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POLICY

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UNITED NATIONS REVOLVING FUND FOR NATURAL RESOURCES EXPLORATION

Annual report of the Administrator for 1984

Summary

This report describes the activities of the United Nations Revolving Fund for Natural Resources Exploration in 1984 and is submitted in compliance with Economic and Social Council resolution 1762(LIV), paragraph 1(o). It informs on investment follow-up activities, describes progress of field operations and advises on the status of new requests for both mineral and geothermal projects.

Continued and serious financial constraints are again brought to the attention of the Council, while the Fund's management policies in focusing its resources on the most promising economic targets and activities are highlighted.

The attention of the Governing Council is directed to the recommendations of the Administrator as set forth in paragraph 38.

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Introduction

1. In 1984 the United Nations Revolving Fund for Natural Resources Exploration continued to provide developing countries with a comprehensive assistance package including project design, execution and follow-up as well as the provision of high-risk financing, expertise, advanced technology and assistance in obtaining investment. The Fund focused its attention on: (a) pre-investment follow-up on its successful mineral discoveries; (b) benefit/cost maximization of its operational activities; and (c) the regeneration of the programme cycle by new mineral and geothermal project development. The progress made in each of these areas is described below.

2. Inadequate donor support remains, however, the major constraint to assisting more developing countries as well as to ensuring adequate replenishment in the longer term. This situation is all the more unfortunate at a time when the availability of high-risk mineral exploration financing in developing countries continues to diminish dramatically.

I. PROGRAMME

A. Mineral resources

3. All phases of activity from the development and appraisal of new projects through the stringent evaluation and realignment of operational projects to the follow-up of successful projects were maintained throughout the year. Work was completed on two projects (in Burkina Faso and Suriname); the Mali project was approaching termination; and a new project in Peru was initiated.

4. Assistance to Governments for investment follow-up on positive exploration findings remained a top priority. Severely depressed metal prices, however, caused a general lack of investment interest in the mining sector. The lack of investment in the San Bartolomé silver deposit in Ecuador illustrates this point, but is also indicative of the long lead time usually experienced in mining projects, and thus the long-term nature of the Revolving Fund operations.

5. Frequent contact was maintained with the Government of Argentina in an effort to stimulate investment in the Huemules project through the private sector, both at the national and international levels. In readiness for bidding, a Fund team, backed up by a specialized consultant, assisted with the preparation of documentation in the first half of the year. This work has remained incomplete and is now awaiting the outcome of a Government policy decision. Several international investors continue to be interested in the prospect which has considerable potential.

6. Further evaluation of the results of laboratory-scale test work on the Benin kaolin deposit near Ketou reported on during 1983 (DP/1984/45) led to a decision to perform industrial application testing on a larger bulk sample of several tons. The sample has been received at a specialized laboratory in Europe and work will be completed during early 1985. Additional detailed exploration is being considered in an effort to increase the reserves.

7. Second-phase exploration work in the Congo was completed with the evaluation of vibrocore samples taken from the offshore drilling programme reported upon last year (DP/1984/45). This second phase work downgraded the significance of the phosphate deposits, at least as far as the development of a major industrial operation is concerned. It was shown that recoverable phosphate/ shell products are largely confined to an area of some 80 square kilometres or about 20 per cent of the area explored. Some 25 million tons of mixed shell/phosphorite are probably recoverable using a simple cost-effective offshore mining system. Total tonnages of about 5 million tons of phosphorite and 20 million tons of shell concentrates are foreseen. Both these products have potential use locally as a fertilizer, particularly for upgrading the sugar cane industry. The Fund is now performing mineral concentration testing and laboratory fertilizer trials on several tons of material collected as a bulk sample during the second phase exploration work. Should the results of these studies be positive, further feasibility work will be considered, if funding is available.

8. On completion of further mineral beneficiation testing and updating of the economic feasibility analysis, work will resume on promoting investment in the San Bartolomé silver deposit in Ecuador. The possibilities have been discussed with potential investors and information has been passed on to interested parties. Positive signs of commodity price strengthening may well be required before real progress can be made.

9. With field activities winding down in Kenya and Mali, and the completion of all work in Burkina Faso and Suriname as reported on last year, only three projects in Haiti, Peru and Sierra Leone were fully operational at the end of 1984.

10. Results obtained from exploration work in Kenya and reported on last year were reviewed, including on-site work by a specialized consultant, and it was recommended that additional work be carried out to investigate further the copper-silver mineralization discovered at Wire Hill. This was endorsed by the Fund's Joint Operations Group (JOG) and an additional \$350,000 will be allocated for detailed geophysical work, geological studies and additional drilling. Arrangements were under way with the Government of Kenya to extend the exploration period, which is due to expire in February 1985. Supplementary short-term funding, to be approved by the Administrator under Governing Council decision 81/8, will allow for the prompt reactivation of field work. Moreover, since the Government is interested in a second project in another part of the country, appraisal work in this area will be carried out simultaneously.

11. In Mali major field work, as called for by the Project Agreement, was completed during the 1983/84 field season (northern winter). The evaluation of the results of this work during 1984 and the completion of limited field work at the In Darset gold prospect and the Adrar Tadhak alkaline complex at the beginning of the 1984/85 field season demonstrated no economic potential. The decision was therefore taken to close down the project in early 1985. Work on the tin and tungsten possibilities of the Tessalit/Kidal area produced

no signs of mineralization. The surface work and drilling of the Immanal carbonatites and Tessalit sulphides only discovered sub-economic mineralization.

12. Work over the past year in Haiti has included detailed geological mapping, two geophysical campaigns, trenching and sampling. This has led to the concentration of activities in two areas, La Mine and Faille. At La Mine, the Fund discovered polymetallic sulphide mineralization (zinc, copper, gold and barite) within a three kilometre zone of acid volcanics. Work is now directed toward the discovery of ore reserves of potential economic significance within this zone. In the structurally complex Faille area, widespread gold showings have been found, the precise extent and grade of which is being determined. Work is continuing apace in both areas, and decisions regarding drilling will be taken early in 1985. Other areas continue to be evaluated with the assistance of consultants.

13. The Peru project became fully operational by mid 1984. Work related to the complex investigation of gold contained within high altitude glacial moraine deposits at San Antonio de Poto (Area I) dominated overall project activities. Initial exploration work for zinc and other base metals was completed over the Orquideas prospect near San Ramon within Area II and regional work in this area was also initiated. For Area I most heavy equipment was received, drill access and drilling pads were prepared, a processing plant was constructed at Ananea and project headquarters and a final processing laboratory were installed in Arequipa. In preparation for the start-up of drilling in early 1985, a major drill contract was concluded and a sophisticated drilling system was purchased, refined, tested and shipped. With the use of specialized consultants, sample processing procedures were being carefully reviewed.

14. After ratification of the project in January 1984 by the Government of Sierra Leone, field work was initiated during the first quarter of the year. Some delays resulted from project staff sickness and a decision by the Government to award one component of the project (alluvial gold) to the private sector. Nevertheless, considerable work was accomplished and smaller target areas with interesting gold mineralization were identified, with detailed investigations under way by the end of the year.

15. The Fund maintained a good level of project development work throughout the year for a new generation of projects. Areas in southern Rwanda with good indications of gold mineralization were positively appraised. An exploration project was designed and endorsed by JOG and negotiations were held at the end of the year to finalize the Project Agreement. Field work will be initiated soon after the signature and ratification by the Government of the Project Agreement.

16. A phosphate exploration project in Chile was also fully developed and endorsed by JOG. Negotiations on the Project Agreement were under way at the end of year. Excellent progress was also made on the rapid development and design of a metals exploration project in the Ivory Coast, which was

subsequently endorsed by JOG. Three exploration areas for gold, nickel and copper were identified. Project Agreement negotiations were planned for early 1985 and field activities will commence as soon as possible after ratification of the Agreement by the Government.

17. A project in Honduras, which was endorsed by JOG at the end of 1983, suffered delays when one of the areas was taken over by the private mining sector. The situation has now been clarified with the Government and other areas proposed by the Government are being appraised. A modified project recommendation to explore for base-metal sulphides, silver and gold will be developed in the first quarter of 1985. It is hoped that approval can be obtained, and Project Agreement negotiations completed by the middle of the year.

18. Project development work proceeded well in Guatemala. A final preparatory mission was planned for early 1985 and it was expected that a positive project recommendation would ensue. A negative assessment was made of the possibilities in one area of Burundi, but the Fund will continue to work closely with the Government to see whether ongoing work by UNDP/United Nations Department of Technical Co-operation for Development (UNDTCD) in the Cibitoke Province uncovers any possibilities for follow-up. Project development missions to Brazil and Ghana were positive and it is hoped that appraisal work will be initiated during 1985.

19. The reduced level of funds available for project approvals will be the major factor in determining new project development decisions over the next biennium. The criteria used in selecting projects will have to become even more stringent and, if significant additional funding does not become available, many requests will have to be deferred. Those projects with the best chances of success will assume top priority.

B. Geothermal energy

20. During 1984 advanced project development activities were pursued on promising target areas in four countries: Mexico, St. Lucia, Turkey and Bolivia.

21. Following the successful outcome of two Fund missions in 1984, the project in Mexico at Las Planillas, near Guadalajara, was endorsed by JOG. At the end of the year the project recommendation and Agreement were in the hands of the Government of Mexico. This project, if successful, should lead to the rapid development of a large block of power to assist industry in the area.

22. In St. Lucia, pre-feasibility studies completed by the Los Alamos National Laboratory have led to a positive appraisal of the Qualibou Caldera prospect near Soufrière for a possible Fund project. A project recommendation has been prepared and at the end of the year discussions were taking place with the Government and the United States Agency for International Development, for possible co-financing of this project, estimated to cost approximately \$5 million. If successful, this project should meet all the electrical requirements of St. Lucia and eventually displace imported diesel oil as the main power source.

23. A four-man appraisal mission visited the Seferihisar prospect near Izmir in Turkey in October; the technical reports are due in early 1985.

24. Two prospects in Bolivia were also appraised by a consultant from UNDTCD. A project was eventually set up at Laguna Colorada by UNDP using Italian bilateral funding on one of the prospects.

25. Developing countries have a strong interest in using Revolving Fund financing for exploratory drilling programmes, which is the highest risk component of the geothermal exploration sequence. It is hoped that the Fund's success in its first endeavours in this field, combined with the fast replenishment anticipated from geothermal installations, will provide the developing countries with continuous access to funds for further activities of this type.

26. The geothermal activity data base established over the past two years has been continuously updated and has proven extremely useful in guiding the activity in this area, ensuring that the most promising targets from both a technical and economic point of view are given particular attention.

II. MANAGEMENT AND FINANCE

A. Management

27. The primary management concern of the Fund in 1984 was to make as effective use as possible of the Fund's limited financial resources. Preparation of new projects continued, while recognizing that funding availability would probably not cover all projects favourably assessed by the Fund. Since Government interest in Fund projects now exceeds funding capacity in the very short term, only the most promising exploration targets identified by the Fund were selected for priority project development.

28. The main project selection criteria remained potential economic viability of the exploration targets. During the year, four new project recommendations (Chile, Ivory Coast, Rwanda and Mexico) were approved by the Fund's advisory body, in addition to the Kenya project extension. Another project recommendation (St. Lucia) was formulated at the end of the year. Discussions and/or Project Agreement negotiations took place with each of the respective Governments. Complex issues, which varied from country to country, made it difficult to determine when each negotiation process would be completed. Such issues involve, depending on the country, the level of project funding, co-financing possibilities, the size of target areas and the availability to the Fund of privately held concessions for exploration. With the possibility of prolonged project negotiations with Governments, it becomes imperative for the Fund to establish deadlines for decisions by Governments in order not to block funding indefinitely for other projects.

29. The Fund maintained tight management control of all aspects of its operational programme both at Headquarters and in the field. The phasing and selective progression of project activities, dependent on technical and

economic assessments of previous results, allowed the Fund to achieve cost-effective results. The emphasis on programme quality and the ability to operate fast and effectively has contributed to the Fund's impressive record of exploration results. It also has provided the Fund with maximum programming flexibility and the capacity to respond quickly to situations as they arose, while at the same time assuring that work continued only when technically and economically justified. In this connection, it is noteworthy that expenditure on projects for which field work has been completed is approximately 20 per cent less than the maximum Governing Council approval authorization. Also, in efforts to keep costs in line, the Fund has maintained a zero growth position in real terms in its administrative expenditures.

30. The Fund maintained close contacts with major private and public sector mining groups to promote investment interests in successful projects as well as to keep abreast of the general exploration and investment climate. With continued depressed mineral markets, there were few new high-risk exploration ventures financed from the traditional private sector, particularly in the developing countries. This situation is not surprising since most mining groups' exploration operations must conform to short-term market conditions. The Fund, on the other hand, has the advantage of a longer-term time horizon. Developing countries, consequently, continue to see in the Fund a unique opportunity to reduce financial risk and to open doors to investment.

31. Since the beginning of Fund operations in 1975, there have been two directors who have ably managed its activities during these formative years. A new director has been designated to take up his appointment in early 1985. The Council's endorsement of this designation is requested in accordance with Economic and Social Council resolution 1762 (LIV), paragraph 1(n).

B. Financial position

32. The \$2.4 million in expected voluntary contributions for 1985 falls far short of the level of financial support required for new project approvals on a continued and sustained basis. As of 31 December 1984, the Fund's cumulative expenditure on completed projects, including its present programme commitments and an actuarial estimate for subsequent work, was \$32.8 million. Programme expenditures in 1984 are estimated at \$3.7 million, a decline of about \$1 million from 1983. This is attributed in part to the completion of work on several projects before a new generation of projects become operational.

33. The financial prerequisite for submitting project recommendations for approval is funding availability for the Minimum Work commitment and possible subsequent work, estimated on an actuarial basis. As noted in the programme section of this report, mineral exploration project recommendations were endorsed in October by JOG for Chile, the Ivory Coast and Rwanda along with the extension of the project in Kenya.

34. With regard to geothermal project development, the possibility of funding the geothermal project recommendation in Mexico is subject to the Fund's financial position at such time as the Government may officially endorse the project recommendation and Project Agreement negotiations are successfully concluded. Funding of the project recommendation in St. Lucia, not yet submitted to JOG, is subject to reaching a third-party co-financing agreement in order to guarantee covering the costs of three exploratory wells.

35. While at the end of 1984 it was uncertain how fast negotiations on the above noted projects would proceed with Governments, it is nevertheless clear that the funding capacity is rapidly being exhausted. Should the project recommendations endorsed by JOG, as well as others in an advanced stage of development, lead to approval by the Governing Council, annex III in DP/1985/46/Add.1 shows that the estimate of funding available for other new programming would be reduced to \$1.5 million.

36. While the potential economic viability of some relatively expensive projects, particularly for geothermal exploration, may be good, it is becoming increasingly difficult for the Fund to consider financing them alone. It is therefore becoming necessary to look for co-financing partners in order to assure that the required exploration work is fully covered.

37. While there is interest by some donors in co-financing, the Fund has found that there are many complex management, institutional and procedural issues to be resolved. In short, the degree to which the Fund will be able to carry out its mandate rests on voluntary and eventual replenishment contributions, supplemented, in special circumstances, by co-financing. It must be emphasized, however, that in the long run real success will only be achieved through sustained core programme financing. Consequently, the recommendation which follows stresses the need urgently to increase the level of voluntary contributions to the Fund.

III. RECOMMENDATIONS

38. In the light of the above, the Administrator recommends that the Governing Council adopt a decision which would, inter alia:

(a) Take note of the approval by the Administrator of the \$350,000 in supplementary short-term funding for Mineral Exploration in the Migori Area of Kenya (KEN/NR/78/001) in accordance with decision 81/8;

(b) Approve the projects submitted under the series DP/NRE/PROJECTS/REC, subject to the availability of funds;

(c) Endorse the appointment of Mr. Shigeaki Tomita as the new Director of the United Nations Revolving Fund for Natural Resources Exploration, in accordance with Economic and Social Council resolution 1762 (LIV), paragraph 1(n);

(d) Emphasize growing concern over the very limited financial capacity of the Fund to assist more developing countries in their natural resource exploration and development activities;

(e) Appeal urgently to Member States to contribute to the financial resources of the Fund in order for it to fulfil its mandate.