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DEVELOPMENT  
PROGRAMME



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UNITED NATIONS REVOLVING FUND FOR NATURAL RESOURCES EXPLORATION

PROJECT RECOMMENDED BY THE ADMINISTRATOR

Mineral Exploration in the Eastern Desert, Egypt (EGY/NR/77/001)

I. Background

1. At its January 1978 meetings, the Governing Council took note that negotiations were continuing on the project Mineral Exploration in the Eastern Desert (DP/291) <sup>1/</sup>. Formulated at the request of the Government, the project was intended to cover an area of 5,500 square kilometres.
2. Final consideration and approval of this project was postponed, at the request of the Government of Egypt, until work which is being undertaken by the Egyptian Geological Survey and Mining Authority would be completed in 1981. Subsequently, in January 1979, the Government proposed a new area (Abu Dhar), comprising approximately 4,550 square kilometres and situated to the south of the Hamata area, for exploration by the Revolving Fund as a separate project.
3. Two ancient underground gold mines are known in the Abu Dhar area, one of which, Hutit, was worked during the early part of this century. In addition, there are two known areas of ancient alluvial gold workings. No other types of mineral deposits have yet been identified, although abandoned base metal mines and operating small talc mines exist in a similar geological setting further north. This part of the Eastern Desert is hilly and virtually uninhabited, and lies to the south of the country in the Red Sea Hills.
4. The Abu Dhar area comprises predominantly a Precambrian rock complex or lavas, metavolcanics, schists, greywackes, etc., the ophiolitic series, and intrusions

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<sup>1/</sup> See Official Records of the Economic and Social Council, 1978, Supplement No. 13, (E/1978/53/Rev.1), Annex II, page 210, operative paragraph 6.

ranging from peridotites to syntectonic and younger granites. On present knowledge, the major economic potential is represented by gold but there is a good potential for locating other minerals. The geological environment of the Abu Dhar area is similar to that of the Hamata area to the North, where economic grade mineralization is known in the metavolcanics.

## II. The project

5. The principal objective of the project will be the discovery of primary and alluvial gold deposits and the assessment of both known old workings and new discoveries. Any indications of other minerals of sufficiently high potential economic value to warrant exploitation in south-east Egypt will also be investigated.

6. The project covers a total of about 4,550 square kilometres, located to the south-west of the Hamata harbour on the Red Sea coast, some 800 kilometres south of Cairo to which it is connected by an all-weather coastal road.

7. The Minimum Work will include:

(a) Review and evaluation of relevant reports of the Egyptian Geological Survey and Mining Authority, including aerial photographs and satellite imagery;

(b) Determination of the gold grades/widths in underground workings of the Hutit mine. This will probably necessitate some re-opening of caved workings;

(c) Detailed evaluation of mineralization in the Hutit mine area by geophysical and geochemical techniques, large-scale geological mapping, trenching and core drilling as warranted;

(d) Assessment of known alluvial gold occurrences by mapping and pit sampling;

(e) Exploration for other gold and other mineral deposits, including massive sulphides associated with the metavolcanics by, in the first instance, "wadi" (dry river) sampling, followed, as appropriate, by detailed mapping and loaming or other techniques where mineralization of potential economic value is indicated; and

(f) Compilation and evaluation of all data, with detailed recommendations, if appropriate, for further work to assess the economic potential of targets.

8. In carrying out the Minimum Work, the Fund will expend not less than the equivalent of \$440,000 over a period of approximately 12 months, to finance the services of locally and internationally recruited personnel and provision of necessary equipment, supplies, logistics and supporting services.

9. If the results of the Minimum Work programme provide justification for further exploration to demonstrate the nature and extent of mineralization in selected target zones, subsequent activities, suitably phased, will consist initially of further detailed surface work and subsurface investigations by drilling, pitting or other means of access to deposits, as necessary. Should these initial additional investi-

gations indicate one or more potential ore bodies, further assessment would include one or more of the following: detailed drilling, opening underground access, sampling, mineral dressing and metallurgical tests. A reasonable assumption on present knowledge is that the Minimum Work may indicate some four or five targets on which some additional work, as indicated above, will be required.

10. In the event that it is concluded, on the basis of the above studies, that an economic mineral body exists, further detailed studies including preliminary feasibility work may be carried out.

11. The total cost of all work, subsequent to the Minimum Work described in paragraphs 7 and 8 above, may reach \$2 million.

### III. Financial data

<u>12. Revolving Fund allocation</u>	<u>\$US</u>
Minimum Work	440 000
Possible additional expenditures for further activities following the Minimum Work	2 000 000

The financial assets of the Fund are adequate to meet the costs of this project.

### IV. Recommendation

13. The Administrator recommends that:

#### The Governing Council,

(a) Approve the project, involving a Minimum Work at a cost equivalent to \$440,000, as an obligation of the United Nations Revolving Fund for Natural Resources Exploration, and possible additional expenditures for further activities, up to a maximum of \$2 million; bringing total possible expenditures to the equivalent of \$2,440,000;

(b) Decide that this approval shall be cancelled unless the Government of Egypt and the Fund shall have signed a project agreement within a period of nine months after the date of this approval, it being understood that the Governing Council shall be notified of any such cancellation at the Council's first session after such action has been taken.

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