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Current Support Brief

THREAT OF SABOTAGE TO THE MINING AND METALS INDUSTRY OF KATANGA



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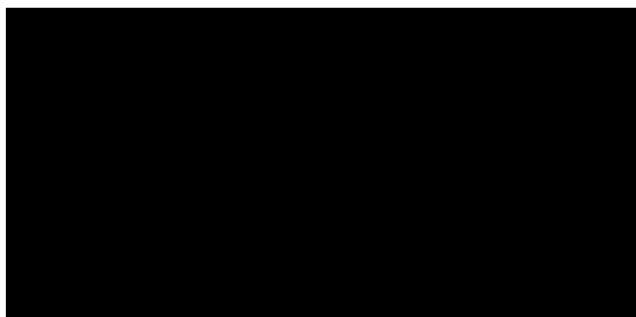
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THREAT OF SABOTAGE
TO THE MINING AND METALS INDUSTRY OF KATANGA

The rapid deterioration of the Tshombe regime in Katanga Province of the Republic of the Congo poses the threat of extensive sabotage of that province's industrial facilities. Among these, the mines and plants of the giant Union Miniere du Haut Katanga (UMHK) are a prime target. On 1 January 1963, Tshombe stated that unless the United Nations accepted a cease-fire, he would put into effect his long threatened "scorched earth" policy, 1/ and some damage already has been inflicted. [REDACTED]

[REDACTED] the prolonged loss of production by UMHK, which produces large quantities of copper, cobalt, germanium, and zinc, plus a host of other metals and minerals, would be a major blow to the economic and political stability of the Congo. In 1960, Katanga received US \$44 million from this company, a sum equal to about half of the budgetary income of the Republic of the Congo in that year. 2/ Although the loss of production would be serious to the Congo, the impact upon the rest of the world, with the possible exception of Belgium, probably would be negligible.

I. Nature of the Facilities

The facilities of the Union Miniere include the entire gamut of mines and plants that normally are associated with a large, diversified, and complex mining and metallurgical operation plus such auxiliary but necessary facilities as power-generating plants, transmission lines, rail facilities, coal mines, cement plants, living quarters, and hospitals. 3/ All of the facilities are mechanized, modern, and efficient by the most up-to-date western standards. 4/ Most of the copper, cobalt, germanium, and zinc ores are produced by five large mines at Kamoto, Munonoi-Kolwezi, Ruse, Kipushi, and Ruashi; small quantities are produced by a large number of lesser installations. (See Figure 1 for locations.) The principal metal processing installations are at Kolwezi, Lubumbashi, and Jadotville. All of these facilities are electrified to an unusual degree. The electric power is supplied primarily by four large hydroelectric powerplants, 5/

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of which the largest and newest is located at Le Marinel. 6/ The other hydroelectric powerplants are in Delcommune, Francqui, and Bia. 7/ In addition, there are small thermal powerplants at Jadotville and Elisabethville. (See Figure 2 for locations of plants and transmission lines.)


II. Vulnerabilities

A. General

Should Tshombe or his cohorts attempt the neutralization of the industrial complex, a logical point of attack would be the electric power generation and transmission facilities. 8/ Not only are such facilities potentially the most vulnerable, but their loss would bring the entire mining and metallurgical industry to a halt. 9/ Furthermore, in the Prince Leopold mine (a large underground mine at Kipushi which produces more than a third of the total output of copper and nearly all of the zinc produced in Katanga) prolonged flooding resulting from a failure to keep pumps in operation could result in the loss of capital worth millions of dollars. 10/

B. Power Facilities

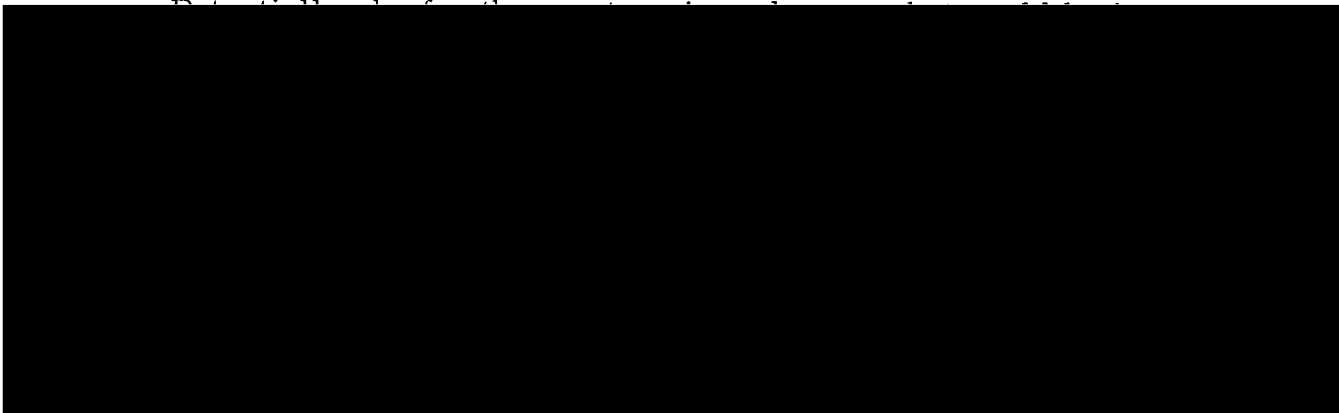
The facilities most accessible to saboteurs would be local transformer substations and transmission lines. Damage to such facilities would be the easiest to repair quickly, although some delays might be incurred in obtaining replacement transformers. Some local auxiliary power-generating equipment probably is available and could provide minimal supplies of power, but not enough to maintain production. Such equipment also would be quite vulnerable to sabotage.



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All four of the powerplants appear to be tied together into a single grid so that the stoppage of power at any one generating plant would not necessarily cut the flow of power to any major consuming area, but all lines pass through the transformer station at Jadotville and damage to this station would interfere with operations throughout much of Katanga. 17/ This station, however, is now in UN hands. Insofar as can be determined, the total power capacity from the four hydroplants is about 411 megawatts (mw), prorated as follows: Le Marinel, 189 mw; Delcommune, 108 mw; Francqui, 72 mw; and Bia, 42 mw.

In addition to supplying power for domestic use, the hydroelectric power complex in Katanga has been supplying power to Northern Rhodesia.

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In recent years, however, power facilities have been built in Rhodesia and that country now may be nearly self-sufficient. Significant quantities of power from Rhodesia for use in Katanga are not believed to be available. 18/ In any case, the connecting grid is reported to have been cut.

C. Effect on Mines

Other than causing a stoppage of production, the loss of power in several instances possibly could result in serious damage to the mines. Underground mines are vulnerable to flooding due to the failure of drainage pumps. The most important mine of this type is the large Prince Leopold mine at Kipushi which normally produces more than a third of the copper and most of the zinc ores mined in Katanga. 19/ [REDACTED]

[REDACTED] it is peculiarly susceptible to flooding damage. The reasons are an unusually high water-seepage problem, a soft and porous "country rock," and a system of mining that involves heavy timbering. In his judgment, complete flooding lasting several months might result in almost complete destruction of the mine, 20/ requiring up to 3 years for full restoration. 21/ A power failure of only a few days could curtail production for some time, however. When the heavy duty sump pumps are covered by water, they become useless and drainage must be achieved through the use of small portable pumps, beginning at the surface and working down to lower levels. A second mine of some importance in which the danger of flooding may be a threat is at Kambove near Jadotville. Most of the other mines in Katanga, including all of the big mines, are open-pit operations and are not subject to the threat of flooding.

The situation at present at the Prince Leopold mine is not clear. Although the mine now is in UN hands, the power lines to the area reportedly have been cut and flooding was said to have begun on 2 January 1963 because of the power failure. 22/ This report that flooding has begun does not mean necessarily that the mine will become completely flooded unless the power lines are repaired. This mine is known to have had, as of 1957, an underground auxiliary power unit of 750 kilovolt-amperes (kva) which, if operating, would be sufficient to run at least some of the pumps and could prevent the water from reaching the higher

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levels. In recent years, however, this mine was tied into the grid into Northern Rhodesia on the assumption that, in an emergency, power could be drawn from Rhodesia. 23/ The possibility exists, therefore, that the auxiliary unit may have been withdrawn and shipped elsewhere in the Congo, as apparently was done with some 12 portable power units that had been located at Jadotville. 24/

D. Other Facilities

Effective sabotage of the concentrating and metallurgical installations of the UMHK would be relatively difficult to achieve. Although damage of many types could be inflicted on these facilities, most of it would be repairable within several months. 25/ Some damage already has been achieved at a refinery at Jadotville through blasting and the removal of an "electrical device." The manager has said, however, that he probably could get the installation in working order within 2 months. 26/

III. Impact of Loss of Production upon the Rest of the World

The output of products exported in 1961 by the UMHK totaled about US \$240 million and represented about 60 percent of the total exports of the Congo. 27/ As shown by the tabulation below, the UMHK produces some metals in quantities of significance in relation to world output.

<u>Commodity</u>	<u>UMHK Output in 1961</u> <u>(Short Tons)</u>	<u>UMHK Output in 1961</u> <u>as a Percent</u> <u>of World Output</u>
Cadmium	10,400 <u>a/</u>	6 <u>a/</u>
Copper	325,400 <u>a/</u>	7 <u>a/</u>
Cobalt	9,259 <u>a/</u>	58 <u>a/</u>
Germanium	15 <u>b/</u>	30 <u>c/</u>
Zinc	62,799 <u>a/</u>	2 <u>a/</u>

a. 28/
b. 29/
c. 30/

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Most of the mineral output of the UMHK is exported, largely to Belgium, other Western European countries, and to the United States. The bulk of the blister copper, cobalt-copper alloy, zinc concentrates, and germanium concentrates are shipped to Belgium for further refining. The principal direct export to the United States is electrolytic cobalt. 31/

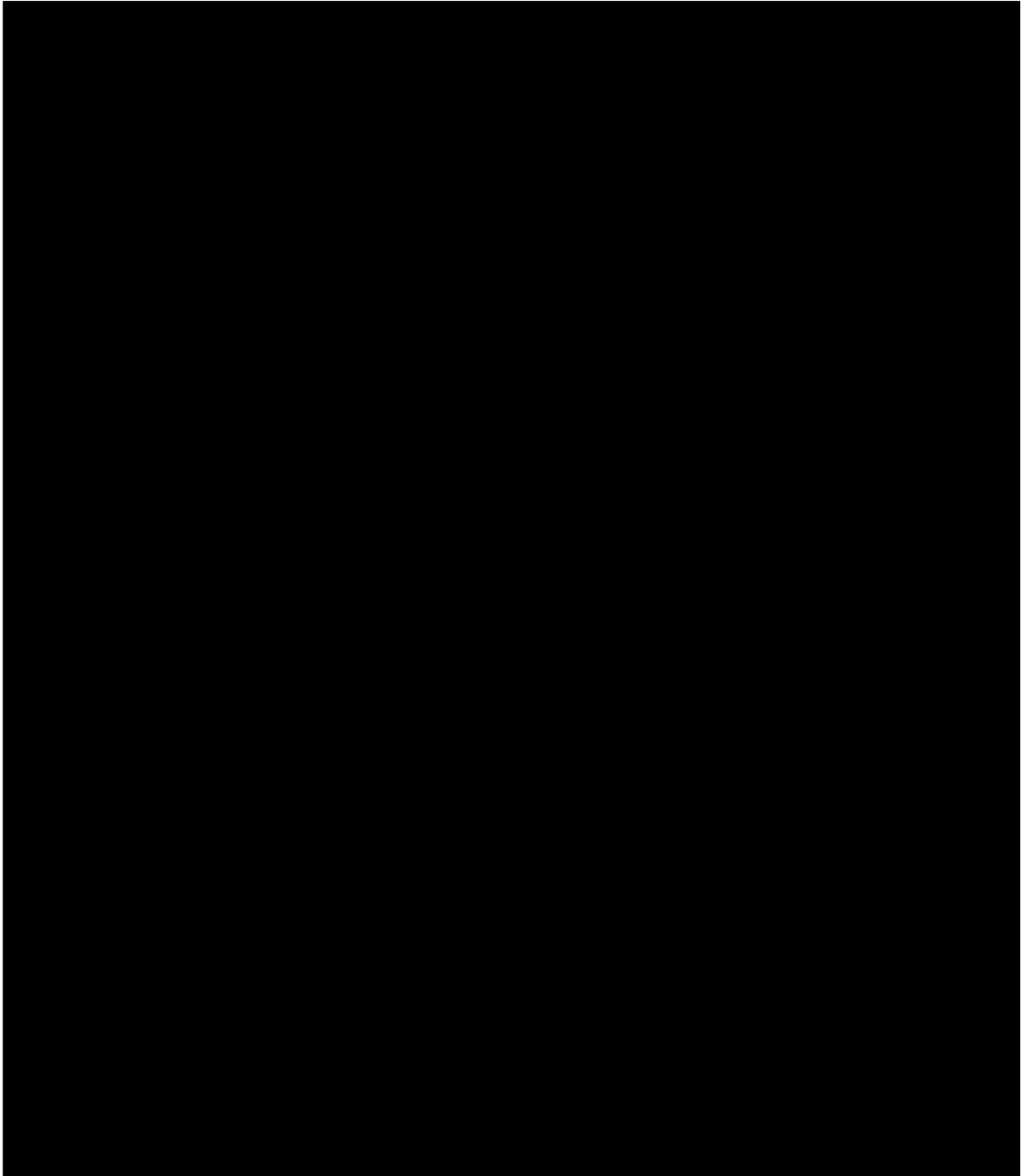
Neither the United States nor the Western European countries other than Belgium would be affected significantly by a lack of supplies resulting from a cessation of production in Katanga, even if the plants were down for several months. Commercial stocks of these products in the United States and Belgium are adequate to cover any resulting decrease in supplies for 3 or 4 months. Furthermore, within a few months the copper production in other countries, notably the United States, Rhodesia, Chile, and Canada, would be increased. On the other hand, the Belgian copper refining and fabricating industries, which depend heavily on imports from Katanga, would suffer some hardship. Although the production of cobalt in other countries could not be increased sharply, the United States possesses large surplus stocks that could be drawn upon in the event of a prolonged shutdown. Also, US stockpiles could provide any necessary supplies of cadmium, zinc, and copper. Little information is available regarding germanium stocks, but in the event of a cessation of production in Katanga, the needed supplies probably could be obtained from Southwest Africa. 32/ Data on the US stockpiles of selected metals produced in UMHK facilities are as follows 33/:

<u>Metals</u>	<u>Short Tons</u>		
	<u>Present Maximum Objective</u>	<u>Present Inventory (As of 30 Sep- tember 1962)</u>	<u>Excess over Present Objective</u>
Copper	1,000,000	1,136,000	136,000
Cobalt	9,500	48,482	38,982
Cadmium	3,250	8,595	5,345
Zinc	178,000	1,581,000	1,403,000

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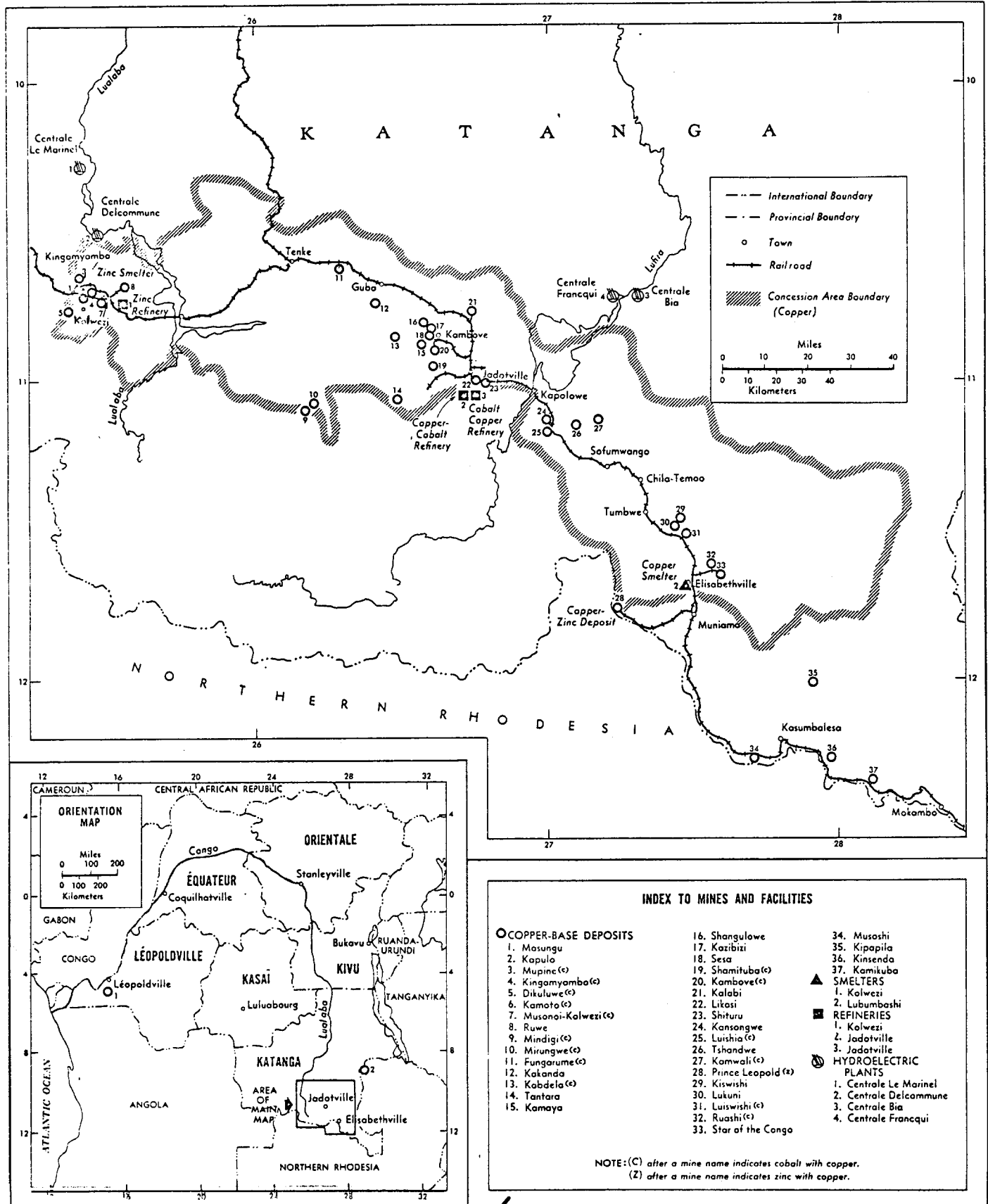
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Figure 1

UMHK Facilities in Katanga



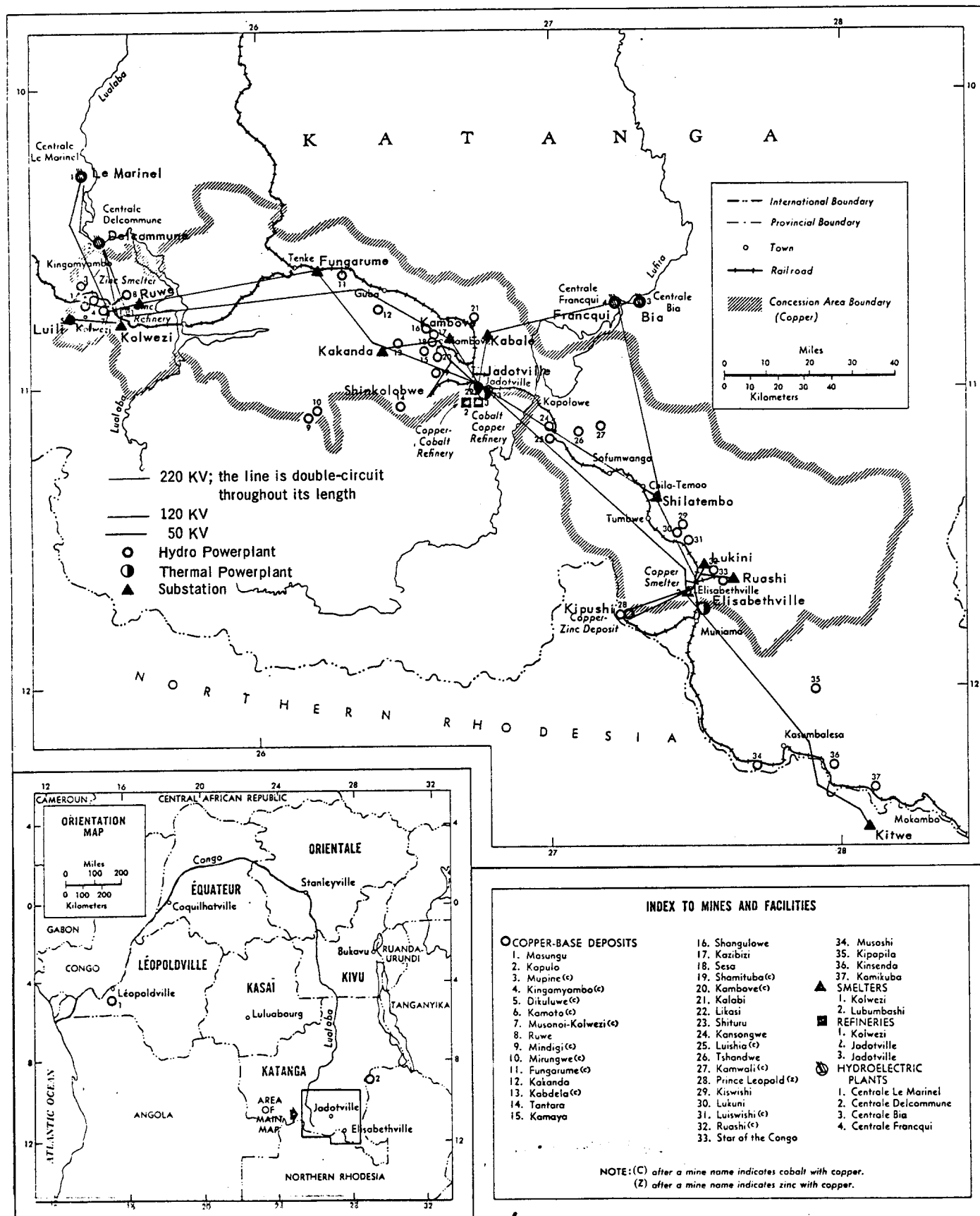
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Figure 2

Power Plants and Transmission Lines in Katanga



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