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OTHER FUNDS AND PROGRAMMES

UNITED NATIONS REVOLVING FUND FOR NATURAL RESOURCES EXPLORATION

Geothermal Exploration in the Qualibou Caldera, St. Lucia (STL/NR/84/001)

Report of the Administrator

I. BACKGROUND

1. Since the mid-1970s, studies have been conducted in St. Lucia addressing the geologic, economic and engineering aspects of geothermal energy potential of the Qualibou Caldera. The technical findings and recommendations resulting from these studies indicate that geothermal potential exists and that several promising sites for production drilling are available.

2. The Qualibou Caldera offers excellent prospects for the discovery of producible high-enthalpy fluids at depths between 1 and 2 km, which can be transformed, initially by mobile turbine-generator units, into commercial electric power production for the national grid. Consequently, any resulting discovery should lead to rapid production of electricity, replacing more expensive imported diesel fuel, and should facilitate the growth of new industries based on the excess geothermal fluids.

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II. THE PROJECT

3. The objective of the project is to discover, within the Qualibou Caldera near Soufriere, the second largest town in St. Lucia, a high enthalpy geothermal reservoir suitable for production of electricity for the national grid. The project exploration area comprises approximately 25 square kilometres.

4. Based on a tripartite technical meeting convened in St. Lucia between the Government of St. Lucia, the United States Agency for International Development (USAID), and the United Nations Revolving Fund for Natural Resources Exploration (UNRFNRE) and their respective consultants, in April 1985, it now appears likely, based on the available evidence, that the immediate area known as Sulphur Springs may represent an outflow zone. A zone of some 3 square kilometres to the south and south-east of the Sulphur Springs has been therefore selected as the target for the first exploratory well by the project.

5. Under overall supervision by the Fund, a consultant project management group with the requisite range of specializations and experience (geology, geophysics, geochemistry, drilling superintendence and reservoir engineering) will ensure that the requisite technical and scientific data are collected during the project, whilst at the same time maintaining an efficient and economic drilling operation.

6. The drilling component will be funded by USAID and will consist of a rig capable of handling depths of 2,500 metres.

III. FINANCIAL DATA

7. In carrying out the project, consisting of a minimum of drilling two production-size exploratory wells; the Fund will expend not more than \$2.5 million. USAID will provide up to \$3 million to co-finance this project through a management services agreement between the Fund and the Government of St. Lucia. The expected duration of the project is approximately 18 months.

8. Under the Minimum Work approval authority of the Administrator, \$2.5 million was allocated to this project in July 1985 as part of a total \$5.5 million exploration programme, the balance co-financed by USAID. The financial assets of the Fund are adequate to meet the cost of the project. Since the additional funding has been obtained under co-financing arrangements, the Council's approval for the additional funding is not being sought.
