



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

226

06585



UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION

Distr
RESTRICTED
UNIDO/ITD.336
6 June 1975
ENGLISH

REPORT ON UNIDO MISSION TO LIBYA ON TECHNICAL ASSISTANCE
IN STRENGTHENING AND DEVELOPING THE ACTIVITIES OF THE
HIGHER PETROLEUM INSTITUTE, TOBRUK, 1/
(TS/LIB/75/003)

16-23 May 1975 .

by

M. El Halfawy
and
A. Dumitrescu
UNIDO Officials

1/ This document has been reproduced without formal editing.

TABLE OF CONTENTS

Page no.

1) BACKGROUND INFORMATION	1
2) CONCLUSIONS AND RECOMMENDATIONS	2
3) FOLLOW-UP ACTION FOR UNIDO	4
4) DISCUSSIONS ON OTHER UNIDO PROJECTS IN LIBYA	5

APPENDICES

APPENDIX 1

Project Data Sheet	8
--------------------	---

APPENDIX 2

Basic Information, Higher Petroleum Institute, Tobruk	10
--	----

APPENDIX 3

List of new Laboratories and Workshops to be established in the Higher Petroleum Institute, Tobruk	14
--	----

APPENDIX 4

Summary of Meetings of the UNIDO Mission with the Management of the Higher Petroleum Institute, Tobruk, 17-20 May 1975	17
--	----

APPENDIX 4A

Job Description (Consultant, Petroleum Refining and Petrochemical Industry)	20
---	----

APPENDIX 4B

Job Description (Consultant in Electro-Mechanical Engineering)	22
--	----

APPENDIX 4C

Job Description (Consultant in Petroleum Exploration)	24
--	----

APPENDIX 4D

Job Description (Consultant in Drilling and Oil Production)	26
---	----

APPENDIX 4.1

Letter to Dr. Adly, Resident Representative, United Nations Development Programme, Tripoli	28
--	----

APPENDIX 4.2

Letter to Dr. Adly, Resident Representative, United Nations Development Programme, Tripoli	29
--	----

APPENDIX 5

Draft Budget	31
--------------	----

1) BACKGROUND INFORMATION

Following the official request from the Government, a mission was undertaken from 16 to 23 May 1975 in Libya, in order to provide guidance and explore the possibilities for further UNIDO technical assistance in strengthening and developing the activities of the Higher Petroleum Institute in Tobruk. (A copy of the relevant project data sheet is attached herewith, as Appendix 1)

On 17 May 1975, a short meeting was held with Dr. Adly, UNEP Resident Representative, and Mr. Sabi, Deputy Resident Representative, and both of them were briefed on the objectives of the project. In the same afternoon, the UNIDO mission reached Tobruk, where a meeting was arranged on the same day with Professor Dr. Elhadi Khoja, Director-General of the Higher Petroleum Institute and Mr. Salah Dewaidar, Technical Adviser.

From 17 to 20 May 1975, the UNIDO mission had the opportunity to visit the laboratories, workshops and training facilities of the Institute and also had several meetings with its management, in order to define the major areas which could be covered by the UNIDO technical assistance.

..... In appendices 2 and 3 attached herewith, a short description on the main activities and organization of the Institute is presented, as well as the new laboratories and workshops to be established in the Institute.

2) CONCLUSIONS AND RECOMMENDATIONS

The following areas of immediate assistance were identified:

- a) Advisory services by a team of four consultants who will assist the Institute during six weeks, in drawing up curricula and training programmes, advise on the utilization of existing equipment and in selecting additional equipment for training, research and development. Starting date is about 1 August 1975
- b) Training of four supporting staff members of the Institute for three months in the field of library science and industrial information, inventory control and management of stores, organization of seminars and training programmes and modern accounting procedures, either at UNIDO headquarters in Vienna or in similar institutes
- c) Training of twelve technicians of the Institute for two months in the field of petroleum refining technology (operation and quality control), maintenance of refineries and petrochemical plants and instrumentation and process control in similar institutes and plants in Austria, Romania and probably Greece.

Details on the requested programme for UNIDO technical assistance including draft job descriptions and draft letters to the UNDP office in Tripoli were prepared by the mission and are presented in the "Summary of Meetings of the UNIDO Mission with the Management of the Higher Petroleum Institute, Tobruk, 17 to 20 May 1975" (Appendix 4).

This programme which will be financed under a Funds-in-Trust arrangement (except for four fellowships), was thoroughly discussed and agreed upon on 21 May 1975, in a final meeting in the UNDP office in Tripoli which was attended by Mr. Sabi, Deputy Resident Representative, Professor Dr. E. Khoja, Director-General, and the writers of this report.

It was also agreed that before submission of the official request by the Libyan Government, the UNDP office will take action based on the "Summary" of the meeting. Application forms for fellowships were handed over to Professor Khoja who will select the suitable candidates for each of two groups of trainees.

In accordance with the desire expressed by Professor Khoja on 22 May 1975, a meeting was arranged by Mr. A. Dumitrescu with the representatives of the Romanian Trade Office in Tripoli, in order to discuss the possible assistance to be given to the project by the Joint UNIDO-Romania Centre, including a tour in July 1975 of research centres and petroleum industry in Romania.

3) FOLLOW-UP ACTION FOR UNIDO

Due to the short time which remains until the project will start, the following steps should be immediately taken by UNIDO.

- a) Selection and advance recruitment of the four consultants using for this purpose the UNIDO roster, as well as the preliminary contacts with the O.K.V. Company (Austria), the Technical High School in Vienna and the Joint UNIDO-Romania Centre in Bucharest;
- b) Preliminary arrangements for ensuring the implementation of fellowships of the two groups of trainees at UNIDO headquarters in Vienna, the Technical High School in Vienna, the C.M.V. Company (Austria), the Joint UNIDO-Romania Centre in Bucharest and the petroleum industry in Greece;
- c) Ensure the necessary amount to be transferred to UNIDO by the Libyan Government in order to have the project financed under Funds-in-Trust. Professor Khoja, during his visit to the UNDP office in Tripoli, was briefed on the necessary arrangements to be made and the suitable procedure to be followed;
- d) Investigate with the Technical Co-operation Division the possibility of UNIDO financing four fellowships under the Regular Programme as stated in the draft letter to the UNDP office in Tripoli. A draft budget of the project is attached herewith as
..... Appendix 5.

4) DISCUSSIONS ON OTHER UNIDO PROJECTS IN LIBYA

A visit was made to the Industrial Research Centre by Mr. M. El Halfawy. The Director-General was not available and apparently is going to leave the Centre to take charge of a new iron and steel project. The UNIDO Project Co-ordinator, Mr. T. Hillesley, was also on annual leave abroad. Discussions were held with Mr. Mohamed El-Tahir Gannour, Director-General of Technical and Economic Affairs.

a) The Single Cell Protein Report

The Centre will communicate to UNIDO in due time their comments on the report. This has not been done so far since other Government bodies such as the Petroleum Organisation and the newly established Arab Development Institute are also involved in this project;

b) The Pesticides Formulation Plant

The personnel responsible for this project were on leave and Mr. Gannour promised to communicate later to them UNIDO's wish to receive the Government's views on the two reports submitted and the project as a whole;

c) Training Fellowships

Mr. Gannour explained that only four out of twelve fellowships have been implemented so far, and the Centre wished to expedite the placement of the fellows. He mentioned that all candidates are University graduates with a good working knowledge of English.

Nevertheless, UNIDO always insists on a language proficiency test which is inconvenient and embarrassing to the candidates and results in unnecessary delays. It was explained to him that UNIDO might be satisfied with Mr. Millesley testifying that the fellows have a good working knowledge of English. This suggestion was acceptable to him and he requested that Mr. Millesley be informed accordingly.

d) Unit for Maintenance and Repair of Laboratory Instruments

UNIDO has submitted a proposal for the setting up of such a Unit within the Centre. Mr. Gannour requested an updating of this proposal in the light of rising costs of experts and equipment. He also would like to know the number and qualifications of the Libyan counterparts required.

e) Proposal for setting up an Industrial Construction Unit

The need of the Centre for such a Unit to plan, manage and follow up the implementation of industrial projects was explained to Mr. Gannour and a proposal, similar to the project under implementation in Turkey, was given to him. He felt that the proposal was most interesting and believed that there was a real need for such a Unit. Some follow-up on this proposal would be needed by the ITD Industrial Construction Unit, the Field Adviser and the office of the Resident Representative.

The UNIDO Mission would like to take this opportunity to express their gratitude and thanks to Mr. Adly, UNDP Resident Representative in Tripoli, Mr. Sabi, UNDP Deputy Resident Representative and Professor Khoja, Director-General of the Higher Petroleum Institute in Tobruk for their cordial reception and kind co-operation during the visit.

Appendix 1

PROJECT DATA SHEET

1. Reference data

Country: Libyan Arab Republic
Project title: Assistance in the development of
the Higher Petroleum Institute
Project number: TP/LIB/75, 003
Original date of request: Resident representative's
cable of 9 May 1975.
Purpose of the project: To provide expert assistance to
the Government in the development
of the Higher Petroleum Institute

2. Background information

The Higher Petroleum Institute, Tobruk, is a state organization attached to the Ministry of Petroleum. The institute trains technicians required for the petroleum and petrochemical, as well as fertilizer industry. The institute also undertakes, on a modest scale, industrial research and development activities in these fields. The management of the institute would like to expand its research and training activities through the installation of pilot plants for the different unit operations and processes employed in these industries and through special training programmes in Libya and abroad. The institute has ample funds in its budget for the expansion of these activities.

3. Description of the project

The experts shall review the training and research activities of the institute and advise the management on the type of pilot

plants and supporting services required, on training programmes, and on possible future co-operation with UNIDO to implement this programme.

4. Project Budget

<u>Component</u>	<u>Duration</u>	<u>Cost US\$</u>
Inter-regional Adviser (petrochemicals and fertilisers)	0.33 m/m	1,000
UNIDO staff member (petroleum technology)	0.33 m/m	1,000
		<u>total: 2,000</u>

5. Request approved

_____ Date: _____
on behalf of UNIDO

_____ Date: _____
on behalf of U.D.P.

Appendix 2

Higher Petroleum Institute
Dr. Elhadi Elhoja, General Director
Tobruk, P.O. Box 201
Libya
Tel. Direct 27 2
2551 (switch)

GENERAL INFORMATION

The institute was established in July 1972 in Tobruk which is located 450 kms. East of Benghazi.

1. Mims of the institute

1.1 To advise courses that will enable entrants from secondary schools to gain diplomas as assistant engineers after 3 years study at the institute.

1.2 To offer consultation and technical studies to the National Petroleum Industry. (near future)

2. Academic time

The academic year comprised two terms, each of 15 weeks. The optimum number of contact hours a week is 36.

3. Language of instruction

English language.

4. Institute departments

4.1 Present departments

- (1) Petroleum Refinery and Petrochemicals
- (2) Mechanical Technology and Maintenance

(3) Electrical and Electronics

4.2 New Departments (next year 1976)

(1) Petroleum exploration (Geology and Geophysics)

(2) Petroleum Drilling and production

(3) Petroleum economics and management

5. Number of students at the Institute

5.1 The present number of students is about 100, distributed over the 3 departments mentioned in 4.1.

5.2 The planned capacity of the institute is to reach 500 students in the coming next 2 years. This number will be distributed over the 3 institute departments.

6. Specialisation in the Institute

6.1 First year students take a general course in their first term.

6.2 In second term of the first year, students work on the specialised departments.

7. Syllabuses in the Institute

7.1 The courses and its syllabuses for the existing departments are already prepared.

7.2 The courses and syllabuses for the new departments are under preparation.

8. Student laboratories in the Institute

8.1 Existing laboratories:

The Institute has several laboratories serving the

existing departments and was built to be student laboratories.

The laboratories are:

- (1) Chemistry laboratory with capacity of 12 students for General Chemistry
- (2) Physics laboratory of capacity 12 students
- (3) Hydraulics laboratory
- (4) Thermodynamics laboratory
- (5) Pneumatics laboratory
- (6) Internal combustion and electrical machinery laboratory
- (7) Thermal process laboratory (unit operation)
- (8) Transport of Fluid laboratory
- (9) Electronics and electrotechnics laboratory
- (10) Non destructive tests laboratory
- (11) Welding laboratory
- (12) Mechanical electrotechnical and electromechanised workshop
- (13) Closed circuit television station for applications of audio visual learning aids.

The above mentioned laboratories have been established during the last 2 years but still require extra deliveries.

2.2 New laboratories

It is planned to install numbers of new laboratories to speed up the development of the Institute and the establishment of new departments.

The laboratories intended to be installed are indicated in the attached list.

2. Research laboratories

It is planned that the existing and the intended Institute

laboratories have dual action, service as student research laboratories. Noting the importance of the separation between the students' daily work and research work. Arrangements will be made for their special requirements.

10. Building of the Institute

10.1 Existing buildings:

- (1) The above mentioned existing laboratories are located in air conditioned building.
- (2) There are some large empty rooms which could be used for the establishment of Geology, Geophysics, Physics, Petroleum production and Drilling laboratories.

10.2 New buildings:

It is planned to start establishment of new buildings for the new laboratories and installation mentioned in the attached list. The project is in the Engineering stage and the predicted starting time is the end of this year (1975).

The philosophy of the new lay-out and buildings to subdivide the Institute into specialised section for each department. The necessary arrangement in the existing building will be done to fulfill this philosophy.

Appendix 3

LIST OF LABORATORIES AND WORKSHOPS TO BE ESTABLISHED IN
THE INSTITUTE

1. Physics laboratories

= 2 laboratories each of capacity 30 students equipped with apparatus and equipments and benches for different branches.

2. General and Analytical Chemistry laboratories

= 3 laboratories each of capacity 30 students for:

- Analytical Chemistry
- General Chemistry
- Physical Chemistry

The laboratories should be equipped with apparatus, equipments and benches.

3. Scientific class workshop

4. Geology and Geophysics

- 2 general geology laboratories
- each of capacity 30 students
- 1 petroleum geology laboratory of capacity 30 students
- 1 Igneous rocks geology laboratory of capacity 30 students
- 1 Sediments geology laboratory of capacity 30 students
- 1 Geological structure laboratory of capacity 30 students
- 1 Structure geology laboratory of capacity 30 students
- 1 Subsurface geology laboratory of capacity 30 students
- 1 Gravity laboratory of capacity 30 students
- 1 Magnetic laboratory of capacity 30 students

- 1 Seismic laboratory of capacity 30 students
- 1 Fossils laboratory of capacity 30 students
- 1 Research laboratory for petroleum geology and geophysics
- 1 Geological museum.

5. Production and Drilling laboratories

- 1 P.V.M. laboratory of capacity 30 students
- 1 Core analysis laboratory of capacity 30 students
- 1 Natural gas reservoir engineering laboratory of capacity 30 students
- 1 Cementing laboratory of capacity 30 students
- 1 Drilling technology laboratory of capacity 30 students
- 1 Well completion laboratory of capacity 30 students
- 1 Mud laboratory of capacity 30 students
- 1 Petroleum production and drilling models laboratory
- 1 Exhibition.

6. Petroleum refinery and petrochemicals laboratories

- 1 Petroleum chemistry laboratory of capacity 30 students
- 1 Petroleum refining and processing laboratories with pilot units of capacity 30 students
- 1 Petrochemical laboratory of capacity 30 students
- 1 Polymer processing laboratory with capacity 30 students
- 1 Corrosion laboratory of capacity 30 students
- 1 Industrial safety laboratory of capacity 30 students

7. Mechanical laboratories

- 1 Strength of material laboratory of capacity 30 students
- 1 Performance test of petroleum products laboratory of capacity 30 students.

- 1 Metallurgical laboratory of capacity 30 students
- 1 Corrosion laboratory of capacity 30 students
- 1 Petrochemical laboratory of capacity for accurate measurement of laboratory of capacity 30 students
- 1 Turbines and compressors laboratory with models of capacity 30 students.

7. Electrical and Electronics laboratories

- 1 Instrumentation and measurement laboratory of capacity 30 students
- 1 Power transmission laboratory of capacity 30 students
- 1 Electrical machines laboratory of capacity 30 students
- 1 Controls engineering laboratory of capacity 30 students
- 1 Radio and communication laboratory of capacity 30 students

8. Computer Center for information storage, education and research.

10. Data bank for petroleum industry.

Appendix 4

SUMMARY OF MEMORANDUM OF THE UNIDC MISSION WITH THE MANAGEMENT OF
THE HIGHER PETROLIUM INSTITUTE, TOBRUK, 17-20 May 1975.

On behalf of the Higher Petroleum Institute:

Prof. Dr. Elhadi Khoja - Director General
Engineer Salah Dowaidar - Technical Advisor

On behalf of the United Nations Industrial Development Organization
(UNIDO)

Dr. Mohamed El Haffay - Senior Inter-regional Adviser
Dr. A. Dumitrescu - Industrial Development Officer

Several meetings, morning and afternoon were held between 17 and 20 May 1975, at the Institute's headquarters in Tobruk. The UNIDO Mission made a tour of the laboratories, workshops and training facilities of the Institute. The Mission believes that the Institute has the potential to eventually become a full fledged Institute of Technology with departments of petroleum, chemical, electrical and mechanical engineering to serve the needs of industry in Libya in general and the needs of the petroleum and petrochemical industry in particular, in training, research and development.

However, the Institute is still in the early formative stages and intensive efforts are needed on behalf of the management to design appropriate programmes, organise and equip the laboratories and provide qualified and trained staff and the requisite supporting personnel. The Mission expressed the willingness of UNIDO to co-operate with the Institute's Management in rendering the required assistance so that the Institute can provide it's

services to the petroleum and petrochemical industry.

The following areas of immediate assistance were identified:

1. The need of expert assistance in drawing up curricula and technical specifications, advice in the utilization of existing equipment and in selecting additional equipment for training, research and development.
2. The need of training supporting personnel of the Institute.
3. The need of training about twelve technicians who have spent the years in the Institute.

It was agreed that U.I.X., under the *de-facto* financing, would recruit a team of four highly-qualified consultants for six weeks duration. Their specializations and duties are outlined in the attached job descriptions (Annex 4.1 to D). The team would arrive in February about the 1st August 1975.

It was also agreed that U.I.X. as a start, shall provide training facilities for four members of the supporting staff of the Institute as outlined in the attached draft letter to the U.D.P. Resident Representative (Annex 4.1). This will be followed by other similar requests in future.

U.I.X. will also try to arrange for eight weeks training of twelve technicians (August and September 1975) in refineries and petrochemical plants (details are given in the draft letter Annex 4.2).

Regarding the long term assistance of U.I.X. in the development of the Institute, it was agreed that this will be elaborated in detail by the team of consultants in the light of their assessment of the present situation and future requirements.

The U I D C Mission would like to express their gratitude to the Director General, Prof. Dr. Elhadi Khoja, for his cordial reception and kind co-operation.

Appendix 4A

Pos' Title: **Consultant, Petroleum Refining and Petrochemical Industry.**

Duration: Six weeks

Duties:

As consultant as leader of and in co-operation with a team of three other consultants (in the fields of electro-mechanical engineering, petroleum exploration and drilling and oil production) and in consultation with the Director General of the Institute, is expected, in his fields of competence, to make a general assessment of the specific needs of the Institute in training of technicians for the petroleum and petrochemical industry and in rendering services to these industries in studies, research and in particular -

1. Draw-up appropriate curricula and propose suitable training programmes for up-grading the skills of personnel employed in industry.
2. Evaluate the proposals made by suppliers for training and applied research equipment and taking into consideration existing equipment, recommend suitable items and adequate spare parts to be ordered by the Institute.
3. Recommend additional equipment teaching aids and training materials needed by the Institute, including general specifications, sources of supply and approximate cost.
4. Advise on the lay-out and installation of equipment.
5. Determine the needs of the Institute for teaching staff, as well as supporting staff for the laboratories, workshops and equipment maintenance.

6. Co-ordinate the work of the other term members and submit a detailed report on his findings and general recommendations for the long-term planning and organization of the Institute and further requirements for U. D. C. technical assistance to implement such a long-term plan.

Appendix 4B

Post Title: Consultant in Electro-Mechanical Engineering

Duration: Six weeks

Duties:

The Consultant, in co-operation with the team leader (consultant in petroleum refining and petrochemical industry) and the other members of the team (consultant in petroleum exploration and consultant in drilling, oil production) is expected, in his field of competence, to make a general assessment of the specific needs of the Institute in training of technicians for, the petroleum and petrochemical industry and in rendering services to these industries in studies, research and in particular -

1. Draw-up appropriate curricula and propose suitable training programmes for up-grading the skills of personnel employed in industry.
2. Evaluate the proposals made by suppliers for training and applied research equipment and taking into consideration existing equipment, recommend suitable items and adequate spare parts to be ordered by the Institute.
3. Recommend additional equipment teaching aids and training materials needed by the Institute, including general specifications, sources of supply and approximate cost.
4. Advise on the lay-out and installation of equipment.
5. Determine the needs of the Institute for teaching staff as well as supporting staff for the laboratories, workshops and equipment maintenance.

6. Submit a detailed report on his findings and assist the team leader in drawing-up recommendations for the long-term planning and organization of the Institute and further requirements for UNID technical assistance to implement such a long-term plan.

Appendix 4B

Post Title: Consultant in Petroleum Exploration

Duration: Six weeks

Duties:

The consultant, in co-operation with the team leader (Consultant in petroleum refining and Petrochemical Industry) and two other members of the team (consultant in electro-mechanical engineering and consultant in drilling and oil production) is expected, in his field of competence, to make a general assessment of the specific needs of the Institute in training of technicians for, the petroleum and petrochemical industry and in rendering services to these industries in studies, research and in particular -

1. Draw-up appropriate curricula and propose suitable training programmes for up-grading the skills of personnel employed in industry.
2. Evaluate the proposals made by suppliers for training and applied research equipment and taking into consideration existing equipment, recommend suitable items and adequate spare parts to be ordered by the Institute.
3. Recommend additional equipment, teaching aids and training materials needed by the Institute, including general specifications, sources of supply and approximate cost.
4. Advise on the lay-out and installation of equipment.
5. Determine the needs of the Institute for teaching staff as well as supporting staff for the laboratories, workshops and equipment maintenance.

6. Submit a detailed report on his findings and assist the team leader in drawing-up recommendations for the long-term planning and organization of the Institute and further requirements for U.I.D.C. technical assistance to implement such a long-term plan.

Annex 4D

Post Title: Consultant in Drilling and Oil Production

Duration: Six weeks

Duties:

The Consultant, in co-operation with the team leader (consultant in petroleum refining and petrochemical industry) and two other members of the team (consultant in electro-mechanical engineering and consultant in petroleum exploration) is expected, in his field of competence, to make a general assessment of the specific needs of the Institute in training of technicians, for the petroleum and petrochemical industry, and in rendering services to these industries in studies, research and in particular -

1. Draw-up appropriate curricula and propose suitable training programmes for up-grading the skills of personnel employed in industry.
2. Evaluate the proposals made by suppliers for training and applied research equipment and taking into consideration existing equipment, recommend suitable items and adequate spare parts to be ordered by the Institute.
3. Recommend additional equipment, teaching aids and training materials needed by the Institute, including general specifications, sources of supply and approximate cost.
4. Advise on the lay-out and installation of equipment.
5. Determine the needs of the Institute for teaching staff, as well as supporting staff for the laboratories, workshops and equipment maintenance.

6. Submit a detailed report on his findings and assist the team leader in preparing recommendations for the long-term planning and organization of the Institute and further requirements for U.S. technical assistance to implement such a long-term plan.

Appendix 4.1

The Resident Representative
United Nations Development Programme
Tripoli.

Dear Mr. Hill,

The Higher Petroleum Institute, Tobruk, is in its early stages of development, having started only three years ago. The Institute requires assistance from U.I.D. in the training of supporting staff, either at U.I.D. Headquarters or in similar Institutes.

The following fields, each for 3 months duration have been identified, in consultation with the U.I.D. Mission visiting Libya between 1st-23rd May 1975.

1. Library Science and industrial information.
2. Inventory control and management of stores.
3. Organisation of seminars and training programmes.
4. Modern accounting procedures.

Fellowships nomination forms will be forwarded as soon as possible.

The Institute will finance the travel and per diem of the trainees under Auda-i-Trust arrangement.

We would appreciate your taking the necessary action with U.I.D.

Yours sincerely,

Appendix 4.2

The Resident Representative
United Nations Development Programme
Tripoli.

Dear Dr. Adly,

This Higher Petroleum Institute trains technicians for operation and maintenance in the Petroleum and Petrochemical Industry.

After two years of training in Libya, it is our intention to provide the trainees with an opportunity for eight weeks training abroad. It was tentatively agreed with UNIDO Mission visiting Libya to train, starting 1st August 1975, a group of twelve technicians, four in each of the following fields:

1. Refinery Technology (operation and quality control)
2. Maintenance of refinery and petrochemical plants.
3. Instrumentation and process control.

Suggested countries for training are Romania, Austria and probably Greece.

Nomination forms will be forwarded to UNIDO, as soon as possible.

The Institute shall finance the travel and per diem of eight trainees under Funds-in-Trust arrangement and the UNIDO Mission promised to explore the possibility of UNIDO financing the other four fellowships under the Regular Programme, General Trust Fund or under the programme of co-operation between developing

countries.

We would appreciate your taking the necessary action with
UNEP Headquarters.

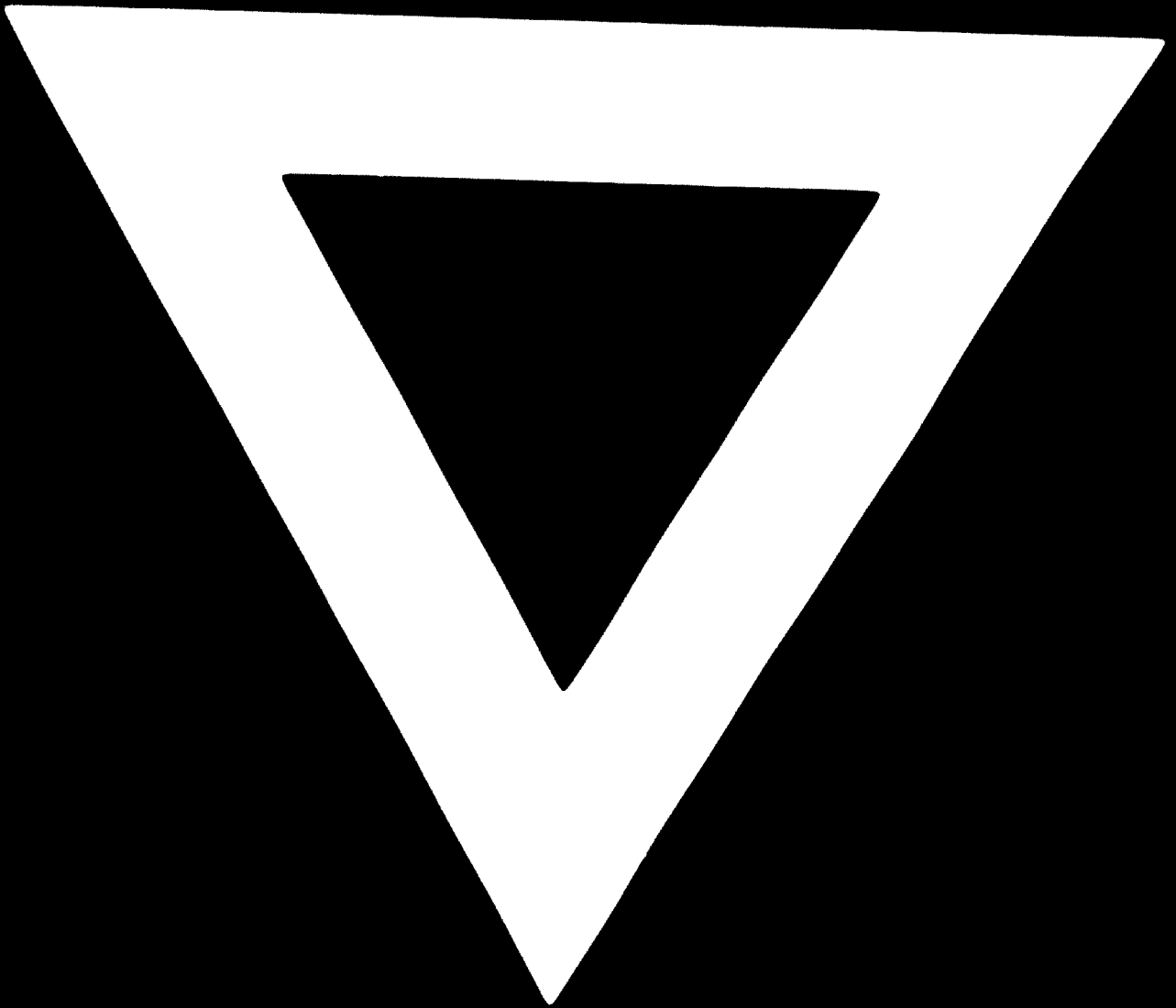
Yours sincerely,

Appendix 5

DRAFT BUDGET

For the UNIDO project "Assistance in the Development and Strengthening of the Higher Petroleum Institute, Tobruk, Libya"

<u>Comment</u>	<u>Duration</u> (m/m)	<u>Cost (US\$)</u>
1. <u>Consultants</u>		
Team of consultants (petroleum refining and petrochemical industry consultant-team leader-consultant on electro-mechanical engineering, consultant in petroleum exploration and consultant in drilling and oil production) to provide assistance for 1.5 months financed from Funds-in-Trust	6	18,000
2. <u>Fellowships</u>		
a) Four fellows to be trained for 3 months at UNIDO headquarters in library science, industrial information, etc. financed from Funds-in-Trust	12	12,800
b) Twelve fellows to be trained for 2 months in refinery technology, maintenance and instrumentation and control in Austria, Romania and Greece.		
<u>Eight fellowships</u> financed from Funds-in-Trust	16	20,000
<u>Four fellowships</u> financed under UNIDO Regular Programme	8	10,000
<u>Cost of project</u>		60,800
<u>Total cost of project</u> out of which		67,912
- financed from <u>Funds-in-Trust</u> : \$50,800 plus \$7,112 (14% UNIDO overhead):		57,912
- financed from <u>UNIDO Regular Programme</u> : \$10,000		



76.01.20