

PAPER 12

MINERALS¹

Ruckia Hkumisi

ROOTS OF CURRENT PROBLEMS

The major mineral is copper, mined at Kilembe and processed at Jinja. Other minerals of economic importance are wolfram (tungsten), beryl, tin, apatite, gold, and bismuth, mined by small miners scattered all over the country with a heavy concentration in Ankole and Kigezi Districts in south-western Uganda. In addition the bulk of the country's limestone - used mainly for the supply of lime to cement factories - is mined at Tororo and Hima.

2. No physical war damage took place at either the copper mines or the smelter but the company lost some vehicles, tools and a bulldozer through looting. Through looting too, most small mines lost their machinery and equipment and their houses were extensively damaged. Similarly the Geological Survey and Mines Department at Entebbe lost most of its equipment and fittings in its offices and six laboratories including mining machinery and equipment in the field as well as vehicles.

3. During the past nine years the mineral sector in general has witnessed a steady decline in production (see Annex 12.1) and export sales because of various problems. First is the lack of adequate funds, both in foreign and local currency, to replace very old and worn-out machinery and equipment and to buy essential supplies such as spares, chemicals, tools, explosives, etc. Also there has been a lack of any local organised marketing system to buy and sell minerals produced by small mines, and a lack of adequate transport facilities. High labour costs resulting from the demand of the mine workers for a minimum wage of Shs. 450, instead of the statutory minimum wage of Shs. 240 have limited increased production.

4. Externally and internally too the general condition requiring all transactions, foreign and local, to be made by cash has resulted in a general acute shortage of funds available for capital and working capital requirements. The break-up of the East African Community, among other things, has had the net effect of increasing freight charges, and producing considerable delays in delivery of essential imports and exports.

POLICIES AND RESOURCES NEEDED

Geological Survey and Mines Department

5. Under these circumstances a return to the 1970 level of operations, starting with the Geological Survey and Mines Department, would involve the re-equipment of the six laboratories at Entebbe, the replacement of lost mining machinery, equipment and vehicles, and recruitment of key qualified and experienced staff. This would enable the Department to continue with its work on geological surveys and mineral exploration besides giving technical support services to the small mines. The equipment of the six laboratories will require a total sum of Shs. 1.4m., all in foreign exchange whereas the replacement of lost machinery, equipment and vehicles will involve a sum of Shs. 10 m., all again in foreign exchange. Also, in order to strengthen its establishment, a Principal Geologist, a Mining Engineer, a Mineral Technologist, a Petrologist and a Driller Instructor are immediately required. At the same time, there is a need to train 11 Geologists and four Mining Engineers.

1 Report is based on written material and discussions with the Acting Commissioner for Geological Surveys and Mines, the Management of Uganda Development Corporation, Bjordal Mines Ltd. and Kilembe Mines Ltd.

Small Mines.

6. It has not been possible to obtain adequate information on the operations and needs of small mines. However, given the problems they have been facing over the past nine years, there is no doubt that their main requirements are provision of mining machinery and equipment, besides provision of improved transport facilities, particularly between the areas where the mines are located and the buying centre. Their working capital requirement is estimated to be in the region of Shs. 8m., Shs. 6m. of which will be in foreign exchange. In addition to all this, there is an urgent need to set up a local organised marketing system to buy and sell minerals produced by the small miners.

Itama Mines Ltd.

7. During the period 1940 - 72, the small miners sold their minerals to the British Metal Corporation based at Kikagati. When the British Metal Corporation closed their operations towards the end of 1972, the Government directed the Uganda Development Corporation Ltd. (UDC) to take over this function and UDC, through its then dormant company, Itama Mines Ltd. started to buy and sell minerals in February 1973. The major minerals which were bought and sold by this company were tin, wolfram, beryl, tantalite and columbite.

8. Itama Mines Ltd. carried out this functions from February 1973 to April 1976, when financial difficulties forced it to suspend its operations. The financial difficulties resulted mainly from insufficient deliveries of minerals to the buying centre which was in turn due to the problems faced by the small mines and stemmed from a lack of essential machinery and equipment, high labour costs and lack of adequate transport facilities. At the time of the revival of this company and throughout its three-year period of operations, no new capital was injected into the company. Instead the company relied on a bank overdraft secured at a very high rate of interest. If the activities of this company are to be revived, it is estimated that for the two-year period 1979/80-1980/81, a sum of Shs. 15m, - 11.25m in foreign exchange and a working capital requirement of Shs. 5m will be required. The sum of Shs. 15m. will be used for new office buildings, laboratory, godown, houses, equipment, furniture and fittings which were completely destroyed and looted during the war. On the manpower side, an experienced Chemist and a qualified Accountant will also be required.

9. As pointed out earlier, due to lack of adequate information, it is not possible to give detailed account of the operation of small mines. However, at the time of writing this report information was available on the following two mining companies - Bjordal Mines Ltd. and Kilembe Mines Ltd.

Bjordal Mines Ltd.

10. Bjordal Mines Ltd., situated at Nyamuliro - 45 km. from Kabale - produces wolfram ore. The company has been in operation for the last 21 years under different owners. Currently Continental Ore Corporation owns 40% of the share capital and the balance is owned equally by UDC and Development Finance Company of Uganda.

11. Due to the very old machinery and lack of funds to buy new machinery, the mill's production has dropped from 10 tonnes of wolfram per month in 1972 to the current 2 or 3 tonnes per month. On account of this continuous decrease in production, it is the view of the present company management that the present mill has outlived its usefulness and therefore requires to be replaced by a completely new mill. The cost of the new mill together with a new power generator is estimated to be Shs. 1.1m. In addition, a sum of Shs. 1.3m. is required to buy one bulldozer, a tractor and essential vehicles. Foreign exchange amounting to Shs. 2.4m. will be required for this purpose.

12. To carry out its operations the company requires an estimated working capital requirement of Shs. 2m., half of which will be in foreign exchange.

13. The Company currently has 210 employees and under the present strength only a Technical Manager from abroad is required.

Kilembe Mines Ltd.

14. Kilembe mines, which started operations in 1956, operates copper mines in Kilembe and a copper smelter at Jinja. The company was managed by Falconbridge Nickel Mines of Canada up to 1975 when the Government acquired all the shares of the company and placed it under the direct supervision of the President's Office. Shortly afterwards the company was placed directly under the Ministry of Industry and Power (now the Ministry of Industry).

15. At the time of writing the report neither the copper mines nor the smelter were in operation. This is due to lack of supplies of essential chemicals at the mines and lack of adequate stocks of copper concentrates, of foreign exchange to buy necessary spares and of working capital to meet payment of wages, among other things, at the smelter.

16. In general, no significant investment has taken place over the past nine years and production of both copper concentrates and blister copper has continually declined because of problems throughout the mine and smelter. Whereas the smelter is in complete disrepair with a dilapidated building, furnace and conveyor system, the mine suffers from mechanical obsolescence arising out of old machinery and equipment. The company has no working capital and is short on spares, new machinery and equipment to replace worn-out units. Because of lack of pumps, the danger exists that some sections of the mine might be flooded any time.

17. Most of the company's needs are the result of a general deterioration throughout the 1970s. The new heavy taxes imposed both on imports and exports soon after the economic war of 1972, together with the sharp drop in copper prices, drove foreign shareholders away. Meanwhile the new owner - the Government - since the takeover of the company in 1975, has lacked funds for the investment which is necessary.

18. Added to all this, the break-up of the East African Community which produced, among other things, the setting up of separate Railways Corporations in the three member states, aggravated already chaotic transport problems. Under these arrangements not only were freight costs substantially higher, but all such costs had to be paid in advance in foreign exchange which was already scarce. Transportation of goods from Mombasa by Kenya Railways stopped at the Kenya/ Uganda border, from where Uganda Railways took charge of the transportation of goods within Uganda. However, lack of wagons and serviceable locomotives made it impossible for exports and imports to be delivered in time. All this tied up capital in stocks, and caused considerable delays in the delivery of production requirements which in turn sometimes resulted in millions of shillings being spent to airfreight essential supplies to avoid plant shutdowns.

19. Shortage of working capital too in some instances forced the Company to transfer into Uganda currency and foreign exchange earned from sales of blister copper, in order to pay wages and salaries. This had the net effect of reducing foreign funds available for spares and other imported production requirements.

20. Given the present conditions, a return to 1970 levels and resumed progress of the ten year period 1970/80 to 1980/81 will require a complete rehabilitation of both the mines and the smelter. The 1970 production of blister copper was 16,958 tonnes but in 1977 this production had decreased to 2,273 tonnes. To start with, the smelter investment aimed at bringing the plant back to a reasonable standard of safety with the existing equipment will involve fixed capital costs amounting to Shs. 11.7m. all in foreign exchange, and operating costs of Shs. 22m., 12m. of which will be in foreign exchange.

21. The smelter currently employs 315 employees. To carry out the rehabilitation programme, one Mechanical Engineer for planning and design of new equipment and one Electrical Engineer for planning and design of the plant's electrical equipment will be required.

22. Investment which will take place at the mine in the course of the two years 1979/80 and 1980/81 will be for the mine rehabilitation and the cobalt plant. This will involve a total sum of Shs. 67.8m., 67.2m. of which will be in foreign exchange for the mine, and Shs.100.8m., 81.6m. of which will be in foreign exchange for the cobalt plant. The revenue expected from this amount of investment is shown below:

Table 12.1
Expected Revenue (Shs.m.)

Year	1979	1980	1981	1982	1983	1984
Copper (Export sales)	2.2	47.6	137.5	137.5	111.5	106.0
Cobalt (Export sales)	-	-	-	528.0	528.0	528.0
Copper, Cobalt (Local sales)	0.3	1.1	3.6	3.6	3.6	3.6
Total	2.5	48.7	141.1	669.1	643.1	637.6

23. A summary of estimated capital costs and working capital requirement is given in Annex 12.2.

EXTERNAL ASSISTANCE

24. From the foregoing details it is clear that substantial external assistance in the form of skilled personnel and finance will be required by the mining sector if its investment programme is to be realised. Whereas international agencies like UNDP can be approached for technical assistance, it is recommended that, in view of the major investment programme which will be undertaken by Kilembe Mines Ltd., the Government seriously considers the possibility of negotiating a joint-venture agreement with a foreign company for the provision of know-how and necessary investment funds.

ANNEX 12.1

Mineral Production

	Unit	1970	1971	1972	1973	1974	1975	1976	1977
Gold	grams	19	na	na	64	102	152	57*	na
Cassiterite (Tin Ore)	tonnes	192	189	113	100	246	88	12	26
Wolfram (Tungsten)	tonnes	335	210	227	172	188	89	71	69
Beryl	tonnes	367	221	73	133	156	40	14	21
Blister Copper	tonnes	16958	15731	14071	9643	8912	8231	5366	2273
Apatite	tonnes	30318	15024	14582	17451	13501	4892	2116	na
Bismuth	tonnes	na	13.6	1.2	2.8	na	na	na	na
Columbite - Tantalite	tonnes	na	3	4.1	1.8	6.5	5	2.10	na
Limestone		21278	291361	232245	199771	156195	na	na	35305*

(*Provisional)

Source: Geological Survey & Mines Department.

Minerals: Summary of Estimated Capital Costs
And Working Capital Requirements (Shs.m.)

<u>PROJECT</u>	<u>1979/80</u>		<u>1980/81</u>	
	<u>Foreign Costs</u>	<u>Local Costs</u>	<u>Foreign Costs</u>	<u>Local Costs</u>
<u>Geological Survey and Mines Department</u>				
Re-equipment of six laboratories	1.4	-	-	-
Replacement of machinery, equipment and vehicles	8.0	-	2.0	-
Sub-Total (i)	<u>9.4</u>	<u>-</u>	<u>2.0</u>	<u>-</u>
<u>Small Mines</u>				
Machinery equipment, building and vehicles	na	na	na	na
Working capital	<u>3.5</u>	<u>1.0</u>	<u>2.5</u>	<u>1.0</u>
Sub-Total (ii)	<u>3.5</u>	<u>1.0</u>	<u>2.5</u>	<u>1.0</u>
<u>Itama Mines Ltd.</u>				
Building equipment and fittings	8.25	3.75	3.0	-
Working capital	-	2.50	-	2.50
Sub-Total (iii)	<u>8.25</u>	<u>6.25</u>	<u>3.0</u>	<u>2.50</u>
<u>Bjordal Mines Ltd.</u>				
New mill and new power generator	1.1	-	-	-
Bulldozer, tractor and vehicles	1.0	-	0.3	-
Working capital	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>
Sub-Total (iv)	<u>2.6</u>	<u>0.5</u>	<u>0.8</u>	<u>0.5</u>
<u>Kilembe Mines Ltd.</u>				
<u>(a) Smelter Plant</u>				
Machinery, equipment and vehicles	6.7	-	5.0	5.0
Working capital	6.0	5.0	6.0	5.0
<u>(b) Mines</u>				
Mine Rehabilitation	47.2	0.3	20.0	0.3
Cobalt plant	36.4	10.7	45.2	8.5
Working capital	<u>30.0</u>	<u>10.0</u>	<u>30.0</u>	<u>10.0</u>
Sub-Total (v)	<u>126.3</u>	<u>26.0</u>	<u>106.2</u>	<u>23.8</u>
GRAND TOTAL :				
(i) + (ii) + (iii) + (iv) + (v)	150.05	33.75	114.5	27.8