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INTERNATIONAL OIL TRADE AND SOUTH AFRICA'S ENERGY REQUIREMENTS

This paper has been prepared by Mr. Paul Conlon, at the request of the Task Force on the Hearings on the Oil Embargo against South Africa to serve as a background paper for the hearings.

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I. THE INTERNATIONAL OIL-PRODUCING/SHIPPING INDUSTRY

A. The traditional structure of the international oil industry

1. The oil industry is peculiar in that it is perhaps the only industry that never really existed in anything but an international form. Unlike other industries, the oil industry was a fully transnational monopoly long before oil was even a significant commodity in world trade. It was also the first United States-based transnational industry and United States oil companies had a near-monopoly position in oil at the beginning of the present century when all other major industries were dominated by European companies.

2. To some extent these peculiar attributes are founded in the nature of petroleum. Petroleum only occurs in certain rare locations, and even within that parameter successfully accessing it is difficult. Exploration is extremely important and there is a strong element of risk and chance in exploration. Nowadays exploration expenditures make up the largest single investment post in the oil industry, which is dominated by men trained in the scientific disciplines most relevant to that pursuit (geology and geophysics). Petroleum in its natural form, crude oil, is not usable as such and the process of transforming it into useful products, refining, has always demanded sophisticated technology, expensive equipment and a small but skilled work-force. Thus oil is of necessity a capital-intensive undertaking, all the more so since it benefits greatly from economies of scale. Even the transportation and handling of oil requires a considerable degree of technology and fixed plant. And ocean transportation has always been so important that refineries invariably are located on coasts and in harbours. Petroleum was first used as a lubricant and for space-lighting purposes (kerosene) and was distributed and sold in bottled form. But after about 1900 it came to be used as a fuel to propel the motors of automobiles and the engines of ships. In the 1920s it came to be used, more marginally, to generate electricity. These new usages soon required amounts and forms of refined petroleum which could not be satisfied without a high degree of monopolization.

3. An international oil industry thus evolved in the first years of this century which remained basically unchanged until the 1950s. It was dominated to an absolute degree by five American and two British companies which were known historically as the "Seven Sisters" or the "Majors" and which were the corporate predecessors of companies now bearing the names Exxon, Shell, Texaco, Mobil, Chevron and British Petroleum (BP) as well as another one, Gulf, which is now a part of Chevron. These companies exercised effective control (occasionally even outright ownership) over the crude oil in the ground, they owned and manned the equipment with which it was extracted and evacuated to port. They owned and manned many of the tankers by which the oil was then brought to a refinery, though this link always allowed for greater participation by independent entrepreneurs. The Majors further owned and operated the refineries and the wholesale distribution systems. At the level of the final retail outlet there was a tendency to rely more on leasehold or franchise arrangements, but where size or other factors made it profitable to go beyond this, they jealously monopolized direct ownership and control even at that level. Finally, they controlled the price at most stages and were able to maintain a system of artificial pricing which tended to keep the price

of crude oil high enough to accommodate the most expensive producer region. Although petroleum was known to exist in many places, the Majors tended to produce it in regions of older petroleum development (the United States of America, Iraq, Iran, Indonesia and Saudi Arabia). 1/

B. Structural changes since the 1960s

4. It has been necessary to describe how this system once functioned, because the background against which South Africa now obtains oil clandestinely evolved out of the disintegration of this system in the last generation.

5. The hegemony of these seven companies and their system was first challenged after the Second World War when the consumption of petroleum products became so widespread that several developed market-economy countries found it prudent to create national oil companies. At the same time problems specific to the oil industry in the United States led to the rise of another group of challengers known as "independent oil companies", thus called because they concentrated on exploration and production and lacked a vertically integrated structure "down-stream" (i.e. in refining and distribution). From about the 1950s onwards, the oil-producing countries themselves began to reassert their control over the production of oil from their own reserves in a way which had far-reaching consequences for the international oil industry and, in fact, eliminated the hegemony of the Majors, thus leaving a greater dispersal of control over oil production, conversion and distribution. Besides this, the demise of the international oil industry's traditional arrangements from the Major-dominated period has led to several adjustment and counter-adjustment trends which have not yet played out their full force and come to rest. Hence within the last 15 or so years, the division of control over oil has been in constant flux with the coming and going of new actors, new structures and changing conditions.

6. An event of considerable import was the closing of the Suez Canal for many years after the Six Days' War in 1967. And for much of the same time the Tapline pipeline which linked parts of the Saudi oil production system to the Mediterranean was also inoperative. This radically lessened the oil industry's means of quickly delivering oil to Western Europe by necessitating the transport of oil around the Cape of Good Hope for those producer outlets which could not ship oil through existing pipeline systems. The capacity of the then existing tanker fleet was sorely strained when the route from the Gulf to Western Europe was increased by 85 per cent, a circumstance which raised cargo rates and provided an incentive for investments in tanker tonnage.

C. The international tanker industry

7. Like the oil industry, the tanker industry has never existed in anything but an international form. But it is in many respects a peculiar industry. Although it is interposed as a vital link between the oil-producing and the oil-consuming/refining countries, its ability to exert any influence on either producers or consumers is close to nil. In the matter of South African oil

supplies it is, however, the critical area which enables oil deliveries to continue. In many ways South Africa has been most successful in purchasing the co-operation of this vital link.

8. One particular aspect of this system should be emphasized. The price of oil was originally so low that the greatest single cost item in the final price to foreign buyer (price on arrival at the refinery) was the sea freight. This being so, the most significant contribution to profit margin was to reduce the cost of the seaborne transport of the oil. Hence the Majors found it in their interests to own and manage impressive tanker fleets themselves.

9. Tanker traffic now accounts for about 44 per cent of all sea-going trade per weight. In 1987, 1.13 billion tons of crude oil and 0.4 billion tons of petroleum product were loaded onto tankers. 2/

10. A peculiarity of the maritime industry is that there is an important legal link between the vessel and its country of registration and which does not have to coincide with the legal links founded in ownership or rental of the vessel. In fact, 40 per cent of all tankers (by dead weight tonnage) are registered in the five open-registry countries of Bahamas, Bermuda, Cyprus, Liberia and Panama. 3/ The largest share is registered in Liberia. The beneficial owners of those vessels are invariably based in other countries. There are several other jurisdictions (Gibraltar, Hong Kong) with a functionally similar nature. Otherwise, major tanker registration States are countries with sea-faring traditions: Norway, Denmark, Greece, Spain, Italy, the United States, Japan and the United Kingdom of Great Britain and Northern Ireland. The oil-producing countries (particularly Saudi Arabia, Kuwait and Algeria) have only begun to build up tanker fleets within the last decade and their aggregate tonnage is still insignificant.

11. At present, 57.6 per cent of all tankers are owned by independent shippers, 38.3 per cent are owned by oil companies, and 4.1 per cent by para-statal companies. A generation ago a much greater percentage would have been owned by oil companies.

12. The rush of investors to profit from the new situation which evolved after the closing of the Suez Canal in 1967 by revamping, modernizing and up-sizing the world's tanker fleet led to feverish construction of new tankers of near-gargantuan dimensions. The standard size of the tankers built for the United States Government during the Second World War had been 16,000 dead weight tons. Ten years later the average size of newly built tankers had climbed to 50,000 dead weight tons and by the time the Suez Canal was closed 100,000-ton tankers were being built. In the next few years an entire class of vessels in the 200-300,000 tonnage range were built and put into service and even a handful of behemoths of 500,000 dead weight ton-capacity began to ply the waters.

13. This frantic expansion soon led to a serious surplus of available tonnage, particularly in the category of large and ultra-large crude carriers, which also turned out to be much less useful than originally thought. This led first to a significant drop in freight rates, something which made it feasible to transport

oil over larger distances and widened the geographic options of oil consuming countries. This was because freight costs were no longer as significant a factor in total cost to the buyer. This expansion also prompted certain major oil producers in the Gulf area to increase their effective export capacity by investing in improved harbour, berthing and pumping facilities to accommodate the new wave of supertankers. Their previous capacity to export had not been constrained by their capacity to pump oil from the ground, but by their capacity to load it onto tankers. The over-capacity in the producing countries' ability to load oil, and in the tanker industry's ability to carry it, were later to play into South Africa's hands when a formal oil embargo was imposed.

II. DEVELOPMENT OF SOUTH AFRICA'S OIL INDUSTRY

A. The original structure of the South African oil industry

14. The energy sector of the South African economy, like that economy in general, has developed on the basis of a peculiar constellation of geological, social and geographical factors. The country lies on structures which are rich in important mineable minerals, thus giving rise to a very old mining industry as well as to abundant reserves of coal (a potential source of energy). But the same geological structures largely lack petroleum and natural gas reserves. In fact, there are no appreciable reserves of petroleum anywhere near South Africa. Most importantly, the colonial economic structure of the country made unskilled manual labour available in excessive amounts at almost obscenely low cost, something which stimulated the growth of labour-intensive industries and led to a distorted slate of resource options.

15. It is here that one comes to the unique role which coal has played in the South African economy. South Africa has very extensive reserves of coal. But there are many regions in the world with an abundance of coal which did not develop such a deviant pattern of energy utilization. It was the added factor of low-cost easily mistreated labour which produced this peculiar result. The importance of cheap mine labour to extract the coal from the sub-surface is well known, but it is less often realized that the availability of cheap labour also reduced the cost of handling the coal at other stages of its way to market and use and even in coping with its ultimate residues.

16. Cheap coal soon began to subsidize other parts of the economy, particularly mining, and later metallurgical industries. It was widely used to generate electrical power, a form of energy which is highly usable in the mining industry. It made possible railway lines stretching far through economically irrelevant areas in order to provide a cheap link between the coasts and the economically valuable interior regions. Thus a pattern of energy consumption eventually evolved which was different from that of other countries, particularly developed market-economies. The following energy input-slate (status as of 1986 for groups of countries, as of 1983 for South Africa) clearly shows how peculiar South Africa has been in its energy development.

Table 1. Ultimate energy sources for different countries and systems

(In percentages)

	Developed market-economies	Centrally-planned economies	Developing countries	South Africa
Coal and lignite	27.4	38.7	34.6	82.9
Liquid hydrocarbons	39.0	27.4	37.1	16.6
Natural gas	18.9	27.1	6.8	--
Nuclear power	7.0	2.4	0.9	0.0
Hydro- and geo-thermal power	6.6	3.1	8.1	0.5
Other renewable energy	1.1	1.2	12.9	0.0
Total primary energy	100.0	100.0	100.0	100.0

Sources: "Report of the Secretary-General on trends and salient issues in energy resources" (E/C.7/1989/10), 2 February 1989, pp. 13, 15, 16. Financial Mail, 10 August 1984. Figures for South Africa are for 1983 and should be understood as "according to their own claims".

17. Up until the 1950s, South Africa had been a very marginal and minor consumer of petroleum products whose energy needs could still be met through a combination of domestically-produced coal and some imported petrol, the only petroleum product it really used. In fact, its modest requirements of kerosene (for lighting purposes) could even be produced from domestic shale reserves. Because the country contained no known or suspected reserves of petroleum, a mineral which is rare in the southern hemisphere, the new independent oil companies, then looking for new areas for investment, had no incentive to enter the South African market as explorationists. Consequently, they did not come as refiners or distributors either.

18. More surprising from a historical point of view is the fact that South Africa never tried to create a national oil company. The National Party had always laid great stress on creating and promoting para-statal industries as a counter-weight to foreign (and largely British) dominated capital concentrations. The latter were also dominated by English-speaking whites and the new para-statals could more effectively be controlled by Afrikaners, members of the ethnic group which became politically dominant in the white community with the passage of time.

19. The consequence of all this is that in 1979 the South African oil industry (refining and distribution) was 75 per cent controlled by companies descended from the "Seven Sisters" and derived 87 per cent of its oil from Iran, a country of older oil development. It had never taken the trouble to develop significant links with independent oil companies, or with countries of newer oil development, and lacked a national oil company. It was almost totally dependent on foreign Majors, particularly the British-based ones. Retail market shares in South Africa in 1978 are given in the following table:

Table 2. South African motor fuel retail market by company in 1978

(In percentages)

Company	Retail market share
Caltex	19.9
Mobil	18.1
BP	17.5
Shell	17.5
Esso	2.0
Total	11.8
Sonarep	1.3
Sasol	7.4
Trek	4.5

Source: Martin Bailey and Bernard Rivers, Oil Sanctions against South Africa, Notes and Documents, United Nations Centre against Apartheid, 12/78, New York, June 1978, p. 31.

20. The first five companies belonged to the Majors, the next two belonged to foreign national oil companies; Sasol was the nearest thing then existing to a national oil company in South Africa and Trek was controlled by private domestic capital.

B. Developments after 1965

21. About the same time that the traditional structure of the world oil industry was about to be radically transformed, South Africa came under a new form of pressure in that the international community began to discuss the possibility of applying economic sanctions against it.

22. The recovery of control over their petroleum reserves by major oil-producers within the framework of OPEC (Organization of Petroleum Exporting Countries) did not originally augur well for South Africa. Most oil-exporters are non-aligned countries, some of which emerged as sovereign States in the course of

decolonization, while the remainder had been economically dependent upon Western countries though formally independent. These countries have normally been in the forefront of international pressure for the abolition of apartheid and have never had any direct economic ties with South Africa. However, the response of non-oil-producing countries and oil companies to the increased economic power of OPEC countries and the rise in the price of oil after 1970 has been to develop other sources of petroleum in other regions and other countries. This increased South Africa's options as to the regional sources of its oil and also makes monitoring clandestine shipments more complex.

23. For the time being, however, the threat of an oil embargo made no progress and the external environment for oil supplies improved considerably because of changes in the international sphere.

24. For example, the closing of the Suez Canal also brought considerable prosperity to South Africa because the old Cape route around the southern coast of Africa, which had lost much of its importance to international seafaring a century earlier, came to be trafficked to an extent never before known. At the height of this trend in the 1970s, about 600 tankers passed the Cape per month, the equivalent of 20 per day. The use of the harbour of Cape Town for bunkering, restocking, refuelling or repairs of ships increased many times over and probably provided the South African authorities with shipping industry contacts with shipping companies which would prove useful years later.

25. At a later stage, after the oil price rises of the 1970s, the absolute over-investment in tanker tonnage led to massive bankruptcies among many of the independent tanker entrepreneurs who had entered the market after 1967. And, while it did not harm the established oil companies as much, it disenchanted them on the value of actually owning and operating their own tanker fleets. Thereafter, they began to reduce the size of their directly-owned fleets and switch to other arrangements with the shipping industry for the transport of oil. By 1985, they owned only about one third of total tanker tonnage in the world.

26. Meanwhile, other trends long building up had come to their logical conclusions. Throughout the 1950s and 1960s, oil-producing countries had strengthened their position vis-à-vis oil companies and gradually wrested control over their own oil reserves to the extent that they could determine the amount produced and the terms under which they would be recompensated. By the 1970s, they had largely re-achieved full ownership of the actual reserves and majority-ownership of the national oil companies which produced from them. OPEC, which had been formed in 1960 with relatively modest aims, was able to influence the price of crude oil and to raise it to levels which soon necessitated a complete change both in the structure of the international oil industry as well as in the consumption pattern of most countries.

27. Having lost the basis of their original hegemony over oil in their effective control of production, the major oil companies began to question the value of the monopolistic vertical integration structure and to shed the less profitable parts of that structure (thus the trend to dispose of tankers). They became interested in new sources of oil in new oil-producing countries and regions and this led to an

increase in the number of countries producing oil to some extent or another. At present about 75 countries have at least some petroleum production. This has widened the geographic options of any country like South Africa which must look far afield for its oil supplies, though the same trend simultaneously drove the price up.

C. The first energy crisis (1973)

28. The first energy crisis (1973) enhanced the value of alternative sources of energy, particularly coal and uranium. The large transnational oil companies had already begun to extend their operations into these areas and since South Africa has abundant supplies of both of these minerals, they now had stronger grounds to invest in South Africa as a source of potentially valuable coal reserves in case of a future renaissance for coal. In the case of Total it was said to be the company's long-term interest in uranium. The claim has frequently been advanced, and does not seem totally implausible, that South Africa after 1974 made more reliable access to its coal (and uranium) reserves conditional upon guarantees that these same oil companies would continue to co-operate in supplying oil to South Africa. The oil companies, on the other hand, deny this and point out that their investments in South African coal at the same time were advisable and explainable in their own right.

29. South Africa did not react like most other countries to the first energy crisis (1973). The difference lies to some extent in the role which fuel-oil played in industrialized countries after the end of the Second World War. The refining methods generally employed, and the type of crude oil which tended to come onto the export market, led to a certain yield of refined products, or output-slate, which cracked crude oil into petrol and industrial fuel-oil. This made sense because the major portion of consumption growth for petroleum lay in the expansion of the private motor vehicle park in industrialized countries (creating a need for petrol) and because the price of crude oil was still very low. Since fuel-oil was produced as an incidental by-product of this process at a relatively low cost, those countries began to replace coal with fuel-oil for certain purposes, particularly electric power generation.

30. In South Africa the price of coal was still cheap enough to resist substitution of fuel-oil in the period before 1973. After the first energy crisis industrialized countries were able to reduce their total petroleum consumption, largely by switching to coal or nuclear sources of electrical power generation in replacement of fuel-oil. This process was facilitated by more advanced refining methods which allow for wider and more useful output-slates. South Africa is, and has always been, so highly dependent on coal for its energy needs, and has always so radically dispensed with petroleum-based fuels where it could, that it lacked the margin of substitution which permitted much of the world to reduce petroleum consumption after 1973. Only the petroleum-reduction margin resulting from the increased fuel efficiency of vehicles is the same. It uses vehicles which have been designed for use in Europe or Japan where motor fuel costs must be kept to a minimum. Other than that, it has no margin left for further substitution.

31. The enhanced position of the oil-producing countries had not as yet directly affected South Africa's access to petroleum but now threatened to do so. Before 1972, when the Majors still controlled production in the oil-producing countries, 54 per cent of South Africa's oil had come from Iran and an additional 45 per cent from Iraq, Saudi Arabia and Qatar. As oil-producing countries gradually gained control over the sale of their own oil, they moved to stop the flow to South Africa. But a decision of a summit conference of the League of Arab States in 1973 to ban exports of oil to South Africa remained without noticeable effect because Iran, which was outside that organization, stepped into the vacuum created by the boycott of OAPEC (Organization of Arab Petroleum Exporting Countries) and increased its oil supplies to South Africa to almost 90 per cent. The pre-1979 Government in that latter country continued to ship oil to South Africa, exerted pressure within OPEC to suppress occasional proposals that that organization adopt a ban on exports to South Africa and even went as far as investing in a South African oil refinery. 4/

32. The new upsurge in demand for coal brought about by the energy crisis of 1973 led South Africa to the decision to expand its coal-exporting capacities and to enter the international coal market as a major player. As a result of this, infrastructural improvements were made in the railway lines which link the interior of the Transvaal to the harbour of Richards Bay and the harbour itself has since been expanded into one of the world's most modern mineral-exporting harbours. This expansion of coal exports was intended to finance the further defence of the apartheid system which was beginning to emburden the national economy, particularly because it became necessary to deploy large numbers of regular troops to combat the independence struggle in Namibia. The South African ruling élite may also have hoped that converting the country into a major coal supplier would enhance its influence in the international community and lead other countries, particularly Western ones, to adopt a more indulgent attitude towards apartheid. If so, these hopes proved to be illusory.

33. A significant ramification of coal-exports for South Africa's oil supplies lay in the expansion of Richards Bay and in the possibility of combining imports of oil and exports of coal by the use of combined carriers. These could defray the costs of the empty inbound voyage by bringing in some oil. At one end, the harbour of Richards Bay was connected to the country's pipeline systems, while at the other end there has also been a certain tendency for the combined carriers to load oil in some of the same harbours (but more often in other harbours in the same region) where the South African export coal is discharged. In the long run, coal exports probably subsidize some of the clandestine oil-procurement costs (the so-called "pariah penalties") which the oil embargo entails.

34. Meanwhile, the South African authorities had also begun to proceed with their own counter-strategies. Some of these coincided with what were necessary adaptations and modernizations of the domestic oil and fuel industry which, after all, had now been exposed to the strains of considerable increases in consumption. But it should also be borne in mind that many of the counter-measures taken to mitigate the effects of an externally imposed oil embargo were also intended to mitigate the effects of internally generated sabotage. Some of the precautions taken by the authorities to protect the oil supply and distribution system are

also paralleled by similar strategies in electrical power generation and distribution sector.

35. An important counter-measure was the construction of an oil-stockpiling infrastructure in the Transvaal. After initial disappointments, a technology was developed for converting several disused coal mines into storage units and these were eventually hooked into the crude oil pipeline which had been finished in 1967. Besides that pipeline, others were built for petroleum products, particularly one which links the harbour of Durban, with two large refineries, with the distribution system in the interior of the country. Later the authorities turned their attention to Cape Town where, by the beginning of the 1980s, a set of huge underground concrete salad-bowl-shaped bunkers were built for crude oil stockpiles. In 1976 the decision was taken to build a large coal liquefaction plant near Secunda in the Transvaal and to use a slightly improved version of the same technology on which a small coal liquefaction plant (connected to the refinery at Sasolburg) had been running since 1955. When the crisis developed in 1979, the authorities then decided to double capacity by building a further identical plant at the same site in Secunda and both plants were, upon completion, hooked into a new product pipeline system which connects Durban with the Johannesburg-Rand area, but which is unusual in that it is designed to be able to move petroleum product either uphill from coast to plateau or in the opposite direction (depending on the exigencies of the situation). One spur of this system was later extended to a distribution depot near the town of Witbank where a sprawling disused coal mine offered ample room for storage units.

D. The period of clandestine oil supplies

36. The situation changed again after the onset of the second energy crisis of 1979 which was ostensibly caused by the ouster of the Shah of Iran, who had benevolently protected South Africa and its oil supplies against attempts to blockade it a few years earlier. The new Islamic Republic of Iran quickly proceeded to stop further oil exports to South Africa and later divested itself of part-interest in one of South Africa's oil refineries. For several weeks South Africa apparently stood on the brink of a complete oil cut-off, at least according to admissions made several years later by a former minister. Within a short period of time the country was forced to establish the necessary links with oil traders and other intermediaries in order to get at alternative sources of oil, as well as to devise and perfect a system for clandestine shipping of oil. It was not until about 1982-1983 that the South African Government had fully recovered from the near-disaster of 1979 and had adapted to the new situation. 5/

37. The latter was a little bit more favourable to it because the energy crises of the 1970s had again impacted on the oil industry by weakening the system of fixed supply agreements which had once been the rule and throwing increasingly larger amounts of crude oil (ultimately about 40 per cent of all internationally traded oil) onto spot markets. To protect themselves from further supply disruptions of the type occurring in the 1970s oil companies and consumer countries began to develop market mechanisms, such as the oil futures market, designed to strengthen their position vis-à-vis the producers and to blunt the impact of price

fluctuations. With the increasing importance of spot purchases, the international oil market was invaded in the years after 1979 by a new horde of traders and speculators who could be used to camouflage South Africa's oil procurement and to arrange the details of clandestine shipping and trans-shipping. In addition consumer countries began to develop networks of surveying and recording data about oil production and exports in order to predict fluctuations in oil supplies. This activity, known as "OPEC-watching", has also been used by South Africa to help it identify temporary surpluses and other favourable market situations which it can exploit in its capacity as clandestine oil buyer.

38. A number of factors facilitated South Africa's ability to obtain oil despite the embargo during the 1980s. However easy it may appear, there has always been a considerable price attached to it and this has been cynically dubbed the "pariah penalty", by the international business press. It is assumed to have been around $10 per barrel in 1980 and around half that in later years. Besides extracting extra "pariah penalties" from South Africa, a few oil traders took advantage of their pariah position to defraud them outright. The most celebrated case was that of the ship Salem.

39. Other factors also exerted an influence on conditions. The excess capacities at various stages of oil handling (in the producer countries, in tanker tonnage, in refinery outputs) increased supply and pressed down prices. The Gulf War disturbed normal shipping customs and made it more difficult to monitor vessel routes and movements. Discipline within oil producer organizations became lax and there was much talk of oil exporters' "cheating on the quota". Any tendency to corruption and/or lack of discipline played into South Africa's hands for in the case of such illicit oil shipments both sides to the deal had every reason to keep the matter a secret. South Africa was an ideal buyer for any such available oil.

40. In addition new market practices for selling crude oil grew up. Originally, crude oil had generally been sold under supply or term contracts, i.e. fixed agreements to buy and sell certain quantities of oil at periodic intervals at predetermined prices. The time frames for such agreements could last anywhere from one year to five years. A spot market for dealing in the residual quantities (perhaps 5 per cent of the total) had always existed and, with it, a small number of traders. But after 1979 this market grew and ultimately about half of all oil was being traded "on spot". Additional mechanisms, such as futures markets or commodity contracts on exchanges in London, New York and Chicago also made their contribution. To service all these new markets independent oil traders sprang up and multiplied. 6/ Some of the more prominent of these made their fortunes selling oil to South Africa. Particular notoriety was achieved by the Dutch oil trader John Deuss, who later bowed out of the market, and by the American oil trader Marc Rich, who set up a special trading company for such purposes in the Canton of Zug in Switzerland after fleeing from prosecution for tax fraud in the United States. 7/

41. By 1989 many of the trends favourable to South African oil running seem to have played themselves out. The oil price began to firm and the tanker industry began to return to greater equilibrium between tanker tonnage supply and consumer oil demand. With these trends the completely free ad hoc spot market deal has

come to be replaced, increasingly, by a new type of term deal which is more flexible with regard to volume and price but which tends to bind buyer and seller for the duration of the agreement. This will eliminate much of the free oil which South Africa has been able to tap into for its clandestine supplies. Pure spot deals are now down to about 25 per cent of all oil sales, and this figure is expected to drop even more. The spot market retains more of its vitality in the Far East.

42. More than anything else, the current rise in the price of crude for legitimate buyers will also lead to a rise in the "pariah penalty" which South Africa will have to pay for it.

43. Simultaneously the independent oil traders are being subjected to increasing competition from three quarters: oil companies, Wall Street firms and large Japanese trading houses, all of whom now have departments and employees permanently deployed in oil trading. 8/ Finally, with the restabilization of the tanker market, major oil companies, and most recently Chevron, have begun to increase their fleets again. 9/

44. A number of changing conditions should be kept in mind, although their exact impact on oil supplies to South Africa cannot always be predicted. As pipeplines in the Middle East proliferate, more oil will be evacuated to Europe via the Mediterranean. The immediate effect might be to free more tanker tonnage for clandestine traffic to South Africa, but in the longer run the number of tankers passing the Cape will decrease. The tendency of many oil-producing countries to increase refinery capacities and export more oil in the form of product introduces a new element to which oil embargo strategies must adapt. In recent years cases of product shipments to South Africa have become increasingly noticeable (though their total volume is still not that significant).

45. The gradual elimination of surplus tanker tonnage will impinge on South Africa's options with the tanker industry. The decline of the independent oil trader and his replacement by oil companies, Wall Street brokerages and Japanese trading houses will require an adjustment of strategy. Whether or not it will favour or disfavour South Africa is open to question. The reduced number of players in the field may make it easier to enforce the oil embargo. The rise in the oil price and marginal tendencies to quota purchases under term-contract arrangements will reduce the amount of uncommitted oil floating around on the market. These factors will definitely work against South Africa.

III. SOUTH AFRICA'S OIL/FUEL INDUSTRY INFRASTRUCTURE

A. Harbours

46. South Africa possesses four harbours through which crude oil and petroleum products are imported: Saldanha Bay, Cape Town, Durban and Richards Bay. Petroleum products are also shipped from abroad, or from domestic refineries by coastal tankers to three other ports: Walvis Bay in Namibia, and Port Elizabeth and East London. Larger tankers can also discharge oil via a floating mooring near

Durban without having to enter the harbour. It is possible that there is a similar facility near Cape Town.

47. The most important harbour for oil (on volume criteria) is by far Durban. Besides being South Africa's largest harbour for all traffic, it contains two large refineries and two smaller ones, as well as a number of facilities important for petro-chemical and heavy chemical industries. In addition, it is the terminal point of all three major pipeline systems and has the added advantage of a floating mooring for oil discharge.

48. Richards Bay was originally built as a coal-export harbour and it possesses very advanced coal handling and loading facilities. In recent years somewhere between 38 and 45 million tons of coal have been exported through Richards Bay. Some of the ships which come to Richards Bay to pick up coal are combined-carriers which can also carry oil (usually crude oil). How many of them actually do, and what tonnage of oil passes through this harbour annually is not known, but theoretically the entire 12-14 million tons of petroleum which South Africa imports every year could be brought in via Richards Bay on combined-carriers. Richards Bay is connected to the crude pipeline which runs from Durban to Sasolburg. It may also be connected to the product pipeline system. In recent years tankers carrying not only crude, but all kinds of product, petrochemicals, liquefied petroleum gas and even vegetable oils, have been known to call at Richards Bay. Neither can it be excluded that there are long-term oil storage units in its vicinity, though thus far none can be identified. Before the construction of the coal-export harbour, Richards Bay was an obscure resort area. Since few people live there except for those working in harbour-related trades, it has the advantage of being relatively secluded from the general view, being almost 200 kilometres north of Durban, and thus a much better locale for secret oil deliveries.

49. Cape Town, with its harbour of Table Bay is one of the world's oldest harbours, but it is less useful for clandestine imports of oil because it is too small for larger tankers, is congested and has the added disadvantage that almost the entire population of the city can readily see what goes on in the harbour. For this reason fewer tankers are known to call at this port, but it is possible that there is some place on or around the Cape Peninsula where oil tankers can discharge their cargoes for Cape Town. There is a refinery to one side of Cape Town with large oil storage facilities.

50. Saldanha Bay has since 1973 actually been used as an export harbour for iron ore exports. There are also combination-carriers which can carry iron ore in one direction and oil in the other and thus a certain amount of oil goes into South Africa via Saldanha Bay. A pipeline, said to be of rather small dimension, runs from the harbour to storage facilities nearby, but whether this pipeline extends further to Cape Town (about 100 kilometres) or whether the oil is taken to Cape Town by rail is not clear. This port is very much off the beaten path and hence ideal from the point of view of secrecy.

51. Refined products from the refineries in Durban and Cape Town are normally shipped by smaller coastal tankers to Walvis Bay in Namibia, Port Elizabeth and East London, but occasional shipments of refined product from abroad also come into

these ports. In emergencies crude oil could also be landed in Port Elizabeth and East London and taken to refineries by rail. But such a procedure would be cumbersome and costly and the volumes could not be too great since only smaller vessels can enter these harbours. It is assumed that facilities for loading and discharging refined product also exist, or could easily be installed, in the harbour of Mossel Bay. If and when a natural gas conversion plant is built there facilities for smaller coastal tankers will also be included.

52. South Africa has access to several smaller coastal tankers for the transport of petroleum products between refineries and other harbours, and for transporting petroleum products to Walvis Bay in Namibia. Some of these are registered in South Africa, but some are leased from abroad and are registered in other countries.

B. Refineries

53. South Africa is estimated to have a total refining capacity of about 433,500 barrels per day. This is a considerable capacity surplus. The output produced by these refineries tends to be weighted in the direction of traditional products.

54. South Africa's largest refinery is located in the harbour of Durban and is owned by South African Petroleum Refiners (Pty.) Ltd. or Sapref for short (a joint-venture of Shell and BP). It was built in 1963 and has a capacity of about 200,000 barrels per day and produces a more traditional slate of products. Durban contains another large refinery, owned by Mobil Refining Company Southern Africa (Pty.) Ltd and built in 1953. It has a capacity of 65,000 barrels per day. There is an additional specialized refinery producing lubricants with a capacity of 3,000 barrels per day owned by the South African Oil Refinery (Pty.) Ltd.

55. Caltex Oil (South Africa) (Pty.) Ltd. operates a refinery at Milnerton just north of Cape Town. Built in 1966 it has a capacity of 90,000 barrels per day. There is finally a refinery at Sasolburg, owned by National Petroleum Refineries of South Africa (Pty.) Ltd. or Natref for short, which was built in 1971 and is largely owned by Sasol. Its capacity is around 78,500 barrels per day. It was revamped and modernized at the beginning of the 1980s by the engineering division of Fluor Corporation. The exact nature of the modifications made was never divulged. However it is reasonable to assume that these modifications were intended to make Sasolburg a specialized refinery which would be able to produce a wider variety of products from a wider variety of crude oil types. In particular, it was probably modified to increase its ability to produce diesel. Because South Africa's access to petroleum is tenuous, it may be forced to buy and import types of crude which are less well adapted to its other refineries. 10/

C. Pipelines

56. South Africa's pipeline system is less well known. One part of the system was built after the promulgation of a law in 1978 which declared these matters to be State secrets. The routings of pipelines were also removed from ordinance maps at a very early date. Originally pipelines were owned and operated by the State

railway authority, although a recent edition of the Official Yearbook suggests this may now apply only to the petroleum product pipelines.

57. There are three basic systems. The first system was built in 1965-1966 and carries crude from the harbour of Durban northwards to a juncture at Empangeni where it joins a spur coming from the harbour of Richards Bay. The pipeline then runs through Zululand and the Transvaal to the outskirts of Sasolburg where it enters a refinery. At that point it also joins a spur that runs in a north-westerly direction to storage facilities near the village of Kendal-Ogies. From Durban to Sasolburg is about 750 kilometres, and from Ogies to Sasolburg about 100 kilometres. This pipeline has been sabotaged on at least one occasion.

58. The first petroleum product system was built a few years later and ran in an erratic pattern from Durban to Ladysmith in northern Natal, and from there through parts of the Orange Free State until it bends northwards and ends up in Sasolburg.

59. The second petroleum product pipeline system was made to be able to flow in either direction according to the needs of the moment and connects the harbour of Durban with Sasolburg, but also with the coal liquefaction plants at Secunda as well as with important storage facilities in Vrede (Orange Free State) and in Ferrobank (Transvaal).

60. There are further smaller pipeline systems. One runs from Sasolburg via Potchefstroom to Klerksdorp. Another runs from Sasolburg to a place called Alrode (where it joins the second petroleum product pipeline), after which one spur runs off to a terminal point southeast of Johannesburg at a storage facility called Langlaagte. Another spur leads to the airport of Jan Smuts and ultimately to a storage unit at Waltloo north of Pretoria.

61. For crude oil there is also a short pipeline from the harbour of Cape Town to the refinery at Milnerton, as well as a small pipeline at Saldanha Bay which may or may not be connected to the refinery at Milnerton.

62. The available knowledge about the pipeline system is imprecise because the matter is a secret and it also dates from around the years 1983-1984. There may be additional pipelines. The only officially divulged figures which might shed light on this matter are the amounts indicated for investments in pipelines and the number of persons employed by the pipeline division of the relevant railway authority. These figures would not allow for any more extensive pipeline projects than those already known.

63. A serious shortcoming of the South Africa oil infrastructure is that there is no pipeline connection between the northern provinces and Cape Town. In fact, oil is too often transported by rail across significant distances. This system is vulnerable to sabotage in a crisis.

D. Stockpiles

64. Here again the matter is one of great secrecy, so very little is known with any certainty. In addition the South African authorities have for over 15 years circulated exaggerated claims about the size of the stockpiles. In 1978 the Financial Mail of Johannesburg quoted a figure of 42 million tons, which would be the equivalent of 310 million barrels of oil (assuming 34° API gravity). Claims of this sort are clearly absurd. Furthermore the more experts research the question, the smaller the estimates grow.

65. The most reliable estimate was published by the Newsletter on the Oil Embargo in January 1988, together with a description of the facilities. It appears that four disused coal mines near the villages of Kendal and Ogies in the Transvaal were converted into oil storage units sometime after 1969 by the American firm of Fenix and Scisson, whose project engineer, Henry Brandt, published in 1972 an article on the conversion of the first of these mines, the Alpha mine. 11/ These mines can store up to about 4-5 million barrels of oil. The conversion technology took advantage of certain peculiarities of a mining method known as board-and-pillar mining, which is not too common. There were no further mines which could be converted in this way. An attempt to convert a gold mine near Johannesburg for storage purposes failed.

66. There is also a farm of underground concrete bunkers in the shape of salad-bowls near the refinery of Milnerton near Cape Town. These bunkers may have a capacity of just over 1 million barrels each. They were designed and built by the same company as mentioned above. This technology can only be used where soil is very soft (the storage farm is located on a beach) and these units can only store crude oil and bunker fuel.

67. There is an additional storage facility of unknown nature (but definitely not a mine) at the pipeline junction point near Vrede in the Orange Free State. There is a large storage unit at a place called Ferrobank, near Witbank in the Transvaal which may make use of a disused coal mine in the vicinity. There are also many traditional-type storage units in and around urban areas. Langlaagte near Johannesburg and Waltloo near Pretoria are examples. These facilities all store petroleum product.

68. As a protection against sabotage or the effects of civil disobedience or strikes, there is much storage of petroleum products spread out throughout the country. This tactic has nothing to do with the threat of an oil embargo as such and is paralleled in the practice of building new coal-generated power stations near the collieries which feed them.

69. The total capacity of all these storage units could not be more than about 50-60 million barrels. While this is a world record in stockpiling (i.e., stockpiles per consumption), it together with rationing and fuel from coal sources would not keep the economy going for more than about six-seven months in case of a complete oil cut-off.

E. Synthetic fuel

70. South Africa has since 1955 also produced motor fuels from coal (coal liquefaction) on the basis of a technology developed in Germany and used during the Second World War. Such technologies are highly unprofitable and are never used as a major source of fuels except in extraordinary circumstances, such as war or a state of embargo. In 1983, it was estimated that South Africa was paying the equivalent of $75 per barrel for its synthetic fuel from coal. At that time the spot price for petroleum was $28 per barrel.

71. South Africa created the Sasol company and built a small synthetic fuels plant in Sasolburg in 1955. For 25 years this plant almost had the character of being an experiment. It produced some 5-10,000 barrels per day of motor fuels, mostly petrol. The general technology on which the plant operated is known as the Fischer-Tropsch process. The first Sasol plant had two tracks, one of which ran on an adaptation of Fischer-Tropsch known as Synthol, and the other on an adaptation known as ARGE. The first named adaptation produces almost no diesel fuel, the second one has the disadvantage of producing too many useless by-products.

72. In 1975-1976 the South African authorities decided to build a larger plant near Secunda in the Transvaal which would use the Synthol technology. As international pressure against apartheid increased, a few years later the decision was taken to build a second large plant, basically identical, on the same site. Both of these plants were fully on stream by about 1983. Their exact production capacity is at one and the same time a secret and the object of exaggerated claims. Most likely the total production of all three coal conversion plants is about 75,000 barrels per day, roughly one fourth of the country's liquid fuel needs in 1983. 12/

73. It should however be pointed out that the plants produce these volumes under appallingly costly terms. Hence they must be subsidized from public revenues on a permanent basis and the exact modalities of such subsidization, a secret of course, have been a constant source of friction between Sasol and the South African Government. By reducing the amount of motor fuels which must be produced from petroleum they have exacerbated the problem of refinery overcapacity, thus making the traditional petroleum refineries less profitable as well. They are technology-intensive and capital-intensive to an inadvisable degree. In 1983, when South Africa had a gross national product of about $80 billion per year, a total of about $5.8 billion was tied up in capital plants which only produced about 5-10 per cent of the national energy supply. The technologies used are antiquated and wasteful, deplete non-renewable natural resources and produce an unbalanced output-slate (too much petrol and not enough diesel). 13/ In recent years there have been rumours that the plants are wearing out too fast and experts have begun to point out that the thermal efficiency of the plants can only decline with age.

74. Exploration for oil has proved completely unsuccessful, but one deposit of natural gas has been found off the southern coast of the country which is commercially exploitable. A platform will eventually be built there and the natural gas will be evacuated to a gas-conversion plant near the town of Mossel Bay. The conversion plant will use a gas liquefaction technology based on

an improvement of the ARGE version of the Fischer-Tropsch process. Its output will be about 20-25,000 barrels per day of useful motor fuels, equally divided between petrol and diesel, and the target date for commissioning the plant is 1992. The cost of fuel produced in this way will be as high as, and probably higher than, that produced in the Sasol coal conversion plants. The contribution to the country's fuel needs will be minimal. In fact every margin of increased synthetic fuel production from now on must be achieved at higher marginal production costs.

F. Petroleum fuel consumption

75. A study commissioned by the United Nations in 1978 provides a detailed breakdown of South Africa's petroleum and fuel consumption at that time. Petroleum imports were 415,000 barrels per day, 15,000 barrels of petroleum products and the rest crude. Seventy thousand barrels per day of the incoming crude was diverted to stockpiling, leaving 330,000 barrels for refining. The useful product emerging from refining came to 304,000 barrels per day, of which 77,000 barrels were exported to other countries or sold as bunkers. The Sasol plant was assumed to be producing 5,000 barrels per day. 14/

76. In retrospect the figure of 70,000 barrels per day being diverted to stockpiles was much too high. For many years during the 1970s official South African statistics showed considerable discrepancies between the amounts of crude oil imported and the volumes of petroleum product consumed. This encouraged speculation about potentially voluminous stockpiles. There are a number of other possible explanations, one simple one being that the South African authorities falsified the statistics in order to underpin its claims about huge stockpiles.

77. Whatever the case, the figures cited above are the last accurate ones available, since a law went into effect in 1978 which put a blanket cloak of secrecy on anything related to oil.

78. The final figure for petroleum products consumption according to the above cited study was 240,000 barrels per day (for South Africa and Namibia), of which 173,000 barrels, or 72 per cent, went for transportation.

79. Any number of events and conditions since then would tend to change these figures. For one thing, rationing and more rational use of motor fuel could easily reduce consumption. In the other direction, the national vehicle park rose 26 per cent from 3.8 million vehicles to 4.8 million between 1980 and 1985. Economic conditions since then have probably led to less dynamic growth figures. During the same period commercial vehicles increased only 20 per cent, from 874,000 to 1,055,000. 15/ This suggests that shortages of diesel might be inhibiting the growth of the heavy-duty vehicle market.

80. As pointed out above, substituting coal for fuel-oil was not possible in South Africa. And motor fuel in South Africa means petrol, used largely as fuel for private motor vehicles.

81. In the absence of any official statistics only guesswork is possible, but a conservative estimate would be that hydrocarbon product consumption is now about 275-325,000 barrels per day, of which 75,000 barrels are satisfied in the form of refined coal product from the Sasol plants. This leaves some 200-250,000 barrels per day which can only be produced from external sources of petroleum. A useful working assumption might be that South Africa consumes 225,000 barrels per day of petroleum products, of which 15 per cent must be imported in product form (particularly diesel, jet-fuel and petro-chemicals). This would mean that the country currently imports 200,000 barrels per day of crude and another 30,000 barrels per day of product.

82. The above is a conservative (i.e. low) estimate. A slightly higher one is that used by the Shipping Research Bureau which is 12-14 million tons per year (the equivalent of 240-280,000 barrels per day).

IV. THE OIL EMBARGO AGAINST SOUTH AFRICA

A. The international community's choice of an oil embargo

83. Oil is a strategic commodity which is not only necessary for the running of anything but the most rudimentary economy, but is particularly vital for any régime which must use military or paramilitary forces to suppress civil unrest.

84. The suggestion that an embargo on oil supplies to South Africa could be an effective method of bringing about the demise of apartheid was first mooted at the summit meeting of the Organization of African Unity in Addis Ababa in June 1960. It was part of a draft resolution proposed to the General Assembly by Pakistan in November 1961 but later rejected. Its first appearance in a United Nations document occurs in the text of General Assembly resolution 1899 (XVIII) of 13 December 1963 with reference to the issue of Namibia and two years later the issue was given increased actuality when an oil embargo was imposed on the illegal white minority régime of Ian Smith in Rhodesia. South Africa was not affected by that embargo because the two countries imported their oil from different sources and their oil import facilities were infrastructurally distinct. However, the South African Government clearly saw the handwriting on the wall and around 1966 began to prepare for such an eventuality, inter alia, by commissioning a feasibility study of oil stockpiling methods. The feasibility of an oil embargo measure was briefly discussed in a report submitted in February 1965 by the Expert Committee created by Security Council resolution 191 (1964) to study the question of sanctions.

85. At a summit conference in November 1973, the League of Arab States agreed that its members would no longer sell oil to South Africa. In 1981, more exact guidelines on how this oil embargo was to be administered were drawn up by OAPEC.

86. After laying dormant for some years, the matter was again brought up in the forum of the United Nations when the Special Committee against Apartheid, in its annual report in September 1975, recommended an oil embargo as a complement to an arms embargo. As a consequence General Assembly resolution 3411 G (XXV) of

10 December 1975 included it in an appeal to the countries considered most directly concerned. It was repeated in the Programme of Action against Apartheid contained in General Assembly resolution 31/6 J of 9 November 1976.

87. This measure came to be discussed with increaseing frequency in connection with the issue of Rhodesia for two reasons. One, it was clear by that time that South Africa was abetting Rhodesian defiance of the international community by allowing oil to pass through its territory to Rhodesia. Later on it gained greater currency when it became apparent that oil sanctions against Rhodesia had contributed to the economic impasse which brought the illegal, white minority régime to the bargaining table. Consequently more and more attention was devoted to the possibility of an oil embargo against South Africa, including within the forums of the Commonwealth and the Organization of African Unity after 1977. The General Assembly in its resolution 32/116 B of 16 December 1977 called on the Security Council to include an oil embargo against South Africa in its measures against the illegal régime in Rhodesia.

88. When the Special Committee against Apartheid on 21 September 1978 16/ requested the Security Council to adopt an oil embargo against South Africa it went one step further by adding a call to embargo technology and financing for evasive measures as well. This was repeated by the General Assembly in resolution 33/183 E of 24 January 1979.

89. Largely in connection with events in Iran in 1979 and the crisis it caused the Pretoria régime in procuring oil supplies, the General Assembly repeated this request to the Security Council in its resolution 34/93 F of 12 December 1979, but it simultaneously also included an appeal to the States concerned to take such action on their own.

90. The idea of the oil embargo gained further momentum after a seminar was held on the subject in Amsterdam on 14-16 March 1980. This seminar was organized by the Special Committee against Apartheid in co-operation with two Dutch non-governmental organizations, the Holland South Africa Committee and the Working Group Kairos. Subsequently those two non-governmental organizations founded a special institution, the Shipping Research Bureau, with the sole and specific purpose of looking into South Africa's sources of oil supplies. It is headquartered in Amsterdam. By 1982 it began to report systematically on the subject and later began to publish a newsletter.

91. An important conference on the same issue was held in Brussels on 30-31 January 1981. The Special Committee against Apartheid undertook further missions and conducted further consultations with States concerned, including oil-producing States, on possible ways to strengthen the oil embargo.

92. However after the events of 1985-1986 had outraged public opinion throughout the world, the international community's patience with the apartheid régime began to run out and several non-producer countries (the United States, Brazil and the European Community) decided to ban oil to South Africa. The Special Committee against Apartheid, in co-operation with the Norwegian Government, on 4 to 6 June 1986 organized a seminar in Oslo to discuss more effective ways of imposing

an oil embargo. In the years since the seminars in Amsterdam and Brussels, the realization had gained ground that a successful oil embargo could not be achieved merely by agreement among oil producers but would have to gain the co-operation of important maritime States as well. On the basis of this new insight and because of the Oslo seminar's unambiguous appeal to the international community to strengthen and expand the oil embargo weapon against apartheid, diplomatic representatives of Kuwait, Nigeria and Norway at the United Nations discussed various possible arrangements for this end during the autumn of 1986. The seriousness of the international community's commitment to an effective oil embargo was proved once more when Member States from among the Group of Western European and Other States expressed their interest in participating in an eventual special body devoted to this matter.

93. By resolution 41/35 F of 10 November 1986, the General Assembly created the Intergovernmental Group to Monitor the Supply and Shipping of Oil and Petroleum Products to South Africa (often referred to by its acronym, IGG) and mandated the President of the General Assembly to consult with the chairmen of the regional groups of States and the Chairman of the Special Committee against Apartheid to select and commit 11 Member States to participate in this new body.

94. This was a remarkable step in itself for it was the first and only time that the General Assembly has ever created a body to monitor compliance with sanctions measures which it has recommended to the international community.

95. On 24 March 1987 delegates from Algeria, Cuba, the German Democratic Republic, Indonesia, Kuwait, New Zealand, Nicaragua, Nigeria, Norway, the Ukrainian Soviet Socialist Republic and the United Republic of Tanzania met at United Nations Headquarters in New York and convened the first meeting of the Intergovernmental Group.

B. Supply and shipping of oil to South Africa

96. Practically all oil-exporting countries have explicitly banned the export of crude oil to South Africa, in most cases doing so some years before the General Assembly recommended the oil embargo. Since there is no legitimate source of crude oil for South Africa, all crude oil reaching South African shores must have changed hands illegally at some point along the way from the well to its destination. There is much less unanimity about refined petroleum products, and generally there are few legal strictures on the export or trans-shipment of oil to South Africa which has come from a source outside the legislating country.

97. A detailed survey of national policies and legal measures on this subject is found in the Intergovernmental Group annual reports.

98. The cases investigated by the Group are contained in separate annexes appended to its reports for 1987 and 1988. 17/ But there are certainly more. In most cases, the deals were handled by independent oil traders and brokers and the authorities of the exporting country were misled into believing the oil was bound for one or another important spot-market port. Occasionally, refinery centres in

Western Europe have been named as destinations. In some cases, the tanker captain has acted in good faith in making such declarations and the vessel is only re-routed to South Africa after it had reached the high seas. Occasionally, more involved subterfuges are resorted to, such as the secret transloading of oil from one vessel to another on the high seas.

99. There are other manoeuvres which seek to confuse any eventual outside observers or to fool harbour authorities. Often before sailing to South Africa, the tanker has "hopped about", calling at a succession of nearby ports. Cargo sellers or harbour authorities may believe that the oil is destined for a nearby port, while the harbour authorities in the final port of call before the voyage to South Africa may not be aware of how much oil is actually on board the tanker.

100. The countries of registry most frequently named in alleged violations of the oil embargo have been the Bahamas, Cyprus, Denmark, Hong Kong, Norway, Liberia and Panama. However, Denmark now forbids the carriage of any kind of oil on its ships and Norway forbids the carriage of crude oil under most circumstances.

101. The detection of illegal oil shipments to South Africa is still not as effective as it could be. The main method is to find unexplained gaps or seemingly absurd voyages in ships' itineraries. Most commonly, a ship is reported leaving an oil-exporting harbour with a cargo of crude oil. It is next reported arriving, after a long unexplained absence, at another oil-exporting harbour and proceeds to load more crude oil. If a voyage to South Africa fits into the time-gap involved between, and the location of, the last-point-out and the next-point-in, the relevant parties (the company that owns the ship, the country where it is registered, the authorities of the oil-exporting country) can be asked what information or explanations they have to offer. The majority of the cases where the Intergovernmental Group finds the allegations undisproved are where one or two things have occurred: the most relevant parties have failed to provide any explanation or documentation on the case, and/or no discharge documentation was ever submitted to the exporting authorities.

102. The peculiar conditions of the tanker industry, as well as loopholes, have made enforcement of the oil embargo difficult. A major difficulty lies in the nature of the tanker industry which is dominated by a large number of independents. While the independent tanker-owners are never able to assert themselves very aggressively against other major players in this sector, they easily escape the control both of oil-producing countries and of oil companies. National Governments and international organizations cannot always effectively control or influence them, mainly because of the frequent discrepancy between country of ownership and country of registration. This latter circumstance, which is peculiar to the maritime industry, creates a situation where too many significant players can wash their hands and claim, as they frequently do, that they lack control and jurisdiction.

103. Furthermore, there was no governmental, intergovernmental or multigovernmental body available to monitor or enforce the oil embargo until the Intergovernmental Group was created by the General Assembly in 1986. OAPEC had once issued guidelines on the subject, but did not create any body or authority to apply them.

There is no co-ordination of oil embargo measures between national Governments and even standardization is lacking. Thus, one country may forbid the export of its own oil, but not that of foreign-origin oil. There is less unanimity about including petroleum products in bans on oil to South Africa, even though the latter is just as important as the former. Even the exact range of products covered by a ban on exports of petroleum products may differ from one country to another. This is the case within the European Community countries. Control mechanisms are lacking, and it is questionable if national Governments could by themselves really enforce destination bans on oil exports without an intergovernmental enforcement or monitoring body. Under these circumstances what South Africa cannot obtain in one locale, it can always try to obtain elsewhere.

104. A major shortcoming of embargo strategies heretofore is that they were too closely adapted to conventional oil-trading practices used by non-embargoed countries, particularly the assumption that controlling exports from exporting countries would suffice. Not only are there intermediary countries with spot markets and oil-handling facilities, but South Africa has also been known to purchase oil in oil-importing harbours and export it from there. The original embargo strategy had been too narrowly focused on oil-exporting countries and the creation of the Intergovernmental Group had been based on the realization that oil-shipping countries would have to be included in attempts to strengthen the embargo. Historically it was also oil-exporters who first banned oil to South Africa after 1973. The first bans on carriage of oil by maritime countries did not come until a decade later (Denmark in 1986, Norway in 1987). The Intergovernmental Group, in its annual report for 1988, has gone a step further and spoken of the potential contribution which "oil-handling States" could make to an effective embargo. This refers primarily to those countries which are prominent in oil-trading and oil-refining and where spot markets operate. In addition, previously employed control strategies, particularly relating to discharge documentation, have been better suited to the case of crude oil than to that of petroleum products.

C. Legal issues involved

105. Since there is no legal source of oil for South Africa, all oil going there is illegal in the sense that it must have changed hands at least once in an illegal manner. Beyond this general statement, however, very little is certain about the exact ramifications of such an illegal change of title, either on the immediate participants in the transaction or on third parties. In practice, this illegality seems in most cases to have no further ramifications for anyone.

106. The General Assembly in its resolutions has unequivocably recommended that the delivery of oil to South Africa be made a punishable offence in national legislation and even that violators be actively prosecuted. There are countries in which the relevant laws do make it a criminal offence to export oil to South Africa. In a number it is a criminal offence to export without necessary permits, and it is assumed that any oil exported to South Africa had not been properly permitted. There are several borderline cases: one country prohibits oil exports to South Africa and empowers the customs authorities to revoke the export licences of offenders. It is not clear if this should be considered a punishable offence.

107. Many countries stipulate a ban on oil exports to South Africa by one or two measures which definitely do not constitute making it a criminal offence: the Government or a relevant minister issues a policy statement, or a clause is inserted in the sales contract of the national oil company prohibiting sale or resale of the exported oil to South Africa. Most of the responses tendered by Governments to the Intergovernmental Group do not clarify whether export of oil to South Africa is a criminal offence.

108. The stress on making this act a punishable offence does not only lie in the belief that this would create a greater deterrent effect. Establishing this act as a punishable offence in the jurisdiction from which the oil has originally been exported facilitates third-party interventions against such illegal trade in third-country jurisdictions. A mere clause in a contract between buyer and seller would not suffice to establish any standing in a third-country jurisdiction.

109. The national oil companies of those OAPEC countries which agreed to ban oil exports to South Africa in 1973 invariably contain clauses stipulating that the oil sold may not be resold or otherwise conveyed to South Africa. National oil companies in other countries (Islamic Republic of Iran, Malaysia, Nigeria) do the same. The exact wording differs from case to case and is normally sufficiently vague to allow for problems if a dispute should arise. 18/ Most contracts also make it clear that the buyer is under an obligation to comply with all laws and regulations stipulated by the seller, including compliance with destination or end-user prohibitions. Non-compliance thus constitutes an indisputable breach of the contract and is often specifically cited as grounds for termination of the agreement by the selling party.

110. As title and risk to the goods normally pass to the buyer when the ship leaves the export harbour, and since the contracts of sale of the oil-exporting countries stipulate a prohibition on conveyance to South Africa, it is clear that there is some defect in title to every cargo of oil which leaves an oil-exporting country under such conditions. What that defect in title implies for owners or handlers of the same oil, or for interested third parties (e.g. insurance companies, maritime authorities) beyond that point is far from clear. An interesting question, as yet unresearched, is whether or not the defective title or the illegal nature of the export in any way mitigates or invalidates insurance coverage on the vessel or on the cargo. It is also uncertain what recourse the offended party (the oil-exporting country or its national oil company) has in third-country jurisdictions, should it try to stop conveyance of its oil to South Africa before delivery has been accomplished or to sue for damages thereafter.

111. A further complicating factor is that one country, the United States, has enacted provisions prohibiting its nationals (persons and entities) and their foreign subsidiaries from complying with the terms of such destination restrictions. However, this provision, originally known as the "Ribicoff Amendment" (of 1976) and later inserted in the country's Export Administration Act, has not been used in recent years. 19/

D. The question of voyage and discharge documentation

112. The main regulation by which oil-exporting States have sought to restrict the sale of oil to South Africa has been in the inclusion of a contractual obligation for the buyer to provide discharge certification after disposing of the exported oil. Standardized contracts used by oil companies generally stipulate the buyer's obligation, not only to comply with destination and resale restrictions, but also to provide such discharge or destination documentation as the seller demands. But there are no internationally agreed or accepted norms on what constitutes proper discharge documentation and it is up to the seller to decide what it wishes to accept as proper discharge documentation. It is in some cases not even certain if it is within the competence of the national oil company or of the national Government to adjudicate the matter.

113. In practice, the discharge certificate is a part, or a copy of a part, of the bill of lading which is certified and then stamped or countersigned by the customs authorities of the country into which the oil has been admitted. Its contents are presumed to correspond to the entry made in the importing country's normal customs records. This is important because, besides prima facie inspection of the discharge certificate, the countersigning national customs authority can be requested to ascertain its authenticity or to check its claims against their own records. This assumes that the national Government involved agrees to co-operate with the Intergovernmental Group.

114. Contract terms do not normally make clear what is to be accepted as discharge certification or when it is to be submitted. The practice seems to be within a period of 60 to 90 days after export of the oil. Invariably the certificate is to be submitted to the seller (the national oil company). In some cases, no discharge certificate is ever submitted. In most cases it is uncertain to what extent the certificate is checked for its authenticity by the recipient (the national oil company). The responses of Governments to the Intergovernmental Group's requests for discharge certificates imply that the government authority normally does not see the discharge certificate, which instead is deposited in the files of the national oil company.

115. Commonly those diverting oil shipments to South Africa either fail to file a certificate of discharge, or attempt to satisfy this contractual requirement by means of less formal communications about the ultimate disposition of the cargo. In one case, the national oil company had only received a telex from the ship's master. In many cases, certificates of discharge are filed which indicate that the oil was off-loaded in a large oil-handling harbour, such as Rotterdam or Singapore. Less important harbours in France or Italy have also occurred. There is considerable suspicion that some of these documents are forged.

116. The sale and conveyance of oil to South Africa is an example of white-collar crime and many of its practices and circumstances are those commonly encountered in other white-collar crimes, such as fiscal or customs fraud. In this case, the white-collar criminal, in order to facilitate a violation of the laws of the oil-exporting country, must resort to the falsification of customs documentations purportedly issued by the authorities of a third country, in most cases a country

not otherwise involved in the original transaction. In this way, a new violation against the laws of the third country is committed, something which is very often the undoing of the white-collar criminal. These third countries, even where they do not actively support the oil embargo against South Africa, have no interest in having customs documents forged in their Government's name, and can be expected to co-operate in pronouncing on the authenticity of suspected forgeries.

117. The general principle involved in the aforementioned paragraph has already been shown to operate in other cases. In some cases under investigation in 1988, the Intergovernmental Group was gratified to receive effective and, in one case, very prompt co-operation from Governments which had not voted for the General Assembly resolutions calling for an oil embargo against South Africa.

V. CONCLUSIONS

118. The priority given to the oil embargo in the international community's struggle for a peaceful end to apartheid is not accidental. This is the one commodity which South Africa does not have on its own territory. In fact, it does not occur anywhere near South Africa. There are no long-range possibilities of substitution because even after allowances are made for synthetic fuel and fuel-economy measures, there still remains a gap in the magnitude of 200,000 barrels per day. Stockpiles can only last some six to seven months, hardly enough time to find any new sources of petroleum. The resolute co-operation of a few key States, oil producers, oil shippers and oil handlers, would be sufficient. Because tankers are large and easily detected and identifiable, technologically advanced monitoring methods, such as the use of satellite images, could be used which would not tie up equipment or personnel to any greater extent.

119. Market conditions in the oil and shipping industries seem to be evolving to the disfavour of the apartheid régime, although not all of the many fluctuating factors can be unambiguously interpreted at present. Some, like the rising price of oil, increased production control by oil exporters and the gradual re-establishment of equilibrium in the tanker industry, will make it more difficult for South Africa to obtain oil. Others, like the emerging structural changes in the oil-trading market, are less easy to evaluate in their ultimate repercussions on the issue. In any case, rapidly changing conditions require flexible and innovative strategies which can be quickly reformulated and put into practice.

120. One of the most encouraging developments has been the creation of the Intergovernmental Group itself and the way in which it succeeded in getting a grasp on the many technical and organizational complexities inherent in this matter. Indeed, no similar body has before achieved so much in so little time.

121. Disappointing experiences with poorly conceptualized sanctions measures in the past have convinced the Intergovernmental Group that its approach must be based on a realistic analysis of the strengths and weaknesses of the various groups of States which participate in the international oil industry: producers, traders, shippers and even others such as insurers, technology-suppliers and refiners.

122. Governments concerned should be urged to close legal loopholes and enhance the legal force of the oil embargo by enacting coherent and specific legislative measures to outlaw all participation in supplying oil to South Africa and to make it a punishable offence. Since the United Nations assumed primary responsibility for co-ordination by assisting concerned Governments in the international application and enforcement of their own policies, there should be continued efforts for enhanced methods of control and monitoring and for a speedy and efficient system of information exchange among Governments.

123. Current concerns about tightening up discharge certification and destination-control documentation illustrate the United Nations potential role as a forum for experts to work out practical arrangements for enforcing national Governments' own statutes as well as executing the wishes of the international community as expressed in General Assembly resolutions on the oil embargo against South Africa.

124. Finally, the United Nations success or failure in gaining the confidence and co-operation of the community of Western States with respect to the oil embargo against South Africa will also be crucial. Auspiciously enough, the oil embargo is a sanctions measure which most Western States have approved of as far as they are directly concerned: they will not allow their own oil to be exported. They have been reluctant thus far to extend this positive attitude to the more ancillary areas of trans-shipment and trading as well as to accept the idea of international co-ordination in monitoring and enforcement. They have thus far tended to favour a relatively voluntary approach. It is hoped that through the participation of Western States ways will be found to arrive at mutually acceptable tactics and measures for achieving an effective oil embargo.

125. It is with these insights and expectations in mind that the Intergovernmental Group and the Special Committee against Apartheid are sponsoring the hearings on the oil embargo to which all sincere opponents of apartheid in the international community have been invited to contribute.

Notes

1/ Farhad Rad Serecht, Le marché pétrolier international: ruptures et nouvelles configurations, Paris, 1985, chap. I.

2/ UNCTAD, Review of Maritime Transport 1987, Geneva, 1988, table 3.

3/ As this concept is used by international organizations, e.g., the United Nations Conference on Trade and Development.

4/ Martin Bailey and Bernard Rivers, Oil Sanctions against South Africa, Notes and Documents of the United Nations Centre against Apartheid, 12/78, June 1978, p. 25A.

Notes (continued)

5/ Martin Bailey, The impact on South Africa of the cut-off of Iranian oil, Notes and Documents of the United Nations Centre against Apartheid, 16/79, July 1979.

6/ "Oil Markets Reconsidered - 1984 and Beyond" (Special Supplement) in Petroleum Intelligence Weekly, New York, 22 April 1985.

7/ Shipping Research Bureau, Marimpex, a German oil supplier to South Africa, Amsterdam, October 1985; Shell Marubeni Rich, crude oil deliveries to Brunei from South Africa, Amsterdam, 1987; John Deuss Transworld Oil, Zuid-Afrika's belangrijkste olieleverancier, Amsterdam, 1986.

8/ Petroleum Intelligence Weekly, New York, 23 January 1989, pp. 1 and 4; ibid., 30 January 1989, p. 6.

9/ Ibid., 20 March 1989, p. 6.

10/ All statistics are taken from Oil and Gas Journal, Tulsa, 26 December 1988.

11/ H. W. Brandt, "Abandoned coal mine converted into man-made oil field", in Oil and Gas Journal, Tulsa, vol. 70, No. 52 (December 1972), pp. 76-78.

12/ Martin Quinlan, "South Africa: problem of uncertain oil supplies", in Petroleum Economist, February 1978, pp. 55-58; Paul Conlon, The Sasol coal liquefaction plants: economic implications and impact on South Africa's ability to withstand an oil cut-off, Notes and Documents of the United Nations Centre against Apartheid, 10/85, October 1985, pp. 28-35.

13/ Paul Conlon, op. cit., pp. 36-46.

14/ Bailey and Rivers, op. cit., p. 11.

15/ Official Yearbook 1986-1987, chap. 15, p. 752.

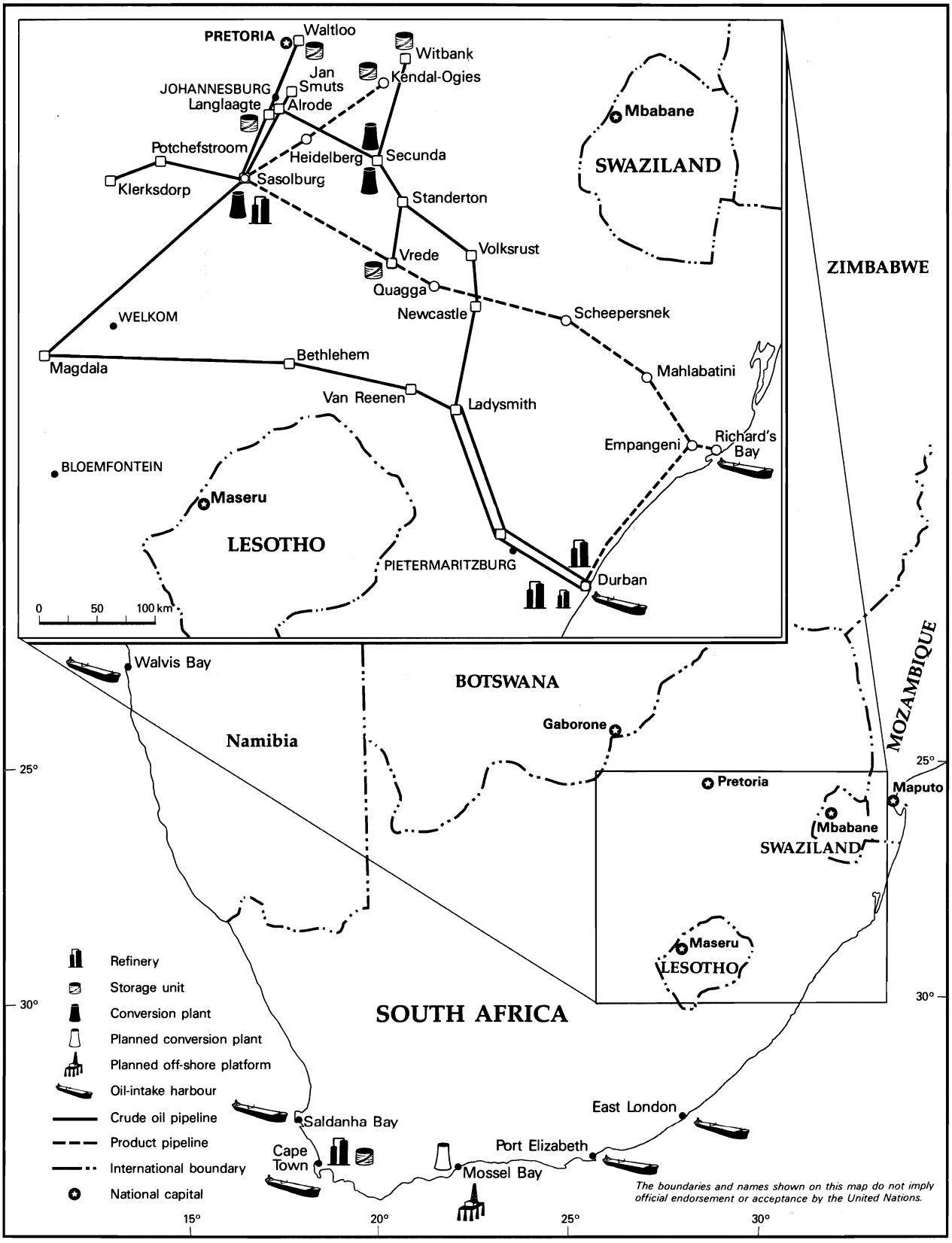
16/ See Official Records of the General Assembly, Thirty-third Session, Supplement No. 22A (A/33/22/Add.1 and 2), document A/33/22/Add.1.

17/ Ibid., Forty-second Session, Supplement No. 45 (A/42/45), annex II; and ibid., Forty-third Session, Supplement No. 44 (A/43/44 and Corr.1), annexes II and III.

18/ See section 17, "Boycotts, resale and destination restrictions", in Charles M. Thompson, A study and comparison of F.O.B. general terms and conditions used in the sale of crude oil, London, 1988, pp. 229-237.

19/ Ibid., p. 323.

SOUTH AFRICAN OIL/FUEL INFRASTRUCTURE



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