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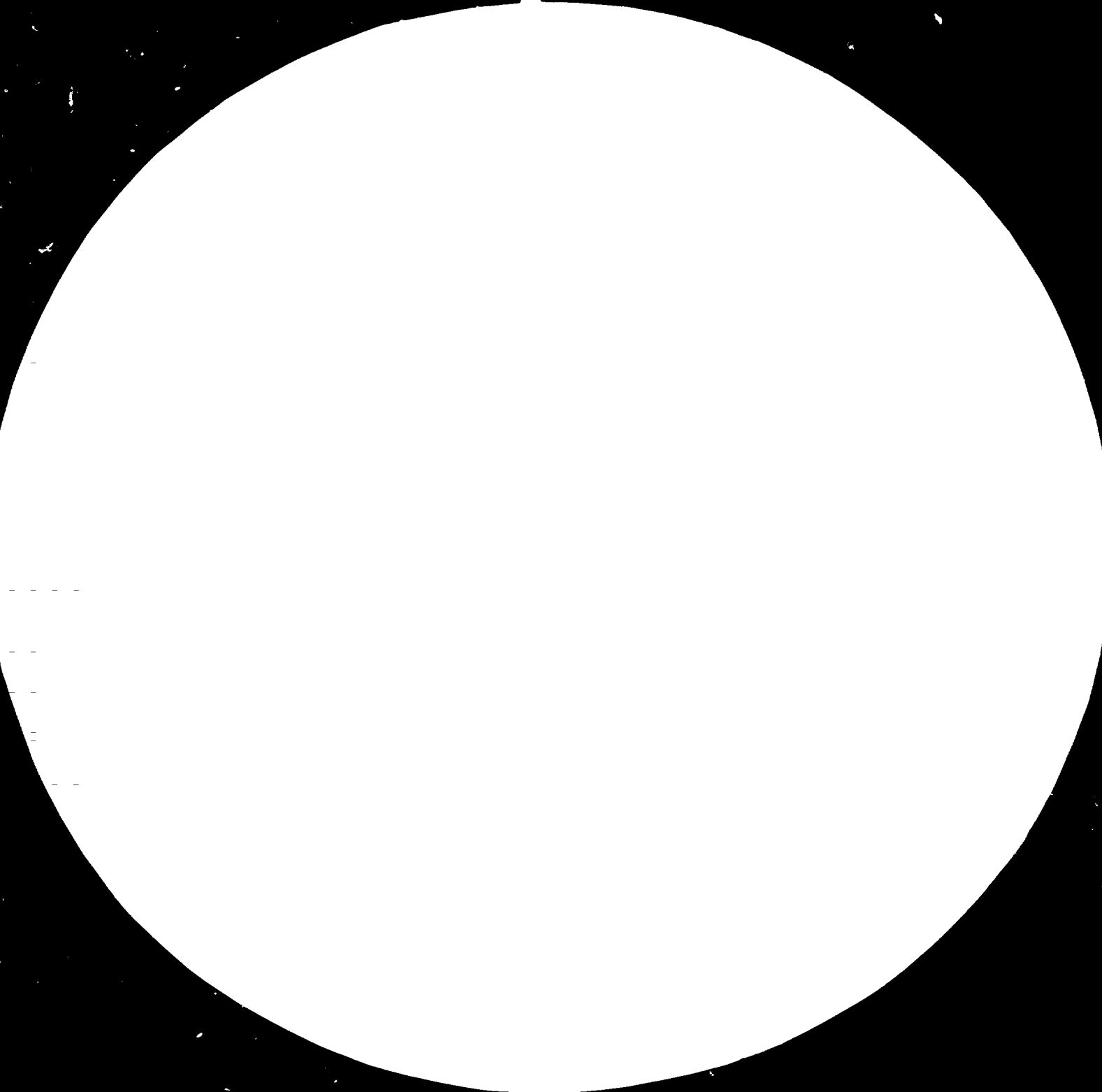
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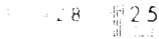
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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Peru.
DEVELOPMENT OF NEW INVESTMENT OPPORTUNITIES IN
THE METALWORKING INDUSTRIES WITHIN THE METALWORKING SOUTH COMPLEX
US/PER/79/067
PERU

Terminal report*

Prepared for the Government of Peru
by the United Nations Industrial Development Organization

Based on the work of G.P. Putnam,
Senior Industrial Development Officer, Engineering Industries Section,
Division of Industrial Operations

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1. BACKGROUND

(i) Objectives

The purpose of the project is to advise COFIDE and industrial enterprises of the "Metalworking South Complex" in the establishment and commissioning of production plants for which feasibility studies were already prepared. Additionally, pre-investment studies were to be prepared on projects identified by COFIDE. Finally, advice was to be provided to COFIDE concerning the promotion of industrial projects.

(ii) Approval

This project was approved by the Executive Director of UNIDO under the project number US/PER/79/067 for a total amount of US\$ 443,200 from the contribution of the Government of Switzerland as confirmed by the memorandum of Mr. Tandon, Head, Programme Development and Evaluation Branch, dated 29 May 1979. The project was approved at the 32nd meeting of the Programming Committee on 25 April 1979.

The overhead charge of 14% amounting to US\$ 62,048 brings the total to US\$ 505,248.

On 25 May 1979 the Ambassador of Switzerland wrote to the Executive Director of UNIDO to confirm the total allotment as Funds-in-Trust of US\$ 505,248.

(iii) Allotment

In July 1979 the sum of US\$ 252,600 was received from the Swiss Government.

The relevant UNIDO Programme Allotment Document No. 79-1434 was issued on 21 June 1979 for US\$ 443,200 plus 14% overhead of US\$ 62,048 making a total of US\$ 505,248.

2. IMPLEMENTATION DATA

(i) Financial

The Financial Services of UNIDO authorized implementation of the project on 21 June 1979. The original implementation was scheduled as follows:

1979	121,500
1980	215,700
1981	106,000

This implementation schedule could not be followed for a number of reasons, among them being the time taken for the government to decide on the type of experts desired, the departure of the project team leader after one year and the termination of J. Beharel who was serving as team leader since the departure of the original team leader, Mr. O. Schmidt.

The attached Status of Allotments (Annex A) for the Project as of 30 April 1982 reflects its current state of implementation. With the inclusion of US\$ 17,281 obligations, this can be considered the project's final financial status.

(ii) Substantive

The project was largely conceived by Mr. Othmar Schmidt while he was employed in Peru on a previous UNIDO project. Initially the project was aimed at advising COFIDE in establishing and commissioning plants to produce electric motors and generators, grinding balls, hand tools, etc. based on existing feasibility studies. Additional assistance was to be provided for other related capital investment studies.

As reported by Mr. Schmidt in his first progress report (covering the last 6 months of 1979) the project was accomplishing the objectives as desired by the counterpart (COFIDE). Several investment opportunity profiles were produced and advisory services provided. However, Mr. Schmidt pointed

out that COFIDE changed the project emphasis from providing advice on establishing and commissioning production plants for which feasibility studies had already been prepared to developing pre-investment studies and new investment opportunities.

During the early portion of 1980 Mr. Schmidt decided not to continue with the project and did not renew his contract.

Mr. Lluch-Soler, the Regional Industrial Field Adviser, expressed in his letter of 15 January 1980 the government's satisfaction with the reports thus far produced by the project. He transmitted the government's (COFIDE) request to have Mr. Beharel look after the project and use the additional man months (occasioned by Mr. Schmidt's non-renewal of his contract) to provide additional expert consultants for the project.

During his debriefing in Vienna on 7 July 1980 Mr. Schmidt submitted his final report in which he, among other things, recommends:

- beginning the construction of a facility to produce heavy electrical motors and generators;
- points out that pre-investment studies take a long time (3 plus years) before the investment is made and a facility is manufacturing products;
- recommends developing more in-depth factory implementation plans followed by an active search for investors.

His report points out that the principal studies developed to date (that can be used as for establishing factories) relate to:

- heavy electrical motors and generators;
- grinding balls;
- hand tools;
- foundry.

While being debriefed, Mr. Schmidt commented that Mr. Beharel could handle the team leader's duties in view of the project's changed emphasis.

After Mr. Schmidt left the project several experts were hired and sent to the project site. Essentially these experts developed and documented a series of investment opportunities which they listed in their final reports.

H. Walter was assigned to the project for 4 months as an expert in ferro alloy products. His final report recommended the establishment of a ferrosilicon plant. Also included in the report were complete terms of reference for soliciting proposals to design and build such a plant. Additionally Mr. Walter recommended establishing an ore refining facility for Tungsten in order that Peru might supply metal to industrialized countries.

R. Weber, an expert in copper production, was assigned to the project for 6 months. During his assignment he organized and conducted a combination study-promotional tour of western Europe to explore potential investment opportunities. Two Peruvian counterparts accompanied him on this tour that lasted approximately 1 month. In his final report Mr. Weber listed 4 projects that he felt were good possibilities to become finalized at a future date. The arrangement, he felt, would not be a foreign investment in Peru but rather a purchase by Peruvian interest of plant, equipment and "know-how". These projects are:

- a plant to produce copper wire rod;
- a plant to produce round billets for extrusion;
- a plant to produce brass rod and flat pieces;
- a plant to produce draw rod and wire. This would involve selling a defunct USA facility to Peruvians.

M. Meixner, an expert in transforming metal products (especially zinc and copper) was assigned to the project for 4 months. His report recommends several investment opportunities he felt had potential, among them being:

- a facility to recover Cobalt from Peruvian ore tailings;
- a proposal to use the periodic current reversal process in Peru for refining copper.

Attempts to solicit assistance from the Austrian Government and an Austrian company have proved unsuccessful.

Mr. J. Viot, an expert in precious metals, was assigned to the project for 3 months. His report included detailed recommendations concerning:

- the refining of gold in conjunction with palladium;
- the production of jewellery;
- minting coins for collectors using gold findings, gold plate, palladium and platinum.

Mr. Beharel was terminated in mid-1981 at the request of COFIDE and the Swiss government. In response to a COFIDE request for a final report, Mr. Beharel submitted a group of miscellaneous documents he had written during the course of the project. According to the UNDP office in Lima, he claimed he did not have sufficient time to prepare a formal report. His estimate was that such a report would require an additional month. As yet, in spite of repeated requests, there is no final report relative to his area of expertise - forging.

At the end of 1981 the project plan called for fielding additional experts in:

- chemical metallurgy;
- design manufacture and production of railway wagons;
- production of copper wire;
- hydro-electric equipment;
- periodic current reversal method of refining copper.

Since the letter P.A. Troendle to D.C. Ganao dated 22 February 1982 indicated that the project was to be terminated, it was decided to complete only Mr. Meixner's mission related to chemical metallurgy. After this expert's mission the project was to be terminated.

Mr. Meixner completed his second and final mission on 15 March 1982. Based on this mission Mr. Meixner issued a report recommending the location of an acid production plant in Southern Peru (as opposed to Northern Peru) where there is a supporting infrastructure. His report considerably amplified

the work done by the Jacobs Organization and shows that considerable cost saving can be achieved by locating the manufacturing facilities in Southern Peru.

To date the study tour conducted by Mr. Weber has been implemented.

The equipment purchased to date has involved stocking the project library with appropriate books and periodicals.

A copy of Mr. Meixner's report is appended to this report. Copies of previous expert reports (with the exception of Mr. Beharel's) were submitted with the interim project report dated 27 November 1981.

3. ASSESSMENT

The project has generated a number of good potential investment opportunities. Several project summaries for viable projects were developed in conjunction with UNIDO's Investment Promotion Office in Zurich.

In addition some work was done to establish an electric steel works to produce carbon steel that would serve as the input to the following plants:

- a factory producing electric motors and generators;
- a factory producing rock drills;
- a factory producing hand tools;
- a steel casting plant;
- a factory producing steel balls for grinding.

Studies were developed for all six of the above mentioned plants with two of these studies being actually implemented - the electric steel works and the factory producing steel balls for grinding. Together these two projects represent a total investment of US dollars 50 million.

Summary of the Implemented Projects

(a) Electric Steelworks

The enterprise, known as Laminadora del Pacifico, SA has been established at Pisco, 250 kilometers south of Lima in an area capable of supplying the required electric power. It is funded almost entirely by private Peruvian capital (US\$ 12 million).

(b) Steel Grinding Balls Factory

This enterprise, known as Aceros del Sur, SA has been established in the Arequipa industrial estate. Its funding composition is 55% private Peruvian capital, 10% COFIDE, 35% ARMCO (USA).

The total investment is US\$ 5 million, of which 3 million have been financed by the World Bank and the remainder as the partners' contribution.

The technology and principal machinery are supplied from the United States sources.

The plant has been in operation for about a year, producing steel balls for use in grinding ores.

The plant provides employment for about 50 people.

Summary of the Non-implemented Projects:

(c) Electric motors and generators

This project was studied extensively in conjunction with the Swiss firm of Brown Boveri, which was interested in participating as a shareholder.

The project was to produce electric motors and generators of more than 200 kw capacity as assigned to Peru in the Andean Group. Because of the changes made in tariff policy (reduction), the project became unprofitable.

(d) Rock-drills

This project was to produce rock-drilling equipment such as track drills, Jumbos, ore-loading power shovels, etc.

The output was intended for the domestic market and the Andean Group.

These lines of production were assigned exclusively to Peru in the Andean Group. Later negotiations took place with Venezuela and production was shared. Since the demand was relatively small, the project ceased to be viable when production was shared with Venezuela.

The Swedish firm of ATLAS COPCO is interested in the project at any time it becomes viable.

(e) Hand Tools

The project was to produce pliers, screwdrivers, adjustable spanners, etc., mainly for the domestic market.

With the change in the Peruvian Government's policy, tariffs were reduced, with the result that the Peruvian market was flooded with extremely cheap tools from Korea, Taiwan, Brazil, etc.

In these circumstances, and especially in view of the small scale of the proposed plant, it was impossible to implement the project.

The project was extensively studied with the French firm of FACOM, which was interested in being associated with it.

(f) Steel casting

The project was to produce replacement parts for the Peruvian mining industry.

The main reason for the project not being implemented was the lack of infrastructure (electric power) in Arequipa.

This location was important, because the idea was to supply the big mines in the south of the country.

The project could be reactivated when the Charcani V power project is commissioned in 1985.

4. EVALUATION AND FOLLOW-UP

It is UNIDO's intention to maintain close co-ordination with COFIDE, the UNIDO Promotion Office in Zurich and the UNDP office in Lima. The implemented projects will be observed as well as the viability status of those projects that are potentially implementable.

