

The Rio Tinto-Zinc Corporation Limited Anti-Report **CIS**

Letter

"I am writing to you as elected head of the Herero peoples of South West Africa. You may well know apart from its mineral wealth which is substantial, South West Africa is a poor country. This country, which is our country, is being exploited by greedy entrepreneurs, robbed of its wealth, and rendered barren for the future. Our fear is that when freedom finally comes to this land, it will be returned to us with no minerals left. Thus you will see the one wonderful asset which we have for developing the land for the well being of all its people will have been taken away from us. We wish all foreign firms to be removed immediately; we wish to be consulted on ways and means by which our peoples can have a fairer share in benefitting from the wealth of the land of their birth."

Clemens Kapuuu
Chief of the Herero Peoples
of South West Africa

The Rio Tinto-Zinc Corporation Limited Anti-Report

CIS

Contents

2	Introduction
3-4	List of Subsidiaries
5-7	South Africa and RTZ
8-9	South West Africa (Namibia) and RTZ
10-11	Rhodesia and RTZ
12-13	Avonmouth: The No 4 Lead & Zinc Smelter
14-15	RTZ—Image & Reality
16	Swansea Vale Works Llansamlet
17	Capper Pass
18-19	North Wales I The Angelsey Aluminium Smelter
20-21	North Wales II Copper Mining in Snowdonia
22-23	The Bougainville Copper Project
24	The Depletion of Finite Resources
25-28	Conclusion

Introduction

The Rio Tinto-Zinc Corporation is a world wide mining and natural resources company. The basis of the company's action is profit maximisation or in ordinary terms, greed. RTZ is both a product and an accelerator of the economic system which it serves.

Through this system the finite resources of the world are being exploited without regard for future generations for the short term benefit of a tiny minority of the population in the developed countries.

The company conceals its true motivations, with their appalling social and environmental cost, behind a veneer of plausibility. The purpose of this report is to tear away this mask and reveal the nature of the group through its actions and the way in which these affect us all.

Rio Tinto-Zinc Corporation Subsidiary Companies

Middle and Far East and Africa

(Companies are wholly owned by RTZ unless shown otherwise)

Hong Kong

Comalco (Asia) Limited (100% Comalco), Kowloon – aluminium sales

India

Borax Moraji Limited (45% Borax (Holdings)), Ambarnath, nr Bombay – borax products manufacture and sales

Indonesia

PT Riotinto Bethlehem Indonesia (55%), Djakarta – head office; Western Sumatra – exploration

Iran

Riofinex Iran Limited, Teheran – head office
Bafq Mining Company Limited (51%), Kouchke – zinc/lead mining

Japan

Comalco Japan KK (100% Comalco), Tokyo – aluminium sales
Rio Tinto Zinc (Japan) Limited (70% CRA, 30% RTZ), Tokyo – services

Malaysia

Conzinc Riotinto Malaysia Sdn Berhad (75% RTZ, 25% CRA), Kuala Lumpur – head office for exploration projects

Southern Africa

Rio Tinto Holdings Ltd, Johannesburg – holding Rio Tinto Management Services (Pty) Limited (RTMSA) (100% Rio Tinto Holdings) – management

Mandoval Vermiculite (Pty) Limited (100% Palabora), Johannesburg – vermiculite marketing; Phalaborwa, Transvaal – mining
Ore Sorters (Africa) (Pty) Limited, Johannesburg – electronic ore sorter development and marketing

Palabora Mining Company Limited (39%), Phalaborwa, Transvaal – copper mining and refining, magnetite concentrate, sulphuric acid

Lesotho

RTZ and Bethlehem Steel Corporation

Rossing Uranium Limited (partnership of RTMSA and others), Rossing, Swakopmund – uranium mine (under construction)

(contractors for Lesotho National Development Corporation), Letseng-la-Terai – diamond exploration

Europe and Turkey

(Companies are wholly owned by RTZ unless shown otherwise)

Austria

Borax Consolidated Limited (100% Borax (Holdings)), Stadlau, Vienna – borax products manufacture and sales

Belgium

Compagnie Productrice des Borates SA (100% Borax (Holdings)), Brussels – borax products sales

France

Borax Francais SA (100% Borax (Holdings)), St Germain-en-Laye – head office, borax products sales; Coudekerque, Nord – borax products manufacture

Germany

Deutsche Borax-Gesellschaft mbH (51% Borax (Holdings)), Frankfurt-am-Main – borax products sales
RTZ Pillar Europe Limited, Bad Salzflen – holding company for number of European subsidiaries providing aluminium products for building industries, etc

Holland

Borax NV (100% Borax (Holdings)), Rotterdam – ocean terminal, storage depot

Italy

Eurallumina SpA (20% Comalco), Porto Vesme, Sardinia – alumina plant (under construction)

Spain

La Productora de Borax y Articulos Quimicos SA (100% Borax (Holdings)), Barcelona – head office, borax products sales; Badalona – borax products manufacture

Rio Tinto Patino (55% UERT, 5% RTZ), Huelva – copper mining, smelting, refining, sulphuric acid

Switzerland

Atlas Steels SA (100% Rio Algom), Lausanne – head office marketing stainless steel products

RTZ Mineral Services Limited, Zug – uranium enrichment services

Turkey

Turk Boraks Madencilik AS (80% Borax (Holdings)), Istanbul – head office; NW Anatolia – boron ores mining

United Kingdom

(UK companies are wholly owned by RTZ unless shown otherwise)

RTZ Britain Limited, London – holding, management
RTZ Pillar, London – holding, management
Borax (Holdings) Limited, London – holding, management

Anglesey Aluminium Limited (43% RTZ), Holyhead, Anglesey – primary aluminium
Atlas Steels (England) Limited (100% Rio Algom), Luton, Bedfordshire – head office, metals stockholding; Birmingham, Sheffield – metals stockholding

Australian Mining and Smelting Company Limited (67.5% CRA, 43.5% NBHC Holdings Limited), Avonmouth, Bristol – holding company for lead/zinc interests

Barium Chemicals Limited (50%), Widnes, Lancashire – barium chemicals, sodium sulphide

Borax Consolidated Limited (100% Borax (Holdings)), London – borax and potash marketing (outside North America); Belvedere, Kent – borax products manufacture; Chessington, Surrey – research
Bristol Chemicals (33.3%), Avonmouth, Bristol – phosphoric acid

Copper Pass & Son Limited, North Ferriby, Yorkshire – lead, copper solders, alloys, high purity tin

Hardman & Holden Limited, Manchester (100% Borax (Holdings)) – industrial chemicals

Imperial Smelting Corporation (Alloys) Limited, Avonmouth, Bristol; Bloxwich, Staffordshire – zinc alloys, zinc anodes, zinc dust

ISC Smelting Limited, Avonmouth, Bristol – sales, zinc smelting and refining, lead smelting
ISC Chemicals Limited, Avonmouth, Bristol – sulphuric acid, fluorine chemicals; Swansea, Glams – sulphuric acid; Burry Port, Carmarthen – zinc oxide

ISC Estates Limited, Avonmouth, Bristol – land holding company

Imperial Smelting Processes Limited, Avonmouth, Bristol – Imperial Smelting Furnace licensing and development
Mandoval Limited (100% Palabora Mining Company), London – sales; Chessington, Surrey – research; Godalming, Surrey – vermiculite products
Mazak Limited (50%), London – sales; Bloxwich, Staffordshire – zinc diecasting alloys

Nutfield Manufacturing Company Limited, Redhill, Surrey – industrial chemicals
Plastics Design and Engineering Limited, Culcheth, Lancashire; Parr, Lancashire – industrial plastics fabrications

Platt Metals Limited (50%), Enfield, Middlesex – zinc diecasting alloys, lead products

Rare Earth Products Limited (50%), Widnes, Lancashire – high purity rare earth metals

Rio Tinto Finance & Exploration Limited, London – exploration in UK and overseas centres

RTZ Aluminium Limited, London – aluminium marketing

RTZ Consultants Limited, London – management consultants

RTZ Development Enterprises Limited, London – development and construction of new projects

RTZ Pillar Limited (Aluminium Group), Cheltenham, Gloucestershire – holding company for a number of subsidiaries supplying aluminium windows, shopfronts, double glazing, manufacture of components for automobile and domestic appliance industries. Metals stockholding

RTZ Pillar Limited (Engineering Group), London – holding company for a number of subsidiaries for selling machine tools, electrical engineering contracting, floodlighting, overhaul of aero engines, hot dip galvanising, precision engineering, pressure diecastings etc.

RTZ Services Limited, London – administrative services

Thorium Limited, Widnes, Lancashire – thorium and rare earth chemicals

Despite this, such a situation is an obstacle to the policy of 'separate development' which sees in a permanent African urban population a danger of eventual racial integration and is, therefore, attempting by all means within its power to reverse the flow of African labour to the 'white areas' . . . Apart from the complex measures of influx control, the Government has also taken other measures in its attempt to stop the continuing flow of African labour to the industrial centres. It has been encouraging industrialists . . . to establish new industries on the borders of African areas." (UN Report 1970.)

Palabora is situated in such a "border" area and together with a developing "white" town, can benefit from the plentiful supply of cheap African labour from the nearby "depleted" reserves. The miners' wives are largely employed as domestic servants for their white masters. Even then, RTZ's policy to "avoid using a large number of unskilled Africans, relying on mechanization to increase efficiency." (Johannesburg Sunday Times 29/8/71) limits the possibility of increased employment in the area.

8. The same UN Report states that, "Africans are totally denied the right to strike. Section 18 of the Bantu Labour (Settlement of Disputes) Act as amended provides that no African employee shall instigate or take part in a strike. To

Separate but Equal?

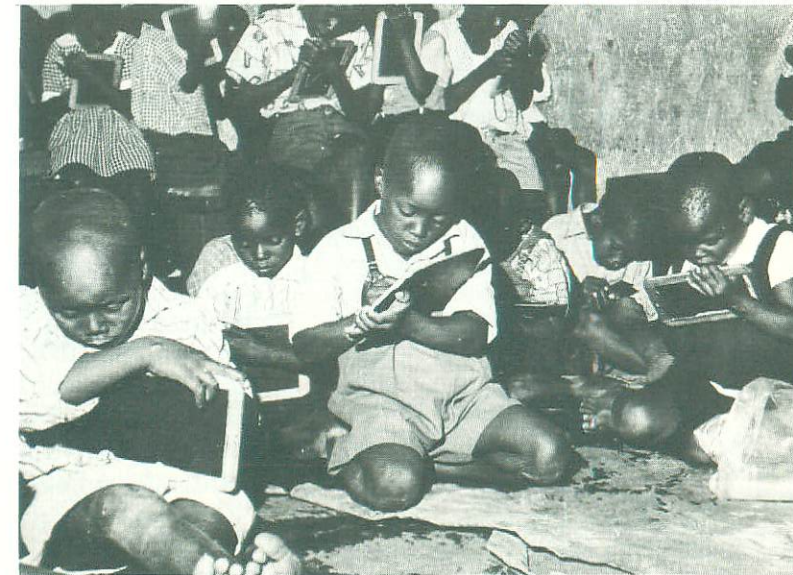
In August 1968 the Palabora Mining Company Educational Bursary scheme was set up. Up to ten bursaries, each for a maximum of £647 a year were to be awarded annually to European children, seeking University or Diploma qualifications. The bursaries were open to all European children, including those of non-employees. In contrast, the 1968 Company Report states, "A scheme is being formulated to provide educational assistance for African children." In 1969, the Report states, "A scheme to provide educational assistance for African children is still in the process of formulation." In 1970, "A scheme to provide educational assistance for African children will be announced in 1971." In 1971, "An educational assistance scheme for African children is under consideration."

The South African Government spends 30 times as much for the education of a white child as it does for a black child.

do so is an offence punishable with a fine not exceeding £500 or imprisonment not exceeding 2 years or both." Further, "African workers are excluded from the definition of 'employee', with the result that African trade unions cannot be registered for the purposes of collective bargaining."

9. Originally the South African Government had placed the mine in a "Bantu" only area, in pursuance of its Apartheid policy. Now Palabora is a "white" area and the original inhabitants are, "now living in a 'trust village', some distance away." (Discarded People—Cosmas Desmond). John Lawrence of the Guardian comments, "the results of a thorough archaeological and ethnographic study published there show that the Transvaal's Phalaborwa area, including the rich copper and phosphate mines, owned entirely by the whites, is in fact part of the genuine African homelands . . ." "Local Africans genealogies prove African ownership without a break from AD 960. But when its riches were realized, the boundary of the reserve was pushed well to the west, leaving all the mineral wealth in the 'white homelands' defined as 'land the white settled before the blacks'."

Yet today Africans are forbidden even to use the parks in the wealthy town of Phalaborwa, their traditional home."





Going to work



Coming home—South Africa

South-West Africa (Namibia) and RTZ

1. In 1966, the General Assembly of the UN unilaterally terminated the South African mandate over South-West Africa, renaming the territory Namibia. The Security Council confirmed this in 1967, calling on all member states to discourage further investments by their nationals. In 1971, the International Court of Justice ruled that the Government of South Africa was in illegal occupation of Namibia.

2. Yet the South African Government has continued with its incorporation of Namibia into the apartheid system as a fifth province of South Africa, in line with its policies of economic expansion throughout Southern Africa.

The South African hold over Namibia has been largely facilitated by the enormous expansion of the mining industry, which is the greatest contributor (over 50%) to exports, gross domestic product, and government revenue. Mining is the principal attraction for overseas investors, by reason of the high rates of return on capital, the freedom to repatriate after-tax profits, and the guaranteed low-labour cost. Taxation is paid directly to the South African Treasury. (Survey of "Expropriation of Minerals in Namibia" — Africa Bureau 1972).

3. To the indigenous people of the country, who benefit least from this development, "The question of increasing concern is their rights in the land and other natural resources and how these rights can be protected from the lawlessness of multi-national corporations who have invested their capital in the exploitation of cheap raw materials whose price they control in the expectation of excessive profits from cheap unorganised labour" (Rev. Michael Scott, in a statement to the UN 1971).

4. RTZ announced in 1968 it intended to bring into production by 1975, a mine at Rossing near Swakopmund in Namibia, producing low-grade uranium ore. Contracts worth £30 million with the UK Atomic Energy Authority (made public in 1971)¹, and with the South African Government, ensure the economic viability of what will be the largest open-cast mine in Africa. The ore will be mined by Rossing Uranium Ltd, and treated with a new enrichment process by

1. (see also conclusions of report p.27)

the SA Nuclear Fuel Corporation. Total investment is £150 million, and RTZ has announced completion of the financing and the signing of a contract for the construction of the mine with the Power-Gas Corporation of the UK (Mining Journal March 1972).

"A new company, formed to operate the mine, would be controlled by the Industrial Development Corporation of SA with Rio Tinto as managers and secretaries" (UN Council for Namibia Report 1971). The main task of the IDC is to channel the benefits of private and overseas capital to the state, and ensure the ruthless maintenance of Apartheid in the economic life of the country.

Thus the final control over the output and use of the uranium from the mine is in the hands of the South African Government, which otherwise has no access to large reserves of uranium. This has an ominous significance in the light of the declaration of 12.4.1971 in the Rand Daily Mail by Dr A J Roux, Chairman of the SA Atomic Energy Board, who said, "it would be impracticable and almost impossible to make nuclear weapons from plutonium. The reason for this was that much of the material and equipment needed to make use of plutonium for military purposes would have to be imported from abroad. Such an installation would be subject to international inspection. **Although the SA policy was to use her enriched uranium for peaceful purposes, the new process recently developed in the country put her in a position to make her own atomic weapons** '.

5. South African Atomic Energy legislation makes it an offence to print or to say anything unauthorised about uranium, so that a wall of secrecy surrounds the activities at Rossing. Urangesellschaft, the West German Company, withdrew from further participation in 1972, after the West German Government ended financial backing, recognising the clear implications of the Rossing project as the means by which SA could produce nuclear weapons.

6. In order to mine the uranium, RTZ will be making use of the compulsory migrant labour policy run by the South African Government, recently the object of a successful and prolonged strike by the mainly Ovambo labour force.

Mining is the largest employer of Ovambo labour, paying an average wage of £10 a month.

7. "When a worker has been treated and classed by the medical officer in one of the 3 working categories, a. mines and industries b. agriculture c. livestock breeding farms, he is given an identity disc with a number to hang around his neck and from there he is sent to an unknown destiny. Sometimes he may travel for several days clothed in a blanket and feeding on a loaf of bread and a tin of jam."

". . . the worker has no rights to leave the employment before the expiry of his contract, he is not entitled to obtain sick leave or annual leave nor is he permitted to be accompanied by his family."

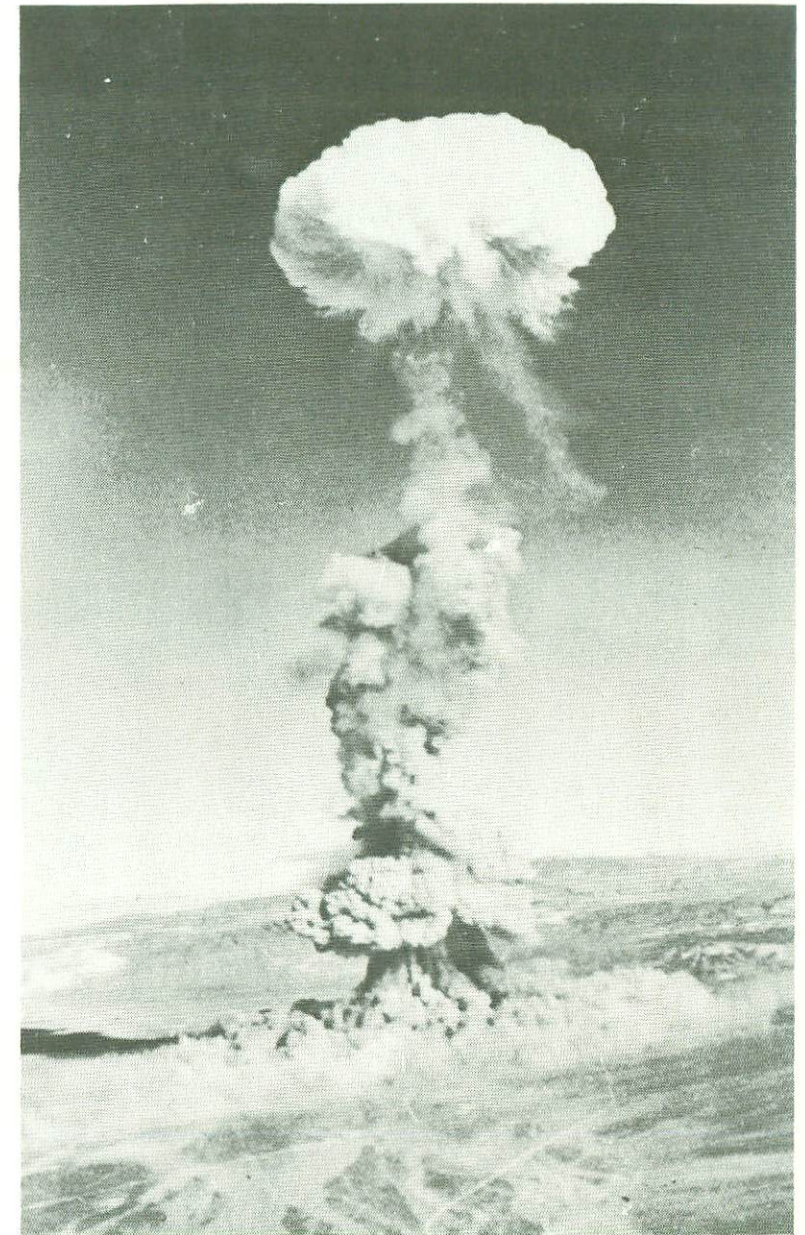
"The worker . . . is compelled . . . to live in compounds which are overcrowded with small sleeping space and no facilities for cooking."

UN Report on Southern Africa 1970.

8. A "new" labour system was introduced in January 1972 by the SA Government in an attempt to end the strike. "A comparison of the contract in operation before the strike and the revised contract shows that while some improvements have been made, the essentials remain unchanged. Most of the worst features remain: low wages, the compounds, the separation of families, the restrictions of mobility". (SA Institute of Race Relations April 1972 "Contract Labour in South-West Africa").

Employers are forming labour associations to prevent competition forcing up the price of labour, thus ensuring an artificial minimum rate. RTZ, as a member of the Mine Owners Association of SWA, is directly involved in this.

9. RTZ's concession has been obtained contrary to ruling of Security Council: "Franchises rights titles or contracts relating to South-West Africa, granted to individuals or companies by South Africa since 1966 were not subject to protection or espousal by their states against claims of a future lawful government of the territory of Namibia" UN Security Council October 20th 1971.



'Although the SA policy was to use her enriched uranium for peaceful purposes, the new process recently developed in the country put her in a position to make her own atomic weapons'.

Dr A J Roux, Chairman of the South Africa Atomic Energy Board, 1971

Rhodesia and RTZ

"Any country which can give a feeling of long term security and a fair deal without any undertone of revolution will charge ahead." Sir Val Duncan, 'The Director' July 1968.

1. The Unilateral Declaration of Independence was made in November 1965, by the Smith regime in Rhodesia to maintain 'white civilization.' What this meant was the continued rule of the 220,000 whites over the 5,000,000 Africans in that country; a rule which basically excludes the Africans from any political or economic power and which maintains a privileged and reactionary white community.

Mandatory economic sanctions were imposed by the United Nations in 1966 in an attempt to weaken the Smith regime, so that the Africans might in the future have some say in the running of their country.

2. Rio Tinto Rhodesia has thoroughly exploited these developments, and continues towards its profit seeking goal. As a result it has strengthened the economic basis of the regime, thereby increasing its ability to continue its repressive policies against the African majority.

"One of the saviours of the Rhodesian economy since UDI was declared has been the country's mining industry, which has scarcely been affected by sanctions . . . This analysis presupposes that metals produced in Rhodesia have been regularly exported despite sanctions and there is every reason to believe this is so. Both Anglo-American and RTZ opened nickel mines during the UDI period . . ."

"Since 1965 total mining output has risen close on 50 per cent in value to £57 millions sterling and more than 30 per cent by volume." The new RTZ nickel mine Empress, "should mean a £3½ ml. boost to Rhodesian export earnings from 720,000 tons of nickel and copper ore to be produced each year." Financial Times 30/10/69.

Rio Tinto Rhodesia owns 4 Gold mines in the Gatooma area, the Sandawana emerald claims, and controls over 90 per cent of the issued share capital of the Empress Mining Co Ltd. In 1971 (after 5 years of UDI) the company purchased the Perseverance claims containing nickel ore reserves of approximately 1 million tons.

In July 1971 the group acquired a 24 per cent interest in a manufacturer of agricultural equipment with a foundry in Salisbury. In February 1972 it acquired the total share capital of the Rhodesian Mining Enterprises Ltd. and the claims and assets of the Great Dyke Chrome Mines Ltd. It has also obtained the option to purchase the entire share capital of Frances Mines Ltd. "The recent US decision to defy, in the matter of chrome ore, the UN embargo on trading with Rhodesia, and (premature?) activity in other western nations in preparation for the removal of these sanctions would appear to have influenced the timing of the move". (Industrial Minerals Feb 1972.)

3. In its resolve to make sanctions as ineffective as possible "RTZ has requested Government approval for building a chrome smelter at Eiffel Flats, near Gatooma. Approval has also been sought for a feasibility study concerning a metal alloy project to be added to the smelting complex. It is hoped to start production in 1975, if the market conditions so warrant. The company is also considering the smelting of the chromium output from other mines on a custom basis." Mining Journal 7/4/72.

In April 1972 RTR "is raising £1.17 millions by way of private placing of the 8½ per cent 4 year Debentures." (Financial Times, 5/4/72).

To forestall any move to stop sanction breaking, "RTZ was naturally extremely reluctant to talk about the nickel position." (Financial Times 18/3/69.)

In all these activities, co-operation between the Government and the private sector has "never been better." (Financial Times 18/3/69.)

"The Rhodesian Minister of Mines Mr. Ian Dillon will tour mining companies in South West Africa later this month at the invitation of the Association of Mining Companies of South West Africa. The spokesman said that Mr. Dillon's hosts would be senior mining personnel including those of Rio Tinto Exploration Ltd at Swakopmund." (Windhoek Advertiser 14/2/72.)

4. Like other British companies operating in Rhodesia, the RTZ London office claims that "it really knows nothing" (African Development, Dec. 1969) about its subsidiary. This claim is very difficult to justify in view of the company's declared

structure and policy.

"Mr Roy Wright, the company's deputy chairman and deputy chief executive, has said that where RTZ is dealing with its large self-sufficient subsidiaries the London head office is responsible for 1. Capital raising and co-ordination 2. Dividend Policy 3. Senior appointments."

"The basis of the style of management created by Sir Val and his colleagues is frequent contact with its subsidiaries. They all serve on the boards of a number of subsidiary companies and play an active role in the management of the companies concerned . . ."

In the sphere of . . . "allocation of reserves, the key body . . . is the Capital Estimates Committee chaired by Sir Mark Turner in London. All operating companies have a limit beneath which they can spend as they choose, but projects costing more than a certain amount, which varies from company to company, must go to the CEC. So too must acquisitions or expansions which would have a chain effect that would take the group into new fields of activity." ". . . the London office can claim that it never had to put off one project in favour of another. It has managed to find enough money to finance all viable schemes that have been put forward." (Financial Times 27/3/69.) During the period of UDI Rio Tinto Rhodesia not only expanded its profits continuously and undertook many new capital spending schemes but also offered a proportion of its equity to the Rhodesian public.

5. Profits after tax for Rio Tinto Rhodesia rose from £871,000 in 1969 to £1,592,000 in 1971.

The expansion and increase in profits of RTR can be partly attributed to the very low wages paid to its African miners, a policy that the company follows with its support for the Rhodesian regime. Apart from agricultural workers, Rhodesian African mine workers are the lowest paid in any sector. In 1972 the average annual wage for Africans was £343, while that of European miners reached £4456.

SANDAWANA

It is also the policy of the mines and the Rhodesian regime to use migrant labour. This supposedly absolves them of the responsibility to pay wages that could feed the miner's family, which remains in the area of origin. It also means that

the housing in compounds can be cheap and no unemployment or sickness benefit need be paid. The miners are given rations for their food by the company. This is bitterly resented by the miners since they have no control over the type of food they can buy. This practice has been proscribed by law in the UK since the 19th century. Theoretically African trade unions are allowed by the Rhodesian regime but any attempt by the unions to change conditions, is met with an immediate banning and imprisonment of the union leaders. The International Labour Organization reported in 1970 that 85% of political detainees in Rhodesia were trade unionists.

Given these conditions it was not surprising that, during the Pearce commission hearings in Rhodesia, the African miners went on strike. RTR's Sandawana Mine in Belingwe was one of the many mines affected. The Rhodesian Chamber of Mines, representing the mine employers, condemned these strikes, calling them "semi-political" and inspired by "agitators". The strikers were demanding 50p a day pay increase and cash for rations. If these demands were met, and there is no indication that they were, the miners pay would increase from a mere £7 to £10 per week.



Avonmouth: The No.4 Lead & Zinc Smelter

“A great British achievement”: Sir Val Duncan, referring to RTZ’s Imperial Smelting Process, in 1966.
(A government enquiry into acute pollution from the smelter is now in progress.)

1. The major development in the Imperial Smelting Corporation since it was bought up by RTZ has been the construction of the giant No.4 lead and zinc complex (working on ISC’s new patent continuous smelting process.) This was commissioned in 1967 for £15 million, and was described in the Times (4/3/66) as “one of the biggest industrial developments in the West Country for more than a quarter of a century.”
2. In 1969, the Factories Inspectorate examined a sample of workers, and the results showed that 50% had a level of lead in their blood greater than 80 micrograms per 100 millilitres, and that 13% had levels of over 125 micrograms per 100 millilitres (Sunday Times, 30/1/72). According to the official classifications published in the British Medical Journal (23/11/68), the levels in the blood of the workers in the first category are “excessive” (more than 80 microgr. per 100 m/litre), and in the second category, “dangerous” (more than 120 microgr. per 100 m/litre).
3. As regards pollution of the surrounding area, the Chief Alkali Inspector’s report on Imperial Smelting in 1969 stated that “initial results were bad. A major shutdown intervened, but when production and sampling were resumed, our worst fears were confirmed. High level meetings were held with the company and plans were laid down for attaining satisfactory conditions. Major modifications are needed and some time will elapse before they can be implemented.”
4. Yet still in January 1972 the TUC’s Chief Medical Investigator, Dr. Murray, said that conditions in the factory were the worst he had experienced in 25 years, and that there was **“just no excuse at all for the pollution and the very real danger to workers in the factory”** (Guardian, 28/1/72). In fact, when Dr. Murray saw the plant in December it was, he said, “leaking lead at every pore” (Sunday Times, 30/1/72). In some parts of the factory tests revealed “atmospheric lead levels of 76 micrograms per cubic metre” (Private Eye,

28/1/72). In the last eighteen months there have been at least 20 cases of serious lead poisoning at the factory. One hundred workers were at one time suspended from duty because of the level of lead in their blood. About 500 workers have recorded levels in their blood of 120 micrograms per 100 millilitres (Guardian, 28/1/72; Observer, 30/1/72).

5. In a letter to the Guardian (1/2/72) Dr. Murray wrote, “a meeting with the firm’s doctor . . . confirmed that (he) had over a long period been making representations to the management about the working conditions, but his warnings had gone unheeded.” He also said that the firm had to be “pressured” into revealing the results of lead level tests that had been carried out (Guardian, 28/1/72).

6. A few weeks later Sir Val Duncan told employees at the smelter that “RTZ policy has always been, and always will be, the necessity to avoid endangering the health of any of our employees.” (Financial Times, 16/2/72).

7. Early in 1972, tests revealed that very high concentrations of toxic metals have been building up in the Severn Estuary and the Bristol Channel. The major source of such toxic metals appears to be the Imperial Smelting works at Avonmouth. Whelk in the Severn Estuary have been found to contain up to 3100 parts per million of zinc, 425 p.p.m. of cadmium and 27 p.p.m. of lead; in the Portishead area some shellfish were found to contain up to 550 p.p.m. of cadmium. (In the U.S. the maximum permissible level for combinations of cadmium, chrome and lead is only 2 p.p.m. in edible shellfish.) **“I find these levels exceedingly high, dangerously so,”** said Dr. Graham Nickless, of Bristol University, whose report had revealed the hazards. He pointed out that if a person ate one whelk every two days he would absorb “as much cadmium as a Japanese who ate daily one pound of cadmium-contaminated rice . . . This level of cadmium brought about the disease itai-itai — it means “ouch ouch” — which leads to a softening of the bones. The bones finally become brittle and break as the rising level of cadmium in the body competes with the calcium that normally strengthens them.” (Observer, 30/1/72; Daily Telegraph, 10/2/72)

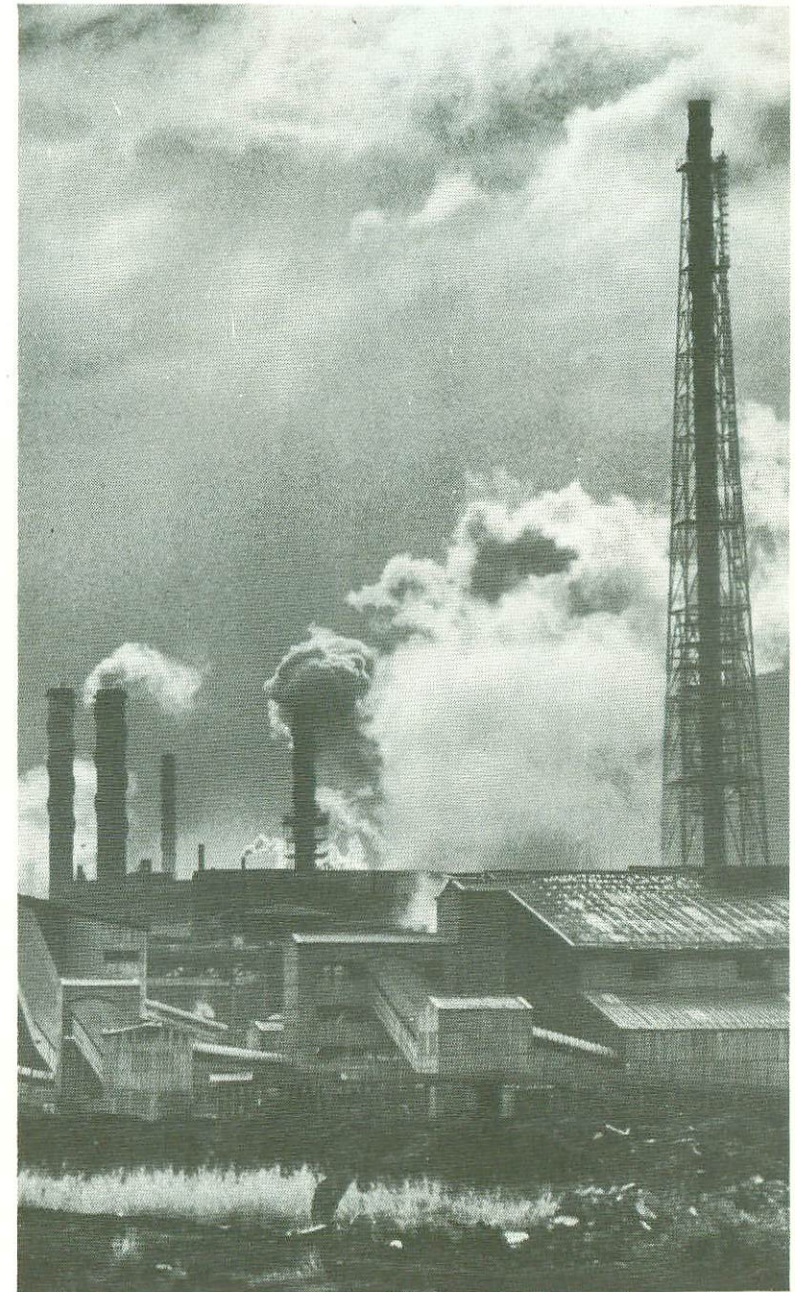
8. Dr. Michael Martin, a botanical scientist working at Bristol University, has been carrying out tests on soil and vegetation in the surrounding area since 1970. His report shows that leaves from trees near the smelter contain 0.7% zinc and that lead levels were also "dangerously high" being up to 400 times greater than in areas unaffected by pollution from the smelter (Guardian, 11/2/72).

Early in 1971 it was discovered that some foals at a stud farm at Easter Compton, three miles from the smelter, were going lame, and displaying symptoms of lead poisoning, immediately after eating grass for the first time. The foals were subsequently moved away and recovered.

9. "Duncan Dewdney . . . has openly confessed that the plant's initial construction was skimped, that corners were cut and that it should have cost at least two million pounds more" (Observer, 30/1/72). Dewdney is Chief Executive of RTZ in Britain.

10. However, the merits of Imperial Smelting Process itself, certainly on the scale on which it operates at Avonmouth, seem open to question. "A similar, yet smaller plant was opened in Swansea in 1960 and experienced teething troubles which also created a pollution hazard. Yet the ISC seemed to expect no trouble at all from the much larger plant at Avonmouth". (Sunday Times, 30/1/72). In Britain it has been a financial disaster for RTZ and also for the thousand or so men made redundant because of RTZ's policies (Times, 3/7/71; Guardian, 28/1/72). In the Daily Telegraph of 21/6/71 it was stated that "the smelter must be kept going at full or near full capacity or it becomes uneconomic." In the Financial Times of 28/1/72 it was said that "the company admits to 'a fairly serious hygiene problem' in respect of lead in the factory, but asserts that this has arisen because the smelter has not been operating continuously."

11. The Imperial Smelting Process "is licensed to 11 overseas producers and brings in annual royalties of about £1 million" for RTZ (Daily Telegraph, 21/6/71.) They are in Italy, Poland, China, Australia, Zambia, France, Federal Republic of Germany, Rumania, Japan, Canada, and Yugoslavia.



The other face of Imperial Smelting

It's true that we have just put into operation the world's largest blast furnace for smelting zinc and lead. And it's a fact that we are the only producer of primary zinc in the United Kingdom. And that we can supply the exact grade of zinc you want.

But there's more to us than that!

Countless British families come in daily contact with Imperial Smelting chemical products. And whenever they do, we are there to make sure that these everyday products work better. One of our range of chemicals, for instance, acts as a propellant in aerosol cans. So we help mother to keep her hair just right in place (father too). And to clean the oven. Then get the right amount of cream on her hands. Repel flies. And freshen the room.

And when baby is dusted in talcum powder or soothed with cream, our zinc is in both products. If he cuts himself, we are in the adhesive plaster.

So you see, Imperial Smelting are not all automated producers of one basic product. Not all computers and process technology. We can be a lot more besides.



IMPERIAL SMELTING RTZ

Fumes hit infants²

Fumes, probably from the Imperial Smelting Corporation works at Llanamlet, Swansea, are said to pollute the atmosphere so much that more than 200 children attending an infants' school have to be kept indoors at playtime to prevent their suffering paroxysms of coughing.

'Countless British families come in daily contact with Imperial Smelting chemical products'

South Wales Evening Post

CITY SCHOOLS PROBED AFTER GASES FEAR

By EVENING POST REPORTERS
A TEAM OF medical officers today went to 24 schools in the Llansamlet area of Swansea, to investigate reports of harmful effects on the children from gases said to be emitted from the Imperial Smelting Corporation's Swansea Vale sulphuric acid works.

BIG BRONCHITIS CHECK IN GAS FEAR DISTRICT

FAMILY DOCTORS near the Swansea Vale works, Llansamlet, are being asked if sulphur dioxide gases from the plant have aggravated bronchitis among their patients.

LEAD-POISON SCANDAL

The Imperial Smelting Corporation's lead and zinc plant at Avonmouth closes down today for at least months because it has been poisoning its workers and endangering nearby residents. The plant was to have been one of the showpieces of the 1960s white revolution, an example, Mr Wilson when he opened it in 1968, of our national talent

It cost £14½ million, but as a director of its parent company, Rio Tinto Zinc, admitted last week wasn't enough. It was supposed to be foolproof, safest of its kind. But more than 100 employees have levels of lead in their blood well above the maximum safety limit. Soil and plants are contaminated, and three horses are eating lead-poisoned grass.

In a pollution-conscious age, it is possibly been allowed to continue in the face of shortcomings on the part of the management safety.

Smelting Corporation are preparing plans for the installation at Swansea of its new blast furnace process for the smelting of zinc or zinc associated with other metals. Unless general conditions show serious deterioration over the next few months, work on the site will begin at an early date, with a view to completion by the end of 1969.

Smelter team strikes for danger money

BY OUR OWN REPORTER

About 300 men employed by independent contractors cleaning the Rio Tinto Zinc smelting plant at Avonmouth struck yesterday, demanding more money.

DANGER AT CITY SCHOOL

Brand-new but poisonous

The Government will have to order an inquiry into conditions at the Rio Tinto smelter in Bristol. One case of serious lead poisoning in a new factory would be grounds for an investigation. Twenty cases of notifiable lead poisoning demand a public inquiry. The TUC's medical adviser, Dr Robert Murray, has also said

RESULTS of the installation of the world's first full scale zinc smelting blast furnace at the Swansea Vale, Llansamlet, works of the National Smelting Co. Ltd. have so far exceeded all expectations, Mr. Emyln Evans, the works manager, told Swansea Rotary Club yesterday.

Medical checks on city pupils?

Evening Post Reporter
ELSH, Secretary
Mr. Peter Thomas may order medical checks on pupils.

THE OBSERVER
BUSINESS OBSERVER

The poison in RTZ's system

Toxic effluent from smelter

GASES FEAR

Rio Tinto stinks

Carr orders inquiry into pollution risk at Avonmouth plant

Poison risks close lead smelter plant

SIX HUNDRED AND eighty workers, including about 30 women, will be sacked when most of the Swansea Vale smelting works at Llansamlet closes this year.

The first redundancies—about 180—will be at the end of May, and the rest by the end of September.

All zinc and lead making will stop, but 120 men will be kept on to continue making sulphuric acid.

Shock poison findings in the Bristol Channel

by JEREMY HIGGINS, our Environment Correspondent

SWANSEA Vale Works, Llansamlet, has introduced a recovery plant which is regarded as making a contribution to the productivity of the Imperial Smelting Corporation Ltd.

By PETER HARVEY

The world's largest lead and zinc smelting plant—built at Avonmouth, near Bristol, three years ago at a cost of £14 millions—is to close for two months because of a mounting risk of lead poisoning to workers.

Unions and medical specialists yesterday described pollution at the plant as appalling. Hundreds of employees had lead levels in their blood well above the maximum safety limit. The factory's owners, Imperial Smelting Corporation—a subsidiary of Rio Tinto Zinc—admitted that "a very serious hygiene problem" existed.

"We have been suspicious something was wrong'. A company spokesman.

1. Although Swansea Vale is the latest RTZ plant to hit the headlines, the pollution hazards have been present for many years. Recently complaints have been made "that 500 children at a nearby school have to be kept in at break-times because they suffer fits of coughing caused by gases from the plant." (South Wales Evening Post 25.4.72)

2. Mr Neil McBride, M.P., for Swansea East has asked the Secretary of State for Wales; "If he will undertake a survey of the Llansamlet area to determine to what extent acidic gases are emitted into the atmosphere from the Swansea Vale works."

"If he will investigate the extent of the damage to plant and vegetable life from acid burn in Llansamlet, Winchwen and Bonymaen areas caused by the emission of acidic gases from the Swansea Vale works."

"If he will consider, as a special case, the ranking for provision of grant within the improvement grant provisions for housing, of reimbursement for the cost of roof repairs in the Llansamlet area where such repairs are caused by the deterioration of galvanised nails in slates and tiles caused by the emission of acidic gases to the atmosphere."

"If he will have an investigation made of the effect on bronchitic persons of the emission of acidic gases from the Swansea Vale works."

"If he will order an immediate examination of the effects of inhalation of acidic gas on the 500 pupils of Trallwn Primary School, Llansamlet."

3. Nearby residents have said, inter alia; "It's the most horrible thing. It's a foul taste in the mouth which catches you at the back of the throat. You can't get your breath and you start choking." "Our grass is dark brown, our ceilings are brown and if you leave the windows for a week they're covered by a brown, sticky solution. If that's what it's doing to things, you can imagine what it's doing to people, especially the young and the old." (Source South Wales Evening Post 25.4.72)

4. "In the modern world the power of a country relies upon the quality and production ability of its modern industrial installations. Imperial Smelting Corporation is proud of its contribution both to the welfare of the people of South Wales and to the Welsh national economy." (Advert. South Wales Evening Post 28/6/63)

5. The Llansamlet works are to be closed with 680 redundancies by the end of September 1972.

"However much we try and however much we improve, circumstances, through no fault of our own and quite outside our control, contrive to drive us two steps back for every step forward we take," said the company." (source South Wales Evening Post 26.2.71)

Capper Pass

A Rio Tinto official said in London: "As far as I know, the routine tests have shown nothing abnormal."

(Times 24/3/72)

1. "The tin smelting works of Capper Pass is unique among the worlds smelters in the range of concentrates, complex ores, residues, fumes, and non-ferrous scrap that it can accept. From these various raw materials, refined tin, copper, and lead are produced as well as solder and alloys of silver, bismuth and antimony. A material flowsheet of great ingenuity and complexity has been built up over the years." (From an RTZ public relations pamphlet).

2. In 1968 work began on expanding the smelting plant of Capper Pass and Son Ltd at North Ferriby, near Hull in Yorkshire. Phase One of the expansion programme was due to be completed at the end of 1970. (Metal Bulletin 26/7/68). Capper Pass had, shortly before, been bought up by the Rio Tinto-Zinc Corporation. (see Economist 30/9/67).

3. "a quarter of the people living near the Capper Pass smelting works . . . whose blood was tested were found to have more lead in their bloodstreams than is normal. Children living in the area are now being tested . . ." (Guardian, 24/3/72)

4. This level (40-80 micrograms per 100 millelitres in the blood) was considered acceptable for people working in lead works, but, said the local Medical Officer of Health, Dr John Maughan (who had conducted the tests) none of the people tested were in fact workers at the factory. (ibid.)

5. The tests followed a Ministry of Agriculture survey which had disclosed lead contamination at ground level. (ibid.)

FOOTNOTE

5. It is perhaps worth remembering here that it was only after very considerable press publicity about the Avonmouth smelter that RTZ was finally forced to admit "that the plants initial construction was skimped". (Duncan Dewdney, Chairman, and chief executive of RTZ in Great Britain: Observer, 30/1/72).

North Wales I The Angelsey Aluminium Smelter

"We intend to be good neighbours and to bring a benefit to this community", Duncan Dewdney, Chairman of Angelsey Aluminium Company, and executive director of RTZ. (Angelsey Mail. 2/7/72)

1. The Angelsey Aluminium Company comprises holdings by BICC, Kaiser Aluminium, and RTZ (27%, 30% and 43% respectively). Its main industrial function is to smelt alumina shipped from the giant refinery at Gladstone (Queensland), operated by the RTZ groups Comalco in which Kaiser is also a partner, and fed by the bauxite from Comalco's Weipa deposits, again in Queensland. These are the largest known deposits of bauxite in the world, and at present rates of consumption (which are certain to be increased, with improvements in mining technology) they will be exhausted inside 35 years. (Ecologist: June 1971).

2. "By 1964 detailed plans for the building of a smelter had been prepared whilst the people of Angelsey still had no idea of their existence. The plans proposed the immediate construction at Penrhos, Holyhead, of a smelter with an initial capacity of 120,000 tons per annum, as well as extensive modifications to Holyhead harbour. A later phase was planned, to increase capacity to 300,000 tons with the further development of a bauxite refinery. No mention of these plans was made in the 1966 annual report." (Ecologist: June 1971)

3. One of the main problems initially, however, was finding a supply of cheap electricity, as every pound of aluminium "takes about 8kWh to produce — the equivalent of running a two bar fire for four hours." (Guardian. 17/2/72). The original plan was for RTZ to build its own nuclear power station jointly with the Atomic Energy Authority (Times 26/5/67). Instead, the Wilson government arranged to provide a loan for the purchase of one third of an atomic power station, the nearby Wylfa, with an option on a further third should the company wish to increase production in the future. Since Wylfa was not yet built, it was decided to peg the price and terms of the agreement to the production of electricity at the Dungeness 'B' station then just coming on tap.

4. Thus the government was pegging the price of the AA Co.'s electricity (a way of giving them cut-price power without officially doing so), then handing over the money to pay for it (£33 million at 7%); they were thus technically not subsidising an industry in competition with Norway, which would have been in contravention of EFTA agreements.

5. "The aluminium smelting process consists of the electrolytic reduction of alumina . . . dissolved in a bath of molten fluorides at 950°C. It is technically possible to scrub both the low level emission of gases from the pot-rooms and the high level emission from the main stack to an efficiency of 95%; however, because of the type of cell or pot chosen for use in the Angelsey smelter (using 'prebaked' anodes), efficient extraction is made more difficult." (Ecologist: June 1971)

6. "Fluorine contamination from atmospheric fall out can cause severe damage to most forms of life; it is cumulative and therefore the degree of damage is dependent upon the length of exposure to the contaminant, as well as its concentration. For these reasons the Medical Research Council Memorandum No.22 on Industrial Fluorosis concludes that ' . . . it is only prudent to site new developments in such a way that, so far as is possible, residents are kept out of the zone known to be liable to contamination.' . . . Presumably RTZ ignored these facts when they made their plans, for the smelter stands contiguous with Holyhead town; primary schools are only a few hundred yards away and 16,000 people live within the fallout area." (Ecologist, June 1971)

7. A public inquiry was held in 1968; however, the inquiry never seems to have been intended to have much significance attached to it, either by RTZ, or by the government. When the smelter went into production, total emissions of pollution were up 54.7%, while fluoride emissions from the main stack were up more than 3 times on the figures submitted by the company at the inquiry.

8. "The official reason for the increase seems to have been that, since the inquiry, smelting capacity had been reduced from a maximum of 120,000 tons per annum to 100,000 tons,

and the height of the stack increased from 300 feet to 400 feet . . . (The original) recommendations were based on a data provided by RTZ and on a stack height of 525 feet". (Ecologist, June 1971).

The chief Alkali Inspector wrote to a resident of Anglesey who expressed alarm at the increase: **"We do not accept that the estimates submitted by the company at the public inquiry were binding in any way"**. (Nov. 1970) Duncan Dewdney, in a personal interview in 1969 told the same resident (who had purchased some shares in RTZ), that the level of pollution control originally promised by them (95%) could have been achieved with the expenditure of only another £250,000.

10. A major hazard from aluminium smelting is the possibility of fluoride pollution. Heavy doses of fluoride are injurious both to animals and human beings. "In the vicinity of industrial plants (high doses) can give rise to thickening of the bones and ossification of the ligaments (osteosclerosis). (Chemical and Process Engineering June 1971)

There are a number of pieces of admittedly circumstantial evidence that this could possibly be affecting the area. Residents have reported that cars parked near the smelter have suffered windscreen "etching" characteristic of fluoride corrosion. Trees used to landscape the plant site are also reported to have been renewed more than once. Under inversion conditions residents of Rhoscolyn, four miles from the smelter, found the air so contaminated as to produce gasping for breath and a burning sensation in the throat. The curling leaves of a dogwood shrub corresponded exactly to a photograph of the effects of fluoride poisoning. As has been emphasised this evidence is totally circumstantial, but the fears of the residents are greatly compounded by RTZ's insistence on monitoring its own pollution figures and refusing either to publish them or to show them to interested local bodies, like the Farmers Union of Wales and the Anglesey Resident's Association. On the evidence of Avonmouth and Swansea the residents have little reason to feel that their interests are properly protected by a combination of RTZ and the Alkali Inspectorate.

North Wales II Copper mining in Snowdonia

"We don't intend raping the British countryside"; Sir Val Duncan (Evening Standard: 23/4/71)

1. RTZ is at present completing a years programme of test drilling for copper in the Capel Hermon area of the Coed-y-Brenin forest in Snowdonia National Park. Drilling had been undertaken without planning permission, as secretly as possible. Following disclosure in the press, RTZ applied for permission to drill and a public inquiry was held.

Unsurprisingly in view of RTZ's overwhelming legal and other sources permission was granted to drill for a year. No action was taken by Merioneth County Council regarding drilling undertaken before permission was granted.

2. At the same time RTZ obtained permission to make exploratory drillings for gold in the Mawddach estuary. In March 1972 RTZ announced that it had dropped its plans for these drillings, a development foreseen by conservationists much earlier. "While it might be crediting RTZ with too Machiavellian a plan to suggest that they put up the Mawddach gold dredging only in order to abandon it later, it is not hard to see the advantages of such a ploy. RTZ would be able to pose as the magnanimous corporation refraining from ruining a beautiful and popular estuary, and the county council would be able to take the credit for persuading it to do so. In the self-congratulatory conservationist haze which would then envelop the subject, opencast coppermining could then be given a go-ahead." (New Scientist' 12/11/70) Besides the above there are further signs that the ground is being prepared for an application to mine. Both Plaid Cymru & Dolgellau county council have written to RTZ asking them to continue with their plans.

3. Sir Val Duncan has remarked, "Our aim would be to provide employment for local people, to save imports and foreign exchange, to reduce the national import bill, but to do this only in the context of being good corporate, environmental citizens, meeting the highest standards." (Guardian 23/3/72). (Not, of course, to make a profit).

4. As regards the possibilities of employment, one of the Dolgellau councillors has talked in terms of 5,000 jobs from the mine. (Guardian 29/3/72). Such a figure is obviously

ridiculous. Even at Palabora which produces 95,000 metric tons of copper per annum, total employment is about 3,000. In view of the considerably higher wages RTZ would have to pay in Wales, a greater degree of mechanization is likely. It is interesting that RTZ has not publicly denied the Dolgellau county councillor's figure, despite the fact that on 6th October 1970 the company's representatives gave a briefing to the Dolgellau RDC at which they projected that (a) 1000-1500 men would be employed in the "Development" period (i.e. construction of mine and plant) (b) they were planning to employ 500 men for 20-25 years. It is probable that a fair proportion of these jobs would be highly skilled and would have to be done by people brought in from outside.

5. An article by the mining correspondent of the Daily Telegraph (17/4/72) who has visited Palabora and other similar mines, estimates the number of new jobs at 200-250 for a mine producing 30,000 tons of copper per annum.

The article goes on to point out that before mining RTZ will have to do the following things:

- (1) Build on the site a series of concentrating plants;
 - (2) Bulldoze and generally prepare adjacent valleys as slime dams and tailing dumps, to hold the vast quantities of finely crushed waste rock;
 - (3) Bring in electric power lines to the site, build offices and workshops and possibly even housing for some of the total 200-250-strong labour force needed.
 - (4) Secure adequate year round water supplies by damming some nearby river and piping in the water;
 - (5) Realign, resurface, and widen all existing roads in the area for trucking a concentrate away to railhead for shipment to a smelter overseas or to a place like, say, Avonmouth.
- Alternatively a flash smelter could be built at the mine itself if output is over 65,000 tons a year. A 30,000 ton a year operation would probably occupy some 8 to 10 square miles of park surface. Other deposits probably exist within the park and would presumably be exploited at some later date by RTZ or other mining groups."
- He goes on to point out that the waste from the three suggested rates of output would cover an area equivalent to the City of London to a height of 255 ft. (for a 30,000 ton

output p.a.), 553 ft. (for 65,000 tons p.a.) or 852 ft. (for 100,000 tons p.a.) The article concludes "The 'national interest' argument on balance of payments savings grounds (£40 million on 100,000 tons) is less convincing now than a

few years ago. It is also less convincing given the plentiful world copper supply and the fact that Britain only consumes 650,000 tons of copper annually anyway and of this 120,000 (more than a Snowdonia mine) comes from recycled scrap."

A MINE IN VOLUME TERMS

Output p.a. tons (copper in concentrates) (assumed 0.6 pc grade)	30,000	65,000	100,000
Total tons of ore to be treated annually (at 83 pc overall recovery)	6.0	13.1m	20.1m
Waste to be removed annually (2:1 waste-ore ratio) tons	12.0m	26.0m	40.2m
Total mined p.a. tons	18.0m	39.3m	60.3m
Ore and waste mined over 14 yrs tons	252.0m	550.0m	844.2m
Pre-stripping for pit (tons)	5.0m	11.0m	16.8m
Total Ore and waste to be mined over 14 yrs (tons)	257.0m	561.0m	861.0m
Volume of rock to be mind over 14 yrs	3,289.6m	7,180.8m	11,020m
Capacity required for Slimes dump (swell factor 2.53) cubic feet	2,720m	5,939m	9,112m
Capacity required for waste dump (Swell factor 1.91) cubic feet	4,107m	8,900m	13,760m
Total dump capacity required cubic feet	6,827m	14,839m	22,872m
Probable Final Size of open pit (depth in brackets) Assume width to length ratio is 1:2.3 and pit sides at 45 degrees. In feet	1,576 x 3,625 (700)	2,050 x 4,715 (900)	2,260 x 5,198 (1,200)



The Bougainville Copper project

"This great and profitable venture . . ." Sir Val Duncan at the 1970 AGM

1. Bougainville in the Solomon Islands group, a former German colony and now a Mandated Territory, comes under the authority of the Australian Government, watched over by the UN Trusteeship Council. It is governed through the agency of the Territory of Papua and New Guinea Administration. Before RTZ arrived it was anthropologically unique and the local agricultural methods on which life depended were eco-stable if, in conventional terms, primitive. "Until a few years ago living happily off their land (the Bougainvillians) hadn't much need for money . . ." (Observer - 28/3/70)

"The giant mine was already created social tensions . . . Coconut palms under which the natives have led carefree and well fed lives have been knocked down and whole villages resettled." (Source Sunday Times 7.11.71) Land, held through the offices of the women was sacred as the source of life in indigenous culture. Now the social structure is damaged beyond repair. "Whole parties of village men drink to stupefaction in the canteens . . ." (and) return to their homes, where brawling and the destruction of property invariably ensues" (Report of the UN Visiting Mission 1971).

2. The Bougainville Copper Pty. is 53 $\frac{1}{3}$ % owned by Conzinc Rio Tinto of Australia. CRA one of the most powerful companies on that continent is 80.7 owned by RTZ. This year Bougainville Copper is beginning to mine using open cast techniques to extract large quantities of copper from low grade ore (0.48% copper) and moderate quantities of gold (0.36 cwts per ton of ore). RTZ's share of profits will be 30-40%.

3. The project produces "160,000 tons of ore and waste a day when in operation" (Observer 28/3/70), and was spawned of ecological rape on the grand scale and weaned on contempt for the opinions and culture of the indigenous population.

4. Eight villages have been 're-located'. "They won't like moving but it's for their own good" said company manager

C. H. Bishop of the people of Moroni, one such village. "Right below their ridge we'll be sinking an open cut mine 4,000 foot long and 2,000 foot wide".

5. A Friends of the Earth statement using BCP's own figures states that "The operation has removed 40 million tons of overburden (formerly supporting a jungle which was removed with herbicides and high-lead logging) and dumped it in a neighbouring valley. Two fifths of all material mined, i.e. over 400 million tons, will end there. The river gradient will go from 8% to 1%."

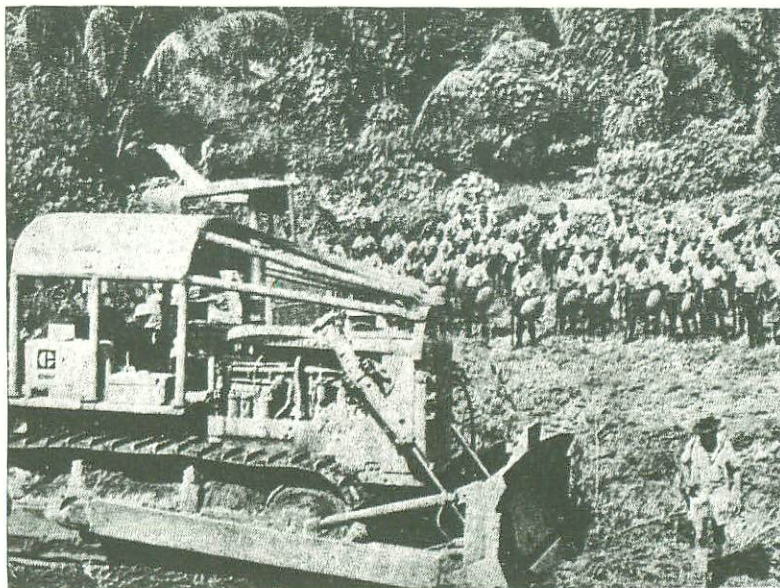
6. Mr. L. F. Reynolds, President of the Papua and New Guinea Conservation Society comments as follows on procedures which RTZ public relations expertise would have us accept as landscape improvements. "The three thousand acre 'lake' will be the result of a hole-filling with drained water. It will be as attractive and productive as any flood abandoned open pit mine. The 'useless swamp' is a breeding ground for many species of estuarine fish, large numbers of water fowl and possibly other undiscovered endemic species. It is now being 'converted' to 'pasture' by inundating it with thousands of tons of silty overburden from the copper deposit. In this process of 'altruistic' conversion the fauna of a large river system has already been destroyed. The 2,000 acres to be reclaimed from the sea will consist of deposits of silt removed from the top of the copper deposit and introduced into a river which in turn will deposit it in Empress Augusta Bay. This silt which is already present in large quantities has damaged the ecology of the bay and will eventually make it uninhabitable to the majority of the organisms now populating it. Pastures, lakes and rivers have only dubious value when heavily polluted with toxic by-products released from ore-concentrating process." By the time the mine is worked out a mountain will have been removed and the level of the pit sunk from 2,700 ft. to 800 feet. "Ultimately the operation will consist of an oval basin measuring 7,000 x 5,000 ft." (Mining Magazine - October 71)

7. Estimates of the lifetime of the mine are "25 years" (Financial Times 24/6/69) and "25-30 years" (Observer 28/3/70). With improvements in mining technology the figure will probably be reduced.

8. The UN Mission which visited the Territory in February 1971 reported that the Nasioi villagers had protested to them that "all the money spent on development benefited only Europeans. We believe the truth lies somewhere between these two extremes, though perhaps closer to the viewpoint of the Nasioi themselves". On the subject of the Panguan villagers local RC priest Father Bernard Bresnan was more blunt "they're getting robbed". Their land is being rented at under one pound an acre per annum.

9. The Rorovana villagers were served with a compulsory purchase order after they had "rejected an offer of £49 per acre . . . 65 of them in militant mood defied police on Tuesday when they massed in front of land clearance bull dozers" (Fin. Times 7/8/69) Another report stated that "about a hundred villagers of Rorovana . . . lined up in front of Conzinc bulldozers clearing land . . . for the proposed parts . . . 70 armed police fired tear gas. When this failed to disperse the pickets, they made a baton charge". (Sun. Times 10/8/69) See Photo.

10. Eventually, the Rorovanans were given £17,000 "a



Armed police clear the way for Conzinc Rio Tinto's bulldozers at Rorovana

fortune by Bougainvillean standards," as the Observer of 28/3/70 pointed out. By RTZ's standards however, the figure is rather less impressive. Consider; (a) The 100 ton ore trucks cost £120,000 apiece and there are 36 of them . . . the 25 ton-capacity shovels cost £300,000 each. (Observer 28/3/70)

(b) "Bougainville, due on stream in mid '72 should produce some £20 million a year of profits for RTZ alone." (Daily Telegraph 5/4/71)

(c) The royalties paid to the owners of the land on which the mine operates "amount to just over 6 cents out of each \$100 net profit." (Financial Times 25/4/72) or in other words 0.06%.

11. While it is true that the administration of the Territory of Papua and New Guinea will reap considerable financial benefits from the mine, the public share issue of 1971, in which a proportion of the shares was set aside for residents only, represented a tiny fraction of the £400 million investment involved. The Times called it "essentially a public relations exercise."

CIS gratefully acknowledges the help on this section from Richard West, whose book "Rio Tinto—River of Tears" is to be published later this month.

The depletion of finite resources

“Taking the wealth out of the soil is an emotional business”
Sir Val Duncan

1. The MIT/Club of Rome report, “The Limits to Growth”, (published in England in March 1972 by Earth Island) provides the latest available figures for the number of years left before the worlds resources of the main non-renewable commodities expire. The figures are calculated on an exponential basis, that is, taking into account the fact that demand is constantly accelerating (or increasing like money invested at compound interest) rather than simply growing steadily.
2. One of the shortest “lives” of any metal allowing for this factor is copper, which is one of the two major profit-earners for RTZ. Allowing for a continuing exponential growth in consumption of 4.6% per annum, the report estimates that known world reserves will be exhausted in 21 years, and even reserves of five times this amount would be finished in 48 years.
3. Owing to RTZ’s method of financing it is essential for the group to ensure that the metal is extracted as rapidly as possible, without regard for future availability of the metal. Thus it has strenuously resisted Japanese pressure to cut back Bougainville’s sales contracts.
4. The rapid development of existing resources has produced a short-term glut of copper. Although the RTZ’s group production is not a very large percentage of the world total, very small variations in the difference between consumption and production can mean very wide swings in the copper price.
5. A low copper price means;
 - (a) That low quality ore is not processed.
“the cut off grade for ore sent to the mills was raised to 0.25% Cu. Detailed studies completed in late 1970 clearly demonstrated the improved long-term economics of raising the mine cut-off from 0.20% Cu. to 0.25 Cu. and this step was implemented at the beginning of 1971”. (Palabora Annual Report 1971)
 - (b) That less copper is recycled.

Conclusion

In order to understand how IRTZ operates and the effect of those operations it is necessary to ask certain direct questions. Some of the most important of these are.

- (1) How does RTZ operate
 - (a) In financial terms?
 - (b) In public relations terms?
- (2)
 - (a) What are the sources of RTZ's power?
 - (b) How is that power used?
- (3) Who are the beneficiaries and who are the losers from RTZ's operations?

(1) (a) RTZ's financial operations

"I suppose it is natural when projects are highly successful to forget the exploitation risks and the pain and grief (sic) taken by those who went ahead with them, and to wonder why the risk takers are still the majority owners"

Sir Val Duncan

The basis of RTZ's massive growth over the past fifteen years has been other people's money, other people's minerals and other people's labour.

RTZ is essentially an entrepreneur rather than a miner (or even a conservationist). The system employed is that before developing a find, long term sales contracts are made which serve as security for borrowing the money necessary to commence operations. Since the company puts up very little of its own money the actual risk it takes is minimal. Thus for very small investments the company receives enormous returns e.g. Bougainville.

(1) "At base price the mine's revenue should pass the total capital investment inside three years once production starts" (Observer 28.3.70)

(2) "Bougainville, due on stream in mid '72, should produce some £20 million a year of profits for RTZ alone" (Daily Telegraph 5.4.71).

Or Palabora where an original investment by RTZ of £5.6 million produced net profits of over £40 million in five years. Much of RTZ's capital is raised in the U.S., particularly by

the Bank of America, which headed the first syndicate to put up money for Bougainville:

(b) Public Relations.

"We believe there is room for a greater hands-across-the-sea attitude and try to practise this in RTZ." Sir Val Duncan (Times 16.12.68). One part of RTZ's public relations image consists of offering a part of the action to local investors in the countries where it operates. The Financial Times (27.3.69) comments, "If it can own shares the local public is less likely to be suspicious of the company's profits on investment and trading policies."

RTZ is often led to self-contradictory statements by its attempts to cover its basic profit motivation with a liberal image. Where a posture of serving the national interests is thought useful in furthering the company's plans (e.g. Snowdonia) this will be trumpeted. In cases where the company might not benefit from this, however, "national interest" receives short shrift, "Tax rules mean that a heavy bill would have to be paid if any Bougainville earnings were remitted back to the U K so they must be earmarked for reinvestment in Australia." (Sunday Times 21.11.71) There is also a considerable gap between what the company says and what it does. Sir Val Duncan's remark at Avonmouth, "RTZ policy has always been, and will always be, the necessity to avoid endangering the health of any of our employees," just does not square up with the numerous reports which exposed the health hazards over a considerable period and Duncan Dewdney's admission that the building was skimped. Most of RTZ's protestations about the concern for environment have a hollow ring against its record of being probably the worst polluter of any major U.K. company.

Occasionally cruder methods can be adopted. Two laudatory articles in the Times almost patriotic to brand of colonialism must have to remain industrialized nations their author, Mr Be department. Whilst laudatory articles in the Sunday Times (Nov. 1971), —

"Thanks to Val Duncan, as Britain goes into the Common Market, mining at least is one industry of which we have no need to be ashamed," – it transpired that the expenses of visits to some of RTZ's more glamorous sites had been paid on behalf of the author, Keith Richardson, by RTZ. The Zuckerman commission set up by RTZ and other mining companies to report on mining in National Parks is another fairly obvious public relations enterprise.

RTZ is also an expert at making a virtue out of necessity. Thus Sir Val Duncan's 1971 report dwells on its environmental triumphs in Canada and the U.S.A., where controls are particularly strict, but makes no mention of the ecological disaster at Bougainville.

What is clear is that RTZ's publicity machine will trim its sails to the prevailing winds but the company will not be diverted from its profit making course.

As Sir Val Duncan has put it, **"We should use our wits and make the best we can of whatever climate we're in."** (Director, July 1968).

3. The sources of RTZ's power

"We were given the deep water treatment about 14 years ago, when we just had to finance some uranium mines which were a matter of very high policy, as a result of this we devised a pattern which has been a blessing ever since".

Sir Val Duncan (Director July 1968)

Whilst the bulk of RTZ's profits come from copper there is greater reason to believe that the major source of its power is uranium. The bulk of the UK's needs are supplied from Canada where RTZ's Rio Algom is the largest supplier. In connection with this it is interesting to consider the machinations surrounding the Rössing contract.

The contract was for between 8,000 and 11,500 short tons of uranium to be delivered between 1973 and 1980, as part of "one of the major new developments in uranium" (Mining Journal 1966) probably for the UK nuclear defence programme. The deal was initially for the supply of uranium from Canada, by the Canadian RTZ subsidiary, Rio Algom, but once the deal was clinched with the UK Atomic Energy Authority, the contract worth £40 million to RTZ's was switched from Rio Algom to Rio Tinto SA (Pty) Ltd, which

immediately began negotiations with the South African Industrial Development Corporation. This was the first mention of South-West Africa in any contract as the eventual source of the uranium. Permission to proceed was granted, by the Ministry of Technology then headed by Anthony Wedgewood-Benn, but details of the contract were not made public until 1971.

South Africa, unlike Canada, has no "safety clause" limiting the use of uranium exports to peaceful uses. "The price the UK Atomic Energy Authority will reportedly pay for the 7,500 tons of uranium from Rössing is considerably below the going, not to mention the future rates of uranium" (Economist 11.7.70)

It would appear that a good bargain had been struck by the UK Atomic Energy Authority in return for agreeing to RTZ's relocation of the supply source. South Africa gets a guarantee of the development of uranium reserves under its overall supervision, with no restrictions on the uses which the uranium may be put to.

As the Daily Telegraph summed it up

"The deal means Britain will be getting a bigger share of its uranium needs from South Africa . . . and the Republic has an extra lever in attempts to gain recognition for its disputed South West Africa guardianship."

B. The use of its power.

"We are very politically minded in RTZ, not party politically minded, but on an international basis". Sir Val Duncan (Times 16.12.68)

In a leading article headed "Dirty Works at Avonmouth" (10.2.72) the Daily Telegraph summed up the matter as follows;

"On Thursday last, Mr Peter Walker declared that the activities of the Imperial Smelting Corporation at Avonmouth caused no danger to health. No further action therefore was needed. Yet on the next day Mr Carr announced that a special inquiry was to be set up. And, if Bristol University scientists are to be believed, there is certainly something here to be inquired into. The scientists have found shockingly high levels of lead, zinc, and cadmium in air and water near the works.

Those who followed with approval the popular programme 'Doomwatch' will have little difficulty in allocating to their own satisfaction the blame for all this, in naming the villains and in drawing a strongly socialist moral. Here is a private company, they will suppose, dominated by insensate greed and utterly indifferent to the wellbeing of its workers, its neighbours and the general public. A corrupt Tory Government, they will further suppose, vainly strives to cover up for its friends. And the remedy is, of course, to bring all industry under public control. Yet in fact neither story nor moral is likely to be as simple as this.

Ignorance and negligence are not confined to the private sector. **In any decision, too, to press on regardless with some potentially risky project, considerations—possibly mistaken—of the national interest may play nowadays as big as part as greed, or bigger."**

(Doomwatch had an estimated viewing figure of 8½ million, source BBC)

4. The beneficiaries and losers from RTZ

"We are trustee for three bodies of people; our shareholders, our employees, and the countries in which we operate". Sir Val Duncan (Director July 1968)

Of these "bodies" the only one which can be said to have totally benefited from RTZ is its shareholders. For every £1 invested in the company in 1962 is now worth at least £10. As regards the employees of the company, the directors also have little reason for complaint. Sir Val Duncan received £50,000 for his services in 1971, his personal holding in the company is worth £150,000 and he holds further options worth more than £160,000, granted in 1965 and 1966. In 1968 he said **"I do not think there are enough people prepared to make the sort of personal sacrifices that those running big business or any major enterprise do, unless the rewards are reasonable. I am not complaining for myself on this."** With eight of his fellow directors earning in excess of £20,000 it seems that they too might have adjusted to the personal sacrifices necessary.

To be amongst RTZ's other employees however, has been something of a mixed blessing. An African miner at Palabora

for example, would have to work 123 years to attain Sir Val's annual fee, although he would have the (probable) advantage of running less risk of poisoning than an RTZ employee working in the U K

As regards the other beneficiaries of RTZ's activities, perhaps the most important of these has been the South African government. Besides the £42 million received up to 1971 in tax payments, sales revenue of some £225 million has been produced by Palabora, all of which boosts South Africa's reserves of foreign currencies.

RTZ has further demonstrated its support for the regime by the switching of the Rossing contract from Canada to Namibia. The obvious loser from this support of the white supremacist regimes in Southern Africa has been the black population.

As the Times has pointed out, the whole system of repression rests on the overseas earnings of the mining companies. The chains which bind the black majorities are forged as much in RTZ's boardroom in St. James Square as in the BOSS headquarters in Johannesburg.

In the U.K. RTZ's employees and neighbours have been the sufferers from the company's attempts to jack up its U K earnings, at minimal cost, to save corporation tax. Our National Parks are likely to be the next victims if RTZ is allowed to have its way.

Finally the losers are the future generations. Not only will they have to repair the political damage caused by RTZ's support for repressive and unjust regimes, but the resources which we hold in trust for them will have been depleted by the greed of our society. A greed which RTZ mirrors and fuels.

The situations described previously in this report are a direct result of the nature of RTZ. Whilst its basic motivation is profit, exploitation will continue and since this is the underlying premise for its existence, reforms are merely palliatives.

The longer RTZ and companies like it are allowed to exist the greater the problems will become. The responsibility lies not only with all those directly involved with such companies, their shareholders, directors and employees, but with all of us who concur in their continuing existence.

'The real criminals in this society are not all of the people who populate the prisons across the state but those people who have stolen the wealth of the world from the people.'

Angela Davis



