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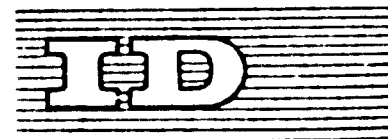
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DEVELOPMENT OF THE PETROCHEMICAL INDUSTRY

IN ALGERIA^{1/}

by

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Algeria

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

Algeria has the good fortune to be endowed, in its subsoil, with mineral resources of inestimable value:

- Gases of iron and other metals;
- Liquid and gaseous hydrocarbons.

These resources have been exploited for a long time and their qualities are being better known.

In small sections by way of example the very high-grade iron ore and the liquid and gaseous hydrocarbons which are of excellent quality in that they contain little sulphur and other impurities.

While these resources were already extracted in Algeria, however, they were not formerly processed here. Algerian industry consisted of no more than oil and gas pipelines and other transport links, bringing the products to the coast to be sent on to sites abroad for processing.

The situation is now different, as our country has made these resources the basis for its industrial development.

The activities of the department concerned with industry and energy are directed towards reaping the benefits of Algeria's natural resources, particularly in regard to hydrocarbons and mining. Thus an industrialization programme in line with the basic policies chosen by Algeria has been drawn up.

The preparation of the programme has been based on the following principles:

- Full utilization of our raw materials;
- Satisfaction of our national requirements;
- Increasing the added value of products intended for export.

Petroleum and gas

Petroleum and gas will open the way to the industrialization of Algeria and its economic development.

They have enabled our country to devise and apply a cheap energy policy which improves conditions of production for all our enterprises.

Hydrocarbons

Hydrocarbons can provide one of the most secure foundations for the industrialization and economic development of our country.

This is thanks to products such as fertilizers, plastics and products for

the protection of plant health. The petrochemical industry is in a particularly good position to alleviate one of the basic weaknesses in an under-developed economy - the poor articulation between agriculture and industry.

Anxious to ensure the harmonious development of its economy, Algeria, through the agency of Sonatrach, the national enterprise for transport, processing and marketing of hydrocarbons, has drawn up the following programme for petrochemical refining:

1. A refinery at Arzew with a capacity of 2.5 million tonnes/year
 - petroleum products)
 - lubricants) under construction 1971

2. A petrochemical refinery at Skikda of 400,000 tonnes/year
 - petroleum products)
 - bitumens)
 - aromatics, paraffins) projected, 1973
 - polyesters, petroleum coke)

3. A petrochemical complex at Skikda combined with a unit for the liquefaction of natural gas
 - ethylene, 120,000 tonnes)
 - polyethylene)
 - PVC) starting 1972

4. A nitrogenous fertilizer complex at Arzew
 - ammonia, 1,000 tonnes/day)
 - nitric acid)
 - urea) in production
 - ammonium nitrate)

5. A phosphatic fertilizer complex at Annaba
 - phosphoric acid, 500 tonnes/day)
 - sulphuric acid, 1,500 tonnes/day)
 - triple superphosphate, 200,000 tonnes/year) starting 1972
 - diammonia phosphate, 1.5,000 tonnes/year)
 - complex fertilizers, 275,000 tonnes/year)

6. An ammonia unit at Skikda
- ammonia, 1,500 tonnes/day - projected
7. A plant for the production of tyres - projected
8. A unit for the production of alcohol, methanol
and resins at Arzew) projected
9. A factory producing:
- butadiene)
- polybutadiene) projected
- SBR)
10. A unit for the desalination of sea water at Skikda, to serve the various complexes.

Most of the units referred to above produce the major intermediate petrochemical products. A number of units for manufacturing finished products are in the process of being set up at various points in Algeria.

The petrochemical industry will thus have important effects on all the main sectors of economic life.

We have assigned to it the function of stimulating industrial development, in view of its multiplier effects on the input side and on the output side.

Such a programme raises a number of problems which Algeria has set itself to resolve.

Market problems

In the petrochemical field, competitive production costs can only be obtained with units having large production capacities, often exceeding what the domestic market can absorb.

This obliges us to look for outlets for our production surpluses. This means an active policy, seeking co-operation with all friendly countries and particularly with the developing countries whose needs are similar to ours.

Technological problems

The petrochemical industry also depends upon technological methods which have been properly tested in practice, and competent technicians.

Algeria has resolved these problems through the establishment of specialized institutes:

- The Institut Algérien du Pétrole (IAF);
- The Centre Africain des Hydrocarbures et du Textile (CAHT);
- Technological institutes.

The task of these institutes, established with the co-operation of friendly countries, is to raise the level of scientific activity to the maximum, and in particular to make possible the training of specialists for the petroleum industry in general and the petrochemicals branch in particular. These institutes also possess laboratories where day-to-day tasks of research and analysis are carried out for petroleum companies in Algeria at their expense.

Meanwhile, to help remedy our shortage of technicians, Algeria receives the services of a large number of technical assistance personnel in the various branches of the petrochemical industry under bilateral agreements with friendly countries.

Investment problems

The petrochemical industry requires large investments. The cost of job creation is extremely high.

Petrochemical plants use very refined techniques at the present day, and the necessary know-how can only be obtained under process licenses involving high royalties. Consequently, to resolve the investment problems, our Government has decided upon a desirable distribution of available funds for the development of our economy.

Conclusion

Petroleum and gas, then, are the key to the industrialization of Algeria and to the task of placing its agriculture on a sound footing.

We are increasingly convinced that the policy adopted by our country in regard to petroleum is one of the most important and effective means of consolidating our economy and enabling us to increase our trade with other countries.

Heavy industry in general is at the implementation stage. All the major projects launched will begin production by 1972 at the latest.

The iron and steel industry, the petrochemical industry, the liquefaction of gas, refineries and the electric power infrastructure will be firmly in-

planted. The necessary basis for industrial development will have been established and the producing plants will be there to pay their part.

However, while Algeria is conscious that its development depends above all on the effort of her own people, it will also have to try to increase its trade with other countries and in this co-operation. In view of the fact that the Algerian economy is in a stage of development where and finished products exceed national needs, all the doors should be every possibility open to it for trade and mutual advantage.

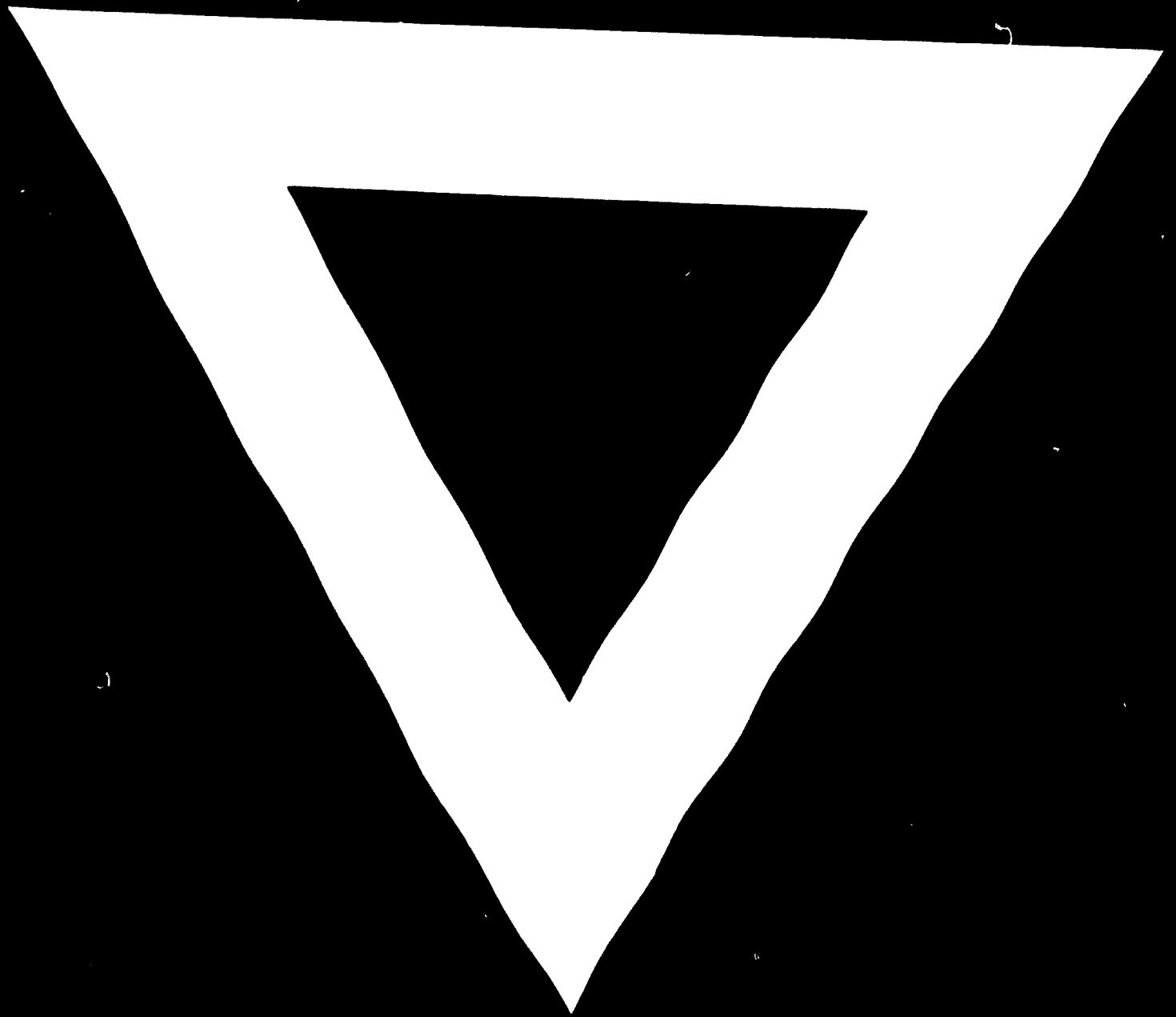
We hope to make the political and economic relations between the two countries a link which will enable us to establish a firm and profitable relationship, based on mutual advantage, with the aim of assisting the economic development of developing countries.

Algeria's Objectives

We would like to see Algeria specializing in the following subjects:

1. Manufacturing:
 - Automobiles
 - Iron
 - Chemicals and plastics
 - Diagnostic Centrifuges,
2. assistance in the production of materials,
3. assistance in developing services.





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