among the various project managers, all of whom disagreed completely on the way to approach the project;

(e) There was lack of adequate, comprehensive technical training for Zairian nationals, who were expected to take over the operation of the new system during the final phase. In fact, 90% of the training sessions abroad under this project were conducted for the project managers, to the detriment of local personnel. It should also be noted that local personnel did not participate in informal training sessions held locally;

(f) The former cost accounting system, which should have served as a reference, was discontinued abruptly. As a result, there were gaps in functional analysis, which brought the overall project into question; and

(g) The GLI project was not completed. As a result, audit reports were not prepared, making it difficult, if not impossible, to achieve sustainable reductions in operating costs.

5.2.5. Information Technology

The technical assistance component was not an outright success because most of the staff hired did not have adequate experience, and consequently, they had to be trained on the job through contacts with the company's analysts/programmers. This is why the project fell behind schedule. This also explains the steady stream of requests for extensions. The expected results were achieved only in part. With respect to rehabilitation and procurement management, the expected results were not achieved at all.

5.2.6. Environmental Protection

This project component is still in the preparatory stage, as the Bank has never followed up on the draft terms of reference which were submitted to it for review.

6. SURVIVAL PLAN

6.1. Summary

The purpose of the survival plan is to reach cash flow equilibrium to the extent possible, until substantial funding can be secured to re-start the company's business activities. Funding may be secured in the form of a contribution from the shareholder (the Government), from external lenders, or through privatization.

During the transition period, management has implemented measures and actions designed to guarantee the company's survival. These measures and actions focus on the following:

- protecting all installations and equipment;
- reallocating, consolidating, and motivating human resources;
- reorienting production toward units which are the most profitable in terms of value added; and
- cutting administrative expenses.

6.2. Description of Survival Plan

6.2.1. Guidelines

- The survival plan is based essentially on cobalt production for two reasons. First, the trend in the cobalt market is expected to be favorable in the medium term. Second, cobalt production will not require mobilization of substantial resources.

- A return to high copper production levels would entail extensive excavation work, requiring financial resources which are not available at this time.

6.2.2. Production Policy

6.2.2.1. Cobalt

In 1994 and 1995, cobalt will be produced mainly from existing inventories of cobalt hydrate and cobalt ore in rocks. These resources will be used up by the end of 1995. Pending on the implementation of the project for hydrometallurgical processing of tailings in Kolwezi, the company plans to mine the small cobalt deposit in Kamoya, which will yield 6,000 tons over a two-year period. It may be noted that little excavation work is needed to mine this deposit.

6.2.2.2. Copper

An annual increment of 20,000 tons of copper is planned, following gradual rehabilitation of the Kamoto underground mine and the gradual increase in SKM excavation, once KOV-Courroies is in operation. Activity remains concentrated on the most productive sites. Installations which cannot be exploited profitably under the prevailing conditions will remain idle, and appropriate measures will be taken to protect them. This applies to the Kipushi underground mine, the Kakanda open-pit mine and concentrator, and the Lubumbashi factories. The Luilu factory will remain closed until adequate production levels can be reached to operate it at a profit.

6.2.2.3. Zinc

In 1994, zinc will be produced from concentrates now in inventory and, in subsequent years, by flotation of old tailings from the Kipushi concentrator and the Kolwezi zinc factory.

6.2.2.4. Maintenance

Selection of machinery and installations to be kept in operation will be based on technical/financial criteria focused on continuing necessary operations and ensuring that production tools are kept operational at the lowest cost. Units to be shut down will be protected from weather damage and theft. Special attention will be given to equipment used in cobalt production.

6.2.3. Streamlining Measures

The main measures which Gécamines has begun to apply and which are to be continued at an accelerated pace are the following:

- concentrating the company's inadequate resources on its most profitable sectors;
- re-processing of old tailings to reduce extraction from mines;
- achieving higher yields in metallurgical factories and concentrators in order to reduce extraction from mines;
- cutting administrative expenses;
- rationalizing human resources management by ensuring that staffing is consistent with the company's real needs, improving supervision, and resuming training programs;
- protecting installations from theft and vandalism; and
- streamlining marketing channels.

In addition, the company will need to negotiate:

- a tax exemption, mainly for investments, with its shareholder (the Government);
- suitable, competitive prices with parastatal organizations (e.g., SNEL, OCS, etc.) that do not constitute indirect subsidies to these organizations;
- terms for repayment of its arrears with its commercial partners; and
- debt rescheduling with donors/lenders.

PART III: STATISTICAL INFORMATION

Table 1. Related Bank Loans and Credits

Title	Purpose	Year Approved	Status
Loan 1090-ZR Gecamines Expansion Project ($100 M)	Expand production	1975	Completed. Loan fully disbursed
Credit 1336-ZR Gecamines Technical Assistance Project ($7 M)	Increase efficiency of operations	1983	Completed. Credit fully disbursed
Loan 2682-ZR Gecamines Rehabilitation Project ($110 M)	Restore sustainability of operations	1986	Completed. Loan fully disbursed

Table 2. Project Timetable

Activity	Planned Date	Actual Date
Identification		During supervision of Loan 2682-ZR
Preparation		During supervision of Loan 2682-ZR
Appraisal	3/21/89	3/21/89
Negotiations	5/8/89	5/8/89
Board Approval	6/27/89	6/27/89
Signature	7/13/89	7/13/89
Effectiveness	10/11/89	3/13/90
Credit Closing	6/30/95	2/8/94
Project Completion	12/31/95	2/8/94

Table 3. Cumulative Estimated and Actual Disbursements ($ million)

Fiscal Year	Original Estimate	Actual	Actual/Original (%)
1990	1.8	0	0
1991	6	1.5	25
1992	10.8	2.08	19.3
1993	14.6	2.3	15.8
1994	17	2.3	13.5
1995	20	2.3	11.5

Table 4. Use of Bank Resources

A. Staff Inputs by Stage of Project Cycle

(In staff weeks)

Year	Through Appraisal	Negotiations Through Effectiveness	Supervision	Total
1989	36.3	2.5	0	38.8
1990	0	15.4	0	15.4
1991	0	0	9.8	9.8
1992	0	0	12.7	12.7
1993	0	0	13.5	13.5
1994	0	0	0	0
TOTAL	36.3	17.9	36	90.2

Table 4. Use of Bank Resources

B. Major Project Missions

Activity	Dates	Number of Days	Staff	Report Date	Rating
APP	3/18-4/2/89	16	FA, ME, EC, CON	4/10/89	(1)
PEM 1	10/17-29/89	13	DC, FA, ME	11/16/89	(1)
PEM 2	2/17-3/3/90	15	FA, ME, EC, CO	3/27/90	(1)
SPVN 1	10/23-11/1/90	10	FA, ME, EC, CO	11/29/90	(2)
COF	10/22-23/91	2	DC, ME, EC, CO	11/8/91	(NA)
SPVN 2	11/30-12/4/92	5	ME, EC, CON, RR	12/30/92	(3)

1. Activity Codes: APP=Appraisal; PEM=Pre-effectiveness Mission; SPVN=Supervision; COF=Co-financiers Meeting.

2. Staff Codes: DC=Division Chief; EC=Economist; ME=Mining Engineer; FA=Financial Analyst; CO=Country Officer; RR=Resident Representative; CON=Consultant.

3. Project Rating Codes: 1=problem free or minor problems; 2=moderate problems; 3=major problems; NA=not applicable.

Table 5. Gécamines Exploitation - Statement of Financial Accounts ($ million)

	1988	1989	1990	1991	1992	1993
Copper gross sales	1,111.8	1,135.7	955.8	566.5	351.2	142.4
Cobalt gross sales	221.3	162.5	257.0	296.7	162.6	117.7
Zinc gross sales	65.3	84.5	49.4	29.5	21.4	8.8
Other Income	50.3	64.0	57.8	64.0	47.8	28.9
TOTAL REVENUE	**1,448.7**	**1,446.7**	**1,320.0**	**956.7**	**583.0**	**297.8**
Transport in Zaire	61.2	48.9	38.6	9.4	4.8	0.3
Transport outside Zaire	27.0	32.5	34.4	31.0	18.6	21.3
Ocean Freight	24.3	24.6	21.1	13.9	8.8	3.8
Refining	25.7	31.7	36.8	19.7	12.4	4.7
Misc. & Commissions	30.2	26.5	29.8	23.2	13.8	8.0
COMMERCIALIZATION	168.4	164.2	160.7	97.2	58.4	38.1
Workers	73.8	72.9	112.4	67.3	53.5	25.6
African Cadres	35.5	40.2	45.4	34.8	33.8	15.4
Expatriates	49.5	41.6	42.4	34.8	40.2	30.4
Others	13.2	21.5	41.0	10.3	13.5	5.5
LABOR EXPENSES	172.0	176.2	241.2	147.2	141.1	76.8
Spares	318.9	326.8	320.6	239.0	163.0	89.8
Fuel	63.7	86.5	69.5	67.3	41.7	15.5
Others	13.4	40.2	62.5	37.4	87.4	12.4
MATERIALS	396.0	453.5	452.5	343.7	292.0	117.6
Power (SNEL/Inga-Shaba)	31.0	37.7	34.1	28.3	46.0	60.3
Transport	43.1	45.6	48.1	29.3	16.9	23.6
Contractors & Misc.	83.0	137.2	156.9	91.0	80.0	44.2
SERVICES	157.0	220.6	239.1	148.5	142.9	128.0
PRODUCTION EXPENSES	725.0	850.2	932.8	639.4	576.0	322.4
Taxes (excluding payroll)	4.8	8.9	10.0	7.7	6.8	5.3
Financial Expenses	46.2	52.0	63.0	62.8	95.0	44.0
CASH OPERATING EXP.	**944.4**	**1,075.3**	**1,166.4**	**807.1**	**736.1**	**409.8**
Depreciation	95.5	110.8	112.1	107.9	138.4	113.7
Provisions	12.3	14.3	69.3	70.7	7.7	15.3
OPERATING COST	1,052.2	1,200.5	1,347.9	985.7	882.2	538.9
OPERATING RESULT	396.5	246.2	-27.9	-29.0	-299.2	-241.1
NON OPER. RESULT	-7.5	-55.2	-97.3	-62.7	178.4	-7.1
PROFIT BEFORE TAX	389.0	191.0	-125.2	-91.7	-120.8	-248.2
INCOME TAX	220.9	175.3				
NET INCOME	**168.1**	**15.7**	**-125.2**	**-91.7**	**-120.8**	**-248.2**