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#### ABSTRACT

Oil as an energy propeller is the largest internationally traded commodity that shows highly visible interplay of politics and economics in the determination of its investment, production, trade and pricing policies. This uniqueness, no doubt demands a well articulated oil policy for an oil producing nation. Thus, the thrust of the paper was to evaluate the state of Nigeria's oil policy in the 1970s/80s. This paper therefore

argues that in the oil policy formulation process, we have to take into account the various stakeholders whose decisions and participation have a great impact on oil industry; and who want to see clear targets and minimize risks.

KEY WORDS: NIGERIA, ECONOMY, OIL POLICY, ENVIRONMENT  
NNPC, POLLUTANTS, OPEC, WORLD BANK, ENERGY,  
PETROLEUM, GOVERNAMENT

JEL NO: E60, F10, L70, L72, N50, N70, Q30, Q40

## 1.0 INTRODUCTION

In 1958, the World Bank made the first comprehensive assessment of Nigeria's energy resources. The resulting document became the basis of initial energy projections in Nigeria. But with a vast extension of the energy supply base following increased production of oil in the seventies, the petroleum sector became very attractive. Since then, oil has influence the lives and fortunes of Nigerians.

Oil as energy propeller, is the largest internationally traded commodity that shows highly visible interplay of politics and economics in the determination of its investment, production, trade and pricing policies. This uniqueness, no doubt demands a well articulated oil policy for an oil producing nation. It is in light of this therefore, that we want to evaluate the state of Nigeria's oil policy. In otherwords, the aim of this paper, is to offer a critical assessment of the nation's oil policy.

The rest of the paper is as follows. In section two, we explore the history of Nigeria's oil. Section three presents and evaluates Nigeria's oil policy: the internal, external and environmental dimension of the policy are critically assessed. The major conclusions and future policy prescriptions of our assessment study are presented in section four.

## 2.0 NIGERIA'S OIL HISTORY

Petroleum is defined both in a standard Nigerian oil mining lease and in section 14(1) of the petroleum Act 1969 as mineral oil (or any related hydrocarbon or natural gas as it exists in its natural state in strata, and does not include coal or bituminous shares or other stratified deposits from which oil can be extracted by destructive distillation (Etikerentse, 1985).

Exploration for oil started in Nigeria when from 1908 to 1914 the German Nigerian Bitumen Corporation and the British Colonial Petroleum Company, drilled from the heavy oil seeps which occur in the cretaceous Abeokuta formation, 200 kilometers east of Lagos. These

holes were dry and the venture was abandoned mainly because of world War 1. interests in exploration languished in the 1920s and yearly 1930s but from 1937 to 1940 interest picked up again when reconnaissance work was undertaken by the shell - D' Arcy Petroleum Development Company. Exploration was again suspended in 1941 because of world War II.

In 1946, the Shell-BP Development Company of Nigeria, jointly financed by the Royal Dutch Shell group and British Company replaced Shell D' Arcy and continued explorations in the area north of the Niger Delta. Mobil Exploration Nigeria incorporated obtained a concession over the whole of Northern Nigeria in 1955 and did some geological studies and also sank three wells in the west of the country.

The first oil show was encountered in 1953 in Shell-D's Akata - 1 and the first commercial find was made by Shell-BP in the Tertiary Agbada formation at Oloibiri in late 1955, further discoveries were made at Ugheli (now in Delta State). Nigeria' first oilcargo was exported in 1958 from the oloibiri oil field, initially at the rate of 5,100b/d. The oil was being pumped from the field via the country's first pipeline, laid by Shell. With the discovery of oil at Oloibiri and Afan, shell stepped up its search in the riverine areas and oil was discovered in Egbu and Bomu.

In 1961, the Nigerian government granted 10 oil exploration licenses to five companies: Shell -BP, Mobil Exploration Nigeria Incorporated, Amosea, Texaco and Nigerian Gulf oil, to explore the country's continental shelf. In the same year, the government commenced discussions with the Royal Dutch Shell Group and Shell - BP, regarding the establishment of the country's first, oil refinery. It was to be located at Port Harcourt and was eventually commissioned in 1965. By 1966 (before the outbreak of the Civil war in 1967) Nigeria's production had reached more than 152 million barrels a year. In 1970, three new comers were active: Mobil, Texaco-chevron and Agip - Phillips

In May 1971, the Nigerian National Oil Corporation (NNOC) was set up as a government agency empowered to engage in all phases of oil industry from exploration to marketing. And in July 1971, Nigeria joined OPEC (Organization of Petroleum Exporting Countries), as the organizations 11th member. In 1977, a rationalization of the government's role in oil management took place. On 1 April, the NNOC was amalgamated with the ministry of petroleum and Nigerian National Petroleum Corporation (NNPC) was formed the two bodies were merged to create a more virile oil agency and optimize human and infrastructure resources available to government. A chronological review given some of the main exploration - production highlights for Nigeria is given in the Appendix .

In October 1985, the corporation (NNPC) was owing to the demands of the Oil industry re-organized into six semi-autonomous units known as sectors in a bid to encourage innovation, efficiency and positive aggressiveness. On January 1988, President Babangida announced the re-organization and commercialization of the corporation. A high point of this re-organization is the establishment of eleven subsidiary companies under the operations arm.

Still in 1988, the federal government opened the oil exploration and exploitation business to private entrepreneurs. And consolidated oil company has to find recoverable oil offshore in 1991. This was a very satisfying breakthrough because it gave credence to the policy of trying to encourage Nigerians in the upstream sector of the oil industry. Among others who got prospecting licenses were Nigeria Oil Resources, Oil company, Dubril oil and Nigus Petroleum.

### 3. 0 OIL POLICY EVALUATION

Policy may be defined as course of action intended to be followed by government with a view to achieving certain objectives. Thus, a major role of government policy is to foster and sustain rapid socio-economic development and an improvement in the living standards of the population of a country. In otherwords, the thrust of a policy should be to properly balance economic and social objectives.

The origin of Nigeria's oil policy can be traced to the year 1971, when petroleum matters (Asiodu, 1979). The policies formulated for various areas of oil industry include Nigerianization and accelerated transfer of technology; coordinated national policy on energy; subsidy on Petroleum products; special oil price to other African countries; oil pollution and counter trade.

Several question emerges with respect to the impact of Nigeria's oil policy. What is the impact of the low oil price regime on the growth of energy demand? Has the poor benefited from the distribution objectives of the oil policy? What is the effect of oil policy on resource allocation and efficient use of energy? Has the country's oil counter trade policy responded positively to aggravated trade and payment difficulties and cushioning the adverse effects of the oil glut? What is the medium term prospect of oil in dealing with the external financial crisis and finally, what are the prospects of Nigeria's oil policy in stemming global warming and enhancing a cleaner environment?

Thus, the choice of oil policy in Nigeria can be evaluated by the multi dimensional role it is expected to play in the economy: internal, external and environmental.

### 3.1 INTERNAL DIMENSION

Government's initial interest in the oil industry was limited to collecting the royalties and other dues which the oil companies offered to pay to it and making laws albeit rudimentary, to regulate the activities of the industry. In this era, the primary concern of government was to provide the right climate for the smooth operation and development of the industry, and the entrepreneur oil companies responded by dictating very low levels of government take for oil produced (Amu, 1983).

Nigeria introduced in 1967, the Petroleum Profits tax (amendment) Decree No. 1 in an attempt to improve its financial receipts from the oil industry. The Decree based the calculation of royalty and petroleum profits tax on posted prices and provided for expensing of royalty. Latter, oil became predominant and more strategic to the economy and Government decided to participate in the industry's activities. Hence the second national development plan, 1970-74 stated that Government should participate in the exploration and production of Nigeria's mineral resources.

In pursuance of this policy, Government in 1971, acquired 33 1/3% equity interest in NAOC in accordance with its concession Agreement and 35% in Elf. Since then, Government has been in the oil industry through its organ known as Nigerian, National Petroleum Corporation. This indigenization process and policy has been successful, to the extent that we now have indigenous oil companies (private entrepreneurs) that work in the upstream and downstream sectors of the oil industry.

To date, petroleum technology has remained foreign largely because of institutional inadequacies and lack of an effectively coordinated manpower development policy. Like most foreign entrepreneurs, the oil companies were not interested in developing indigenous experts and in the early years, most oil field problems arising from their operations were solved by seeking advice from their home offices or flying down experts from abroad. The 1969 Petroleum Decree was drawn up in full recognition of the necessity to force the oil companies to train Nigerians to man the industry. The oil companies did not find it difficult to comply with the stipulation of this edict. As early as 1979, all the companies appear to have complied.

However, there is still a measure of window dressing in promoting Nigerians to key position for which they are not adequately prepared. Consequently, there is currently a more intensive use of consultants and contract staff who are not listed in the manpower returns of the companies. When one looks at the oil service companies that provide the vital skills and technologies required to sustain the industry, the situation is more depressing. Unfortunately, the 1969 Decree did not regulate the activities of the oil service companies and it is only recently that NNPC and the appropriate ministries are co-operating to improve the situation through the mechanism of the expatriate quota. This poor management development can also be attributed to the Nigerian's poor attitude to work and lack of national commitment. The Third National Plan 1975-1980 made a provision for the sum of five million naira to be spent on manpower training during the period (Amu, 1983). Also Petroleum Training Development Fund was established for training Nigerian's in oil matters in universities at home and abroad. But the execution

of all these programs has been in a manner that they have had little impact on the poor manpower situation in the industry.

Government share of crude oil is roughly 70% of total oil produced in the country. This oil is sold for Government by NNPC, and the proceeds are paid directly into federation account. As a matter of policy, NNPC sells oil to customers without any intermediaries. The customers are mostly direct oil users, and include all our joint venture partners. Oil sales are made to all customers at exactly the same price i.e. the official selling price. There is a non-discrimination policy in customer relations. And the only authority on whom should buy Nigerian Oil is the Government. However, these policies have been ineffective by the increasing rate of smuggling of crude oil and petroleum products by Nigerians.

Petroleum products marketing activities began in Nigeria by the turn of the century by socony vacuum Oil Company. It expanded to the seven major companies, namely, Mobil, AP, Total, Agip, Texaco, National, Unipetrol; and a number of independents are now in the trade. Given the overall expansion of economic activities and the unprecedented explosion in the demand for petroleum products in the 1970s the government ventured into petroleum products distribution and marketing.

Prior to 1973, Petroleum product pricing was not uniform throughout the country the pricing was under the control of the domestic affiliates of the multinational oil companies and prices reflected local cost conditions. The pump price depended on point of sale and this affected the distribution and even development of the country. To encourage even distribution of products to all parts of the country, Government introduced the uniform pricing system on October 1, 1973 for all grades of products, and to grant subsidies to the marketing companies to compensate for the differential in the cost of operation. Infact for long periods of time, the nominal administratively determined price remained unchanged.

Nigerian oil is one of the cheapest in the world - at seventy kobo per litre of gasoline (Iwayemi, 1990b). hence, we may ask whether the implicit oil subsidy since 1973 has enhanced economic growth or halt inflation. Se observed that there are developing economies without cheap oil that recorded more impressive economic performance than Nigeria. As regards inflation, fiscal excesses have been more important casual factors than oil price. Even with low price of oil for more than two decades, inflation has remained a major problem as shown in table 1. The inflation rate increased from 5.4% in 1973 to 39.6% in 1984 and 40.9% and 7.5% respectively in 1989 and 1990.

Another major effect of cheap oil price is the sudden rise in oil consumption from 28,000 in 1970 to 236,000 barrels a day in 1982, as shown in table 1. There was a significant fall in 1986,

TABLE 1  
SELECTED INDICATORS.

YEAR	(1) INFLATION RATE	OILCONSUMPTION	(2) CRUDE OIL PRODUCTION	(3)
1970	13.8	28,400		1083.1
1971	15.8	34,300		1531.2
1972	3.2	39,800		1815.7
1973	5.4	48,900		2054.3
1974	13.4	54,400		2255.0
1975	33.9	68,100		1783.2
1976	21.2	89,400		2066.8
1977	15.4	111,900		2085.1
1978	16.6	134,000		1897.0
1979	11.8	154,300		2302.0
1980	9.9	171,000		2058.0
1981	20.9	235,800		1439.0
1982	7.7	236,300		1287.0

1983	23.2	225,900	1235.5
1984	39.6	203,300	1388.0
1985	5.5	214,000	1498.9
1986	5.4	196,300	1466.6
1987	10.2	203,600	1323.0
1988	38.3	205,600	1367.0
1989	40.9		
1990	7.5		

Source: (1) - CBN statistical bulletin (1990)  
 (2) - Iwayemi (1990a) barrels per day  
 (3) - Iwayemi (1990a) ('000 b/d)

to 196,300 barrels a day and since then there has been a steady increase. The aging stock of vehicles fuel using capital stock in an economy undergoing recession implies less fuel efficient use overtime. This combined with smuggling to neighboring countries explain the substantial increase in demand despite the price increases of recent years. Indeed, increasingly domestic oil consumption at highly subsidized prices has cut sharply into the more profitable export market.

A crucial policy problem is whether to encourage further unrestrained and efficient burning off of depletable oil resources or generate more export revenues from the displaced domestic consumption to finance imports required to support long-term growth and better social services. And there is not much realization that oil as a unique product is a depletable asset whose longrun scarcity must be considered properly in order to ensure its efficient use in the long term.

### 3.2 EXTERNAL DIMENSION

Nigeria became a member of organization of petroleum exporting countries in 1971 during a decade when the oil market was characterized by strong upward pressures on prices and OPEC had assumed a dominant role in production and pricing decisions. Even before joining OPEC she was already adopting policies that originated from OPEC as regards Oil fiscal reform and the national control of oil resources (Asiodu, 1979). Her responsibility to OPEC has been a major determinant of Nigeria's oil production policy since 1982. Moreover, her commitment to OPEC has always been very strong inspite of the occasional enlightened self-interested Oil Policy which most member countries pursue when necessary.

Counter trade has been used as a short-term instrument of competition in the world oil market by most OPEC member countries. Available evidence indicates that Nigeria was not the first OPEC country to propose or engage in counter-trading (Adogamhe, 1990). However, Nigeria's entry into the business as a strategy of national survival perhaps introduced a new dimension to it. Perhaps, Nigeria will be at a disadvantage if it stays out when other OPEC countries are involving themselves in countertrade deals. The Nigerian policy making process did not appear to be particularly oriented toward long-term policy outcomes. Thus, Nigeria did not have the special administrative machinery to properly evaluate the countertrade deals, and monitor their efficiency, particularly with regard to the choice, quality and prices of goods to be imported through countertrade. Furthermore, there was complete isolation of countertrade transaction as an integral policy instrument for macro-economic management of the Nigerian economy. In fact, one may agree with the report of the committee of investigation assessment of Nigerian countertrade that "the countertrading system probably made little more than marginal differences to the structural problems of import dependence, declining output, excess industrial capacity, unemployment, foreign debt problems and high inflation" (Aboyade, 1985).

Again, the business of importing in Nigeria was made complicated rather than amplified by countertrade. This has meant a high degree of bureaucratization and favoritism, which has created additional opportunities for corrupt practices. Also, the mark-up price of goods being purchased under counter trade deals is usually higher than market prices because such deals lend themselves more to a monopoly instead of a competitive market. The trading partners who engage in countertrade strive to get the best out of such deals, more so since they do not really require Nigeria's crude oil. To Nigeria, countretrade was a matter of survival, to them it was not.

However, the "Secrete oil Policy" adopted by the Nigerian government is that crude oil

was disposed of outside the OPEC quotas through such subterfuge means as processing agreements or secret discounts, as long as they were beneficial to the economy in terms of relief from both internal and external economic pressures. Moreover, this idea of countertrading in oil appeared to some members of government to be a clever policy instrument irrespective of the cost.

### 3.3 ENVIRONMENTAL DIMENSION

In 1979, the first seminar on pollution of the Nigerian environment from oil industry activities was held in Port Harcourt and a similar seminar was also held in 1981 at Warri. Since then there has been a growing public and government concern about the pollution of the Nigerian environment. We have witnessed the slow poisoning of the waters of this country, and the destruction of vegetation and agricultural land by oil spills which occur as a result of petroleum operations. However, the government have designed policies and measures to combat these problems. But, to what extent has these measures been effective?

One of these measures, was the creation of federal ministry of housing and environment in 1979, which took the realistic step of formulating a general policy for environmental protection and control. Some state governments also established their own Ministries to handle environmentally related problems.

Another measure was the establishment of environmental affairs unit by the petroleum inspectorate of NNPC, within its field operations Department. The unit ensures that oil field operations are carried out at acceptable standards and in accordance with the provisions of the various petroleum laws and regulations. The petroleum inspectorate also closely monitored the activities of the oil companies and ensured that oil field operations were conducted in accordance with "good oil-field practice".

The oil companies themselves initiated and implemented environmental education and awareness programs for all levels of personnel engaged in oil exploration. The petroleum inspectorate of NNPC also took remedial measures to control oil pollution such as enforcing the reporting of oil spills on operating companies, under a new procedure, with a view to documenting all oil spills. Equally, the NNPC embarked upon the collection of baseline data on the changes in the environment of the oil activity. And since the acquisition of baseline data takes time, the petroleum inspectorate worked closely with the oil companies and issued two documents on interim standards for the discharged of formation water, drilling mud and cuttings (NNPC, 1983).

In the "federal environmental control and protection agency Bill 1983" are provisions for water, air and noise pollution control, as well as the control of oil pollution and hazardous substances. The Bill also provided enforcement powers, general penalties and legal proceedings. More recently however, the federal government established federal environmental protection agency (FEPA) which function specifically for the prevention and reduction of environmental pollution and degradation. However, most of these agencies have not functioned effectively because of financial and infrastructures limitations. Again, refined petroleum products vary in their pollution potential. The two products which have received greatest attention are gasoline and fuel oil. They emit several pollutants: Carbon monoxide, nitrogen oxides, hydrocarbons, sulphur oxide, carbon dioxide and methane. The bulk of fossil fuel consumption in Nigeria is in transportation, industry and power sectors where unfortunately there is very high levels of efficiency in energy utilization. Aging stock of transport equipment and inefficient capital equipment are also contributory factors to inefficient energy utilization which has partly resulted to current global warming. Thus, the country's cheap fuel pricing policy has increased fuel - related environmental damage. But with the recent changes in petroleum pricing policy (through phased removal of petroleum subsidy) it is hoped that such damage will be reduced.

### 4.0 CONCLUSIONS AND POLICY PRESCRIPTION

The worst area of scarcity of local manpower and effective Nigerian participation is still in the service sector of the oil industry this is where the Nigerian entrepreneurs, and Nigerian Directors of the foreign oil service companies can make a vital contribution by pressing for more rapid and effective training of Nigerian technicians and engineers for our oil industry.

In the current adjustment process, the government's pricing policy should be laid on three basic principles. This pricing policy should be sufficient to allow the corporation to cover its production and delivery costs; should encourage efficient

inter-fuel competition in the energy market; and should be allowed to perform its allocative function. Taxes and direct income transfer in contrast to price subsidies are more appropriate for the latter objective (Iwayemi; 1991b).

Moreso, the fragmented institutional framework for energy and oil decision making needs overhaul in the more liberalized energy industry. A pricing regulatory and monitoring agency needs to be established to take care of consumers interest in pricing petroleum products. Indeed, price adjustments are highly desirable but the size and speed of the price change should not underestimate the inflationary and income reduction impact in the economy. A strategy based on a phased or gradual price adjustment over a number of years and consequently implies a lower social and economic cost should be given serious consideration in a depressed economic environment. In otherwords, there should be proper balance of economic and socio-political objectives of the oil pricing policy.

The federal government should stamp out petrol smuggling by visiting the full wrath of the law on the offenders. The special Tribunal (Miscellaneous offenses) decree of 1986 spells out "imprisonment for life" for any person who "without lawful authority or an appropriate license", exports crude oil, petroleum or petroleum product. This decree should be adhered strictly.

In the absence of diversified economy and assuming that the deteriorating world oil market will persist as a result of surplus oil capacity, it is still unwise for Nigeria to leave OPEC. The best policy that we should adopt is to seek a fair deal from OPEC to increase its bargaining power within the framework of the organization. By adopting this policy recommendation, it will demonstrate Nigeria's flexibility and ability to negotiate its problems within the framework of OPEC, which is sensitive to conditions both in the oil market and in the economies of member states. She might try to adopt a more flexible pricing policy not too far removed from OPEC guidelines, but still throwing the Nigerian oil industry's crude a certain degree of competition with other countries.

Aggressive marketing must remain in the key variable in the overall policy strategy. Nigerian crude oil exports can be expanded through a vigorously pursued bilateral oil supply arrangement, either in the form of crude or refined products. The country is well placed to serve a developing market for oil within Africa.

As far as counter trade deals are concerned, Nigeria must fortify herself with legal guidelines. Agreement should reflect the contractual obligations of each party. Furthermore, the subject matter of the transaction is that the goods to be counter traded must be identified and stated in detail. Indeed, there are good prospects for countertrade in Nigeria, but the new thrust has to be in the direction of development-oriented countertrade policy. Thus, Olashore (1985) warned that while it is clear that countertrade remains a beneficial forms of trade in many ways for medium to long-term development projects, it is equally clear that the nation will have to proceed with some element of caution in the short term, since the stakes on the international market has become very high.

Moreso, there is need for establishing a sensitive oil pricing policy. In view of the similarity in the quality of Britain's and Nigeria's light crude oil, the latter should henceforth, relate her prices to those of the former. That is, rather than the Nigeria's unilateral alignment of her oil prices with those of Britain, we would like to see its institutionalization for as long as Britain's North sea oil lasts (Ayodele, 1987).

Apart from enhancing Nigeria's market share, such a policy will likely restore confidence, among the major multinational oil companies in Nigeria's ability to price her oil "properly" and thus encourage them to remain in the country to expand production.

While the current pessimistic market outlook, and the size of Nigeria's external indebtedness (about 34 billion dollars) presents formidable obstacles to any ambitious oil-based downstream export strategy in the medium term, this should not preclude putting in place the elements of such a strategy. In otherwords, there is need for a change in policy emphasis from the existing inward-looking oil-based import substitution strategy, to an export oriented strategy that exploits Nigeria's comparative advantage in oil. A more active downstream export strategy is a key component of such a policy given that several other major oil exporters have successfully embarked on such an approach.

Environmentally, the country's oil policy should be to prevent oil pollution and prohibit discharge. This policy should be accompanied by measures to minimize damage when pollution nevertheless occurs. Thus, there is need for the setting up of a national oil environmental agency with active involvement of all levels of government, the oil companies as well as the Nigeria Navy. This environmental agency should be organized in



such a way that it can respond to oil spills at very short notice. Also, environmental awareness scheme should be introduced in school curriculum at every level of the nation's educational system. Both the NNPC and oil companies should intensify environmental awareness and educational program among the general public.

The NNPC should also support and encourage research among universities and research institutes through grants and provision of research facilities and special provision should be given to inter-disciplinary studies on socio-economic and health aspects of the oil industry in the Nigerian environment. Furthermore, oil marketing companies should be fully involved in petroleum pollution matters and they should set aside a reasonable amount of their resources for environmental protection and monitoring. The administration of the special fund should be depoliticised so as to ensure the promotion and maintenance of sustainable environmental and socio-economic development of the oil producing areas.

For combating pollution from refined petroleum product; substantial improvement in the maintenance and more rational use of transport and other capital equipment, and greater fuel efficiency based on a more comprehensive energy audit in industry suggest feasible short-run oil policy alternatives. Tax concessions and other incentives such as duty-free importation of fuel efficient and environmentally cleaner capital stock to induce greater fuel efficiency based on a more comprehensive energy audit in industry suggest feasible short-run oil policy alternatives. Tax concessions and other incentives such as duty free importation of fuel efficient and environmentally cleaner capital stock to induce greater fuel efficiency, are possible oil policy options (Iwayemi, 1992). Moreover, higher fuel prices which induces lower demand should reduce fuel-related environmental damage. However, it must be recognized that the scope for reduction in the use of polluting energy sources such as oil would be constrained by the rate at which existing capital stock can be replaced with newer and more fuel efficient capital stock. And given the socio-economic condition of our country, we suggest that the government should solicit for technical aid and technology transfer as well as research, development and demonstration in carbon-saving technologies suitable to our country.

The current effort in changing the structure of the oil industry should be sustained. It is intended to be a structure with Nigerian owned firms and smaller foreign-owned companies having established producing operations. Encouraged, the government has already launched its second open licensing round (Quinlan, 1992). Offering the foreign companies increased scope for exploration and production in Nigeria was a difficult ideological step for government to take, after years of nurturing NNPC so that it could eventually take over from the majors. Even more difficult was the decision to allow foreign companies to participate in Nigeria's refining industry. It is at present wholly under the control of NNPC. But the oil ministry is now set on allowing foreign companies to take shares in Nigeria's fifth oil refinery which is envisaged as an export-oriented facility. This is aimed at bringing the international contracting companies back in force, after the slack years when many of them closed their bases in Nigeria. We therefore wish that these good efforts are sustained.

In the current decade, if oil demand growth is weakened by environmental legislation (petroleum product and carbon tax), by anti-oil fiscal policies and by the lower economic growth that this would almost certainly entail; then oil prices could come under pressure and thereby hindering the formulation of a stable policy in regard to pricing, production and capacity expansion. But the challenges confronting us are not confined to the upstream sector of the industry. Downstream, an increase in oil demand will entail among other things raising refining capacity and increasing refinery sophistication to meet the demand for lighter and cleaner products.

In conclusion, we cannot expect perfection in trying to handle the whimsical creature that the international oil market has been allowed to become. Other countries also have their hands on the leash. This is right, because we are all in the market together. Moreover, in the oil policy formulation process, we have to take into account bankers, equipment manufacturers, other energy producers and international organizations whose decisions and participation have a great impact on oil industry and who together with us, want to see clear targets and to minimize risks.

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## APPENDIX

### Chronological Review of Some Highlights of the Petroleum Industry in Nigeria, 1908-1979

1908: Nigeria Bitumen Co. Ltd and British Colomal Petroleum Company started to search for hydrocarbons in the Okitipupa Regions 55 miles cast of Lagos. Bitumenous shows encountered and at least one well today stands with heavy oil to the surface

1914: Nigerian Bitumen Co.Ltd abandoned venture because of World War I

1937: Shell/D' Arcy exploration parties established marking the real beginning of exploration for hydrocarbons.

1938: She/D'Arcy obtained from the Colonial Government of Nigeria in November 1938 an Oil Exploration License covering the whole of Nigeria. Some six core holes had been drilled by the beginning of World War II.

1941: Exploration suspended because of World War II which had started in September 1939

1946: In September 1946 two geological parties resumed work.

1948: The first geophysical crews started work in Nigeria, concentrating mainly from 1948 to 1953 on gravity work and from 1948 on wards on seismic work.

1949: By this date the decision had been taken to concentrate prospecting in the southern part of Nigeria.

1951: Shell/D'Arcy reduced their Oil Exploration License from the whole of Nigeria to 58,00 square miles in the southern part of Nigeria extending from Dahomey to Cameroon.

1951: By 26 September 1951 the first exploration well Ihuo-1 had been spaded by Shell-Bp at Ihuo, some 10 miles northeast of Owerri. This was dry hole drilled to 11228 ft and completed and abandoned 20 October 1952. It was started in the in the tertiary and completed in the Cretaceous.

1951: From 1937 to 1951 the Geological Survey of Nigeria was principally in charge of theconduct of the search for hydrocarbons. From 1957 the Mines Division became more and more active.

1952: The Mineral Oils Ordinance was enacted. The safety regulations were administered by the Inspectors of Mines of the Mines Department of the Federal Ministry of Mines and Power until 1959.

1952: Amansiodu-1 spudded in by Shell-Bp 15 December, 1952 was completed and abandoned 20 October 1953. This well tested low pressure gas at three horizons from the Cretaceous Otobi Sandstones. The well was bottomed in the Agbam Sandstone.

1953: First oil show encountered in Akata-1

1955: By mid-1955 some 15 wells had been drilled. Oil and gas had been tested in some of these but prospects all appeared marginally commercial.

1956: Oloibiri-1 was spudded on 3 August 1955 and was completed 5 June 1956 as a commercial oil well. This well produced from Tertiary Sediments. Fifteen wells were drilled around this discovery within the next two years so making Oloibiri, Nigeria's first commercial oil field. By this time the decision had been taken by Shell-Bp to concentrate efforts on exploring the Cenozoic rocks; these they considered a better than the Cretaceous rocks.

Mobil Exploration Nigeria Ltd obtained an exploration license covering 281 782 square miles for all the abandoned Shell/D'Arcy acreage mainly in the northern margin but including that portion of what was then British Cameroon.

1956: 30 April 1956. The name Shell/D'Arcy Petroleum Development Company of Nigeria was changed to Shell-Bp Petroleum Development Company of Nigeria Ltd to make the British Petroleum's Company share in operations clear. This was done mainly for public relations reasons.

1957: Mobil Nigerian concentrated part of their exploration effort in Sokoto, northwestern Nigeria and took out a concession covering 12700 square miles. Geological and seismic work were completed. Mobil pulled out because seismic work proved shallow basement and few structures. They followed Shell into the delta and coastal area. Mobil obtained an exploration license in Western Nigeria covering about 4000 square miles and covering the coastal sedimentary area extending from the Dahomey frontier to a line about 50 miles east of Lagos. Four wells were drilled eventually but the area so far has proved dry and was abandoned by Mobil.

Afam-4 (TD 10207 ft) was spudded on 6 September 1956 and was completed as a commercial oil well on 8 December 1956. This well situated 21 miles east of Port Harcourt proved oil gas in the Cenozoic.

1958: Bomu-1 (TD 10 269 ft) was spudded on 23 February 1958 and completed as a commercial oil well on 8 May 1958. By mid-1958 Shell-Bp had seven seismic parties and eight drilling rigs operational investigating mainly the Cenozoic prospects of the Niger Delta.

Crude oil exports started from Nigeria via Port Harcourt which was fed by two pipelines from Oloibiri (8 inch) and Afam (6 inch). Port Harcourt is on the Bonny River and sea going tankers were topped up by a lightening tanker outside the Bonny Bar. In February 1958 some 5000 bd were exported. The first in February 1958 in the Shell tanker "Hemifusus". With the start of oil production and export in February 1958 the Mines Division took on the additional responsibility of checking the production of royalty figures.

1958: The decision was taken to form a separate Petroleum Division of the Federal Mines and Power. About this time the growth fault-rollover anticline concept was evolved by the Shell-Bp Exploration team. This concept had been developed by research and exploration advances in seismic methods and by argument by analogy with geological conditions then better understood in the Mississippi, Orinoco and other delta complexes. Bomu-1 was completed on 8 May 1958. The Bomu-1 Field became Nigeria's first truly commercial oil

field.

1959: A Nigerian Inspector of Mines (Chief M.O. Feyide, one time Director of Petroleum Resources. FMMP and Nigeria's representative with OPEC) was sent to the Oil Technology Course at Imperial College, London University. An expatriate petroleum engineer, R.K. Dickie was engaged by the Federal Ministry of Mines and Power to take charge of the running of the newly formed Hydrocarbon Section, to arrange for training of Nigerians and to generally advise the Minister on oil matters.

1960: Two Nigerian graduates in physics were sent to the UK to take the post-graduate Oil Technology course at Imperial College and one school leaver was sent to the same institution to take the 3 year undergraduate course in Petroleum Technology. It was decided to educate about eight Nigerian petroleum and chemical engineers by 1968. Practical training for these men was obtained by short attachment to government department dealing with oil matters in Canada and Trinidad and with major international oil companies.

1960: Negotiations were started in 1960 between the Federal Government and a representative of Shell-Bp granted 14 oil-mining leases in the areas covered by 12 oil exploration leases granted in 1955. These leases covered 7975 square miles of the area of 10 licenses still held at the beginning of 1960.

The balance of the Nigerian acreage, including areas previously surrendered was thrown open on payment of premiums assessed by the Nigerian Government's British consultant. Premiums varied from \$10 per square mile to \$500 per square miles in the most promising areas.

Gulf Oil company Eastern Hemisphere Ltd, through its subsidiary GOCON, Gulf Oil Company Nigeria Ltd, was the only applicant for any of this acreage in 1960 and was granted over 1620 square miles as OPL (Oil Production License) No. 29, 1 April 1960 was appointed as the deadline for applications of twelve offshore blocks of 1000 square miles each. Premiums asked were \$500,000 per block. This lease operation was made possible by the regularizing of the position regarding the exploitation of the continental shelf by the United Nations conference on the Law of the Sea in 1958.

Of the 12 offshore blocks offered 10 were applied for and were granted in principle; four to Shell-Bp, two to Gulf, two to Amoseas and two to Mobil. The blocks covered the whole area from Dahomey to the Cross River down to the 100 fathom line. Blocks A and B were not taken up because of allegedly poor prospects.

1960: Tennessee Nigeria Incorporated applied for and were granted a license extending along the coast from the Mobil coastal license to the Shell-Bp license at the head of the delta. OPL, No. 28 covering 1982 square miles was granted in April 1960.

Later Tennessee Oil and Gas or Tenneco as this company became known in Nigeria, applied for OPL 28 and OPL 31 and extended their license to cover the old Mobil area extending to the Dahomey frontier. OPL's 28 and 31 were granted from September 1961 and the old Mobil area from June 1962.

1961: OPL No. 29, granted in principle to Gulf, became effective from 1 December 1961, these blocks were granted in principle because they were subject to substantial premiums and the license terms were under consideration. The companies required tax principles clearing before paying the premiums for the grant of license. These matters were resolved and license were granted from 1 December 1961.

1962: eight of the Shell-BP licenses offered in 1957 expired in January 1962 and the company applied for 32 Oil Mining Licenses (OMI) covering 7330 square miles.

Shell-BP relinquished areas, some 7360 squares miles were offered on premiums determined by the Government's Consultants. Premiums ranged from \$200 per square mile to \$1600 compared with \$10 to \$500 for areas offered in 1960. Some 6418 square miles were allocated, leaving only 945 square miles.

In addition to license granted at this sale to Tenneco and Gulf (OPL 32 and 36), Nigerian AGIP Oil Company Ltd an affiliate of ENI-the Italian Government owned oil company - and Safrap obtained license.

AGIP obtained OPL 34 covering 2031 square miles on 14 June 1962

NB. A special feature of the AGIP agreement was a clause giving the Nigerian government an option to purchase a 30% interest in the development of any oil found by AGIP, the option to be exercised within three months of commercial production being established. SAFRAP obtained OPL 35 on 14 June 1962. In SAFRAP Nigeria Ltd (Societe Anonyme Franaise des Recherches et d' Exploitation de Petrole) had a 50% interest, RAP (Regie Autonome des Petrols) owned 40% and SOGERAP (Societe de Gestion des Participants de la RAP) owned 10%. In SAFRAP and RAP the French Government share amounted to 64% and 100% respectively. In September 1962 the Petroleum Division of the Federal Ministry of Mines and Power was formed from the Hydrocarbon Section of the ;Mines Divisions. The Petroleum Division, headed by the Chief Petroleum Engineer, was charge with the responsibility of administering of the Mineral Oils Act, the petroleum Act and Oil Pipelines Act (NB. The post of Chief Petroleum Engineer was replaced by the Director of Petroleum Resources and the law was replaced largely by Decree 51, Petroleum Decree 1969 and subsequent modifications - see below).

The Petroleum Division is responsible for maintaining a general supervision over, and advising on, the operations of the various Companies engaged in the petroleum industry and, in particular, enforcing safety standards and regulations.

1962: After protracted negotiations between Shell-BP and the Nigerian Government an agreement was finally signed on 25 July, 1962 for the establishment of an oil refinery. The refinery was to have an initial through put of 40,000 b/d and to cost \$10,000.000. The Federal and Regional Governments were to have a 50% financial interest in the refinery and a 50% representations on the Refinery Board. The refinery is sited at Alesa-Eleme, near Port Harcourt. Prior to signing the agreement Shell-BP had formed a refinery company and had cleared, leveled, drained and fenced the site in the 1961-62 dry season.

A total (described as substantial in Federal Mines and Power First Annual Report) of \$4,789495 was spend during the year by exploration companies and the refinery. Rents, royalties, premier and pipelining fees added up to \$8,467,300.0s.0d. (Nigerian). The total was pointed out as an indication of the contribution the oil industry could make to the Nigerian economy by the Ministry. A Chair of Petroleum Geology was established at Ibadan University financed by the Oil Producer's Trade Section Lagos Chamber of Commerce and Industry.

By 1962 petroleum matters in general were controlled by the following Acts of Parliament:

- (a) Petroleum Act (Storage and distribution of products)
- (b) Mineral Oils Act (Search for and Production of Crude Oil and Gas)
- (c) Oil Pipeline Act
- (d) Oil Taxation Act (So-called 50-50 agreement)

These acts were to be administered by the Petroleum Divisions

1963: By the end of 1963, except for the office planned for Warri, the Petroleum Division had been formed and was staffed by four Nigerian engineers, one of whom had been recruited from an oil company. The main function of the section in Lagos was concerned with tank granted 14 June 1974.

Negotiations started with the Ports Authority to deepen the Bonny Channel up to 35 ft so that laden tankers of 35,000 tons could cross the Bonny Bar.

Crude Oil Production: Year ending 31 March 1963 production reached 72,00 b/d with a total annual production of 25,042 bbl. This is to be compared with a production of 2,953,112 bbl for the year 1961-62 Gas Production. Associated gas produced amounted to 18, 159 MMCF equivalent to 50 MMCFD.

Gas deliveries started to Afam Electric Power Generating Station (run by the Electricity Corporation for Nigeria (ECN). By the end of March 1963 ECN had purchased 50.9 MMCF and the industrial estate of Trans-Amadi had purchased 5.3 MMCF

Chief Petroleum Engineer R.K. Dickie proceeded on retirement leave to the UK and chief M.O. Feyide in September 1963 succeeded him as Chief Petroleum Engineer (effective 1 April 1964). Gulf's first exploration well BD-IX, later renamed Okan-1 was spudded offshore in Block C in 30 ft of water. The well was drilled to 913 ft and produced on test 2000 b/d 34 API crude.

1963: Permanent Secretary Federal Ministry of Mines and Power, Alhaji Musa Daggash and

Chief Petroleum Engineer M.O. feyide attended the World Petroleum Congress in Frankfurt. They attended the second consultative meeting of Chief Representatives of the Organization of Petroleum Exploring Countries (OPEC) held in Geneva 1-3 July 1963 as observers.

1964: Crude Oil Production, year ending 31 March 1964 averaged 83 000 b/d and was entirely from Shell-BP's Oil Mining Leases in the eastern part of the delta, net clean oil production amounted to 29,590,000 bbl.

Gas Production: ECN bought 1276 MMCF from the Afam Field for use at their electricity generating station and 143 MMCF were brought by the Eastern Nigeria Development Corporation from the Apará Field for the Trans-Awadi Industrial Estate near Port Harcourt. A team of Canadian experts arrived in Nigeria, at the invitation of the Nigerian Government under terms of Canadian Technical Assistance, to conduct a feasibility survey into the availability and use of natural gas. The total Government take amounted to \$N5018 277. To give some size of the industry the following figures are useful. The Exploration companies employed a total of 3075 persons in various grades and of these 2627 were Nigerians. In the management and professional ranks there were 74 Nigerians directly employed by oil companies; 558 Nigerians held positions as supervisors, skilled artisans, and junior clerical staff. Unskilled labour totaled 1393 (Fed. Min. Mines and Power Statistics; 31 March 1964). Service company personnel were not included. Gulf applied for and were later granted Block B offshore, adjacent to their discovery Block C (Okan field). Shell-BP's first offshore well was spudded on 24 December 1964 in a program to evaluate the offshore permits. This well KC-1 in CSOPL "K" was suspended as an oil well after having been drilled to 10,000 ft.

Shell-BP's local expenditure in 1964 totaled some \$N16. millions of which:

\$N6.3 was paid to Government

\$N5.0 to local contractors

\$N1.2 for locally purchased goods including petroleum and electricity

\$N2.0 wages and salaries

\$N1.8 miscellaneous such as compensation to farmers

Total royalties and rents paid by oil companies to Nigerian Government amounted to \$N18 million.

Late in 1964 Amoseas spudded Pennington-1 in CSOPL "F". This well was suspended as an oil well at 9579 ft TD and was completed in 1964

BP's then owned oil fields to the shipping point at Bonny. The diameter varies from 16 inches to the Uzere-Ughelli section to 24 inches in the Bomu to Bonny sector.

1965: Crude oil production reached 236,000 b/d by the end of March 1965 So making Nigeria the second largest producer in the Commonwealth and the third largest in Africa. Altogether 55 000 000 bbl of net clean oil were produced for the year ending 31 March 1965 representing an 83% increase over the previous year's figures. This was brought about by the completion of additional storage and pipeline facilities. The major increases came from Shell-BP's Imo River, Umuechem. Obigbo North and Bomu fields.

In March 1965 Gulf's Okan Field started production at a rate of 25,000 b/d.

The Nigerian Petroleum Refining Company's Refinery at Alesa-Eleme, some 6 miles east of Port Harcourt was commissioned in October 1965. The main refinery products were premium and regular motor spirit, dual-purpose kerosene, gas oil and fuel oil. Some kerosene was imported to upgrade the refinery products

About 74 MMMCF of gas were produced equivalent to 130 MMCFD. Most of the gas was flared because of small domestic and industrial demand.

A total of 43 million barrels, valued at \$N32 millions, were exported during the calendar year 1964.

Payments made in Nigeria by oil exploration companies amounted to \$N26,067,584 an increase of 73% over previous years.

The Government take for the Nigerian financial year amounted to \$N7,841,506 representing an increase of 60% over the previous 1963-64 financial years.

Esso Exploration Company, a newcomer, was granted two oil prospecting licenses on land.

Amendments were made to the Oil Pipelines Act Cap 145 with effect from 10th November 1965. The amendments are as follows:

(a) the issue of permits to survey and oil pipeline were non longer restricted to oil

exploration companies.

- (b) A permit to survey did not carry an automatic right to an oil pipeline license.
- (c) The term of an oil pipeline license was reduced from a possible 99 years to a maximum of 20 years.
- (d) Annual fees were imposed on oil pipeline license.
- (e) "common carrier" provision were incorporated in the Act.

Phillips Petroleum Company, a newcomer, was granted five exploration licenses on land covering parts of Tennessee's former OPL No. 33. This brought the total number of exploration companies to nine and all except the American companies were incorporated in Nigeria.

Crude oil production reached 347,000 b/d a 47% increase over the previous year.

Maximum production rate was reached in January 1966 when 362,000 b/d were produced. The average production rate for the whole year was 278,000 b/d (Fed. Min. Mines and Power Statistics).

1966: About 112.7 million bb! Were produced in the 12-month period up to 31 March 1966, an increase of 105% over the previous year. This increase in production was brought about by Kokori (8000 b/d), Olomoro (24,000 b/d) and Uzere West (16,000 b/d) in Mid-Western region being connected into the collecting system.

Substantial production increases were recorded at Bomu (81,000 b/d) Imo River (54,000 b/d), Okan (53,000 b/d) Obigbo North (28,000 b/d) and Agbada (14,000 b/d). Figures in brackets are FMMP returns for end March 1966 production rates.

1966: Crude Oil exports, exported during calendar year 1965, worth \$N68 million, a 100% increase over the previous year. A total of \$N32,688,970 was spent in Nigeria by oil exploration companies.

Great Basins Petroleum company was awarded OFL 11 covering some 10,000 square miles in the Cretaceous Bida or Niger Embayment.

Delta Oil Company Limited, a company owned by Mr. Godfrey Amachree a Lagos Lawyer, filed an application for OPL 51 and for offshore acreage between CSOPL block M belonging to Mobile near the Cameroon frontier. This was the first positive show of interest by a Nigerian Company in the Nigerian oil play.

The Baruch Foster Corporation applied for OPL's 49 and 50 in the Cretaceous Niger Embayment.

Esso West Africa was issued with two Oil Exploration Licenses OELs Nos 9 and 10. OEL 9 covers 7721 square miles in the southwestern end of the Benue Depression, Eastern Region. OEL 10 is situated in the Upper Benue Depression, covered 51 209 square miles and included parts of the Gongola and Yola arms of the Benue Depression.

Panoil Company applied for the CS OPLs covering 1500 square miles during 1965.

In April 1966 these applications were transferred to Panoil Nigeria Limited in a joint venture with Cities service Company.

The Income Tax (Amendment) Decree 1966 (Decree No. 65 of 1966) came into force (effective 1 October 1966) and was applied to the petroleum industry by amending the rates of initial annual capital allowances under the Petroleum Profits Tax (Amendment) Decree 1967 (Decree No. 1 1967). In enacting this legislation a so-called OPEC formula was used to increase the government take from petroleum exports. The essential features are:

- (1) setting posted prices in keeping with international postings; and
- (2) basing 50% profits tax and the government royalty on posted prices.

Prior to this Decree according to the previous act, profits were split 50\50 on the basis of realized prices and royalty was "expensed".

The new decree was brought in because of Libyan increases and the "most favored nation clauses" (referring to other activities of companies in Africa) which were included in Nigerian concession agreements.

Total Government take amounted to \$N14,587,517, an increase of 81% over the previous year.

Six tanks with about 365,000 bbl net storage were completed at Bonny Terminal, so bringing the capacity up to 4,633,000 bbl.



1966: On 15 January a military coup was implemented in Kaduna, Ibadan and Lagos. The Sardauna and Chief Akintola were killed immediately. Then the Federal Prime Minister Sir Abubakar Tafawa Balewa and Chief Festus Okotie-Eboh, the Federal Finance Minister were subsequently kidnapped and killed.

17 January, Major General Ironsi assumed power, suspended the Constitution and established a Military Government.

Discontent in the North finally exploded into Anti-Ibo Riots on 29 May. This among other things started the Ibo retreat into their heartland-so-called "Biafara".

1 August, Col. Yakubu Gowon, a Northern Christian, became Head of Government and Supreme Commander.

1967: About 117 MMMCF of gas were produced during the year, a 16.7% increase over the previous year. Only small quantities of gas were used in oil field operations or sold to the Electricity Corporation of Nigeria or to industries near Aba and Port Harcourt. Some 93% or about 109,269 MMCF were flared.

First Cretaceous oil discovery by Safrap in Anambra River-1, oil came from several zones of Late Cretaceous age. Because of the "crisis" or "Civil War" or "War of Biafran Independence" or whatever title you wish to apply dependent on your view point, virtually all activities of oil companies ceased in the Eastern States and for a brief period in the Mid-West. Operations had ceased by July 1967 in all three Eastern States.

Union Oil Company of Nigeria were granted CSOPLA on 17 April 1967.

Alesa-Elleme refinery and the Bonny Terminal were no longer accessible to the Federal Authorities. The Bonny Terminal was closed in July 1967 with a reduction in export volume from 550,000 b/d to about 55,000 b/d produce mainly from Nigerian Gulf Oil Company's Offshore Okan field. The Petroleum Control Decree 1967 (Decree No. 28 of 1967) took effect from 3 July 1967 and conferred on the Commissioner for Mines and Power, powers to deal with situations which might arise in connection with the importation, storage and distribution of petroleum products. The Commissioner was also empowered to fix retail prices for petroleum products.

"The Petroleum Regulations 1967" were made with effect from 8 March 1967 and included the following:

- (1) The revocation of the Petroleum Regulations (Regulation 27 of 1928).
- (2) Provision for the safe handling of the petroleum products in line with modern technological developments.
- (3) The inclusion of safety precautions in the handling of liquefied petroleum gases.
- (4) Clarification of procedures for making applications for bulk installations and underground storage of petroleum products in the Federal Territory of Lagos.

By March 1967 the staff of the Petroleum Division (9 officers) had been reduced by one third compared with the beginning of the year. This took place because the Eastern Nigeria Government gave instructions in October 1966 that all persons of non-Eastern Nigeria origin should leave the Eastern Region.

May 1967 average daily production of 580,000 b/d was the highest for any month previous. Mobil Exploration moved its onshore bases to the island of Fernando Po and continued to explore CSOPL Blocks L and M.

Oil company personnel, moved out of the Eastern States to the mid-Western State in July 1967, were again moved from the mid-West between August and October 1967 when this state was over-run by Biafran or "rebel" forces. Oil companies moved back into Mid-West in October 1967 after the state had been liberated by Federal Forces.

Out of the 28 rigs active during the year only 9 were active at the end of the year. Crude oil production was normal in April, May and June 1967.

1967: Early in July 1967 tanker movements to Bonny Terminal were restricted by the emergency regulations. Shell-BP production dropped from 490,000 b/d (average April, May and June) to 86,000 b/d in July. Sarap's production dropped from 40,000 b/d (April to June) to 7500 b/d in July to 3000 b/d for the remainder of the year.

Great Basins Petroleum Company entered the Nigerian oil scene making a total of ten companies prospecting for oil during the year.

By the end of 1967 some 3252 Nigerians and 640 non-Nigerians were employed by the oil industry in Nigeria; some sixteen Nigerians were reported as occupying managerial

posts.

Also giving some indication of the size of the industry and its impact on the Nigerian economy is the figure of \$65 million (twice previous year's) spent in Nigeria by oil companies.

The Government take reached \$21,578,000.

The question of the numbers of marketing companies operating in Nigeria was raised officially in public for the first time.

Philips found oil at its first try in Gilli-Gilli-1

1967: The Federal military Government in 1967 decreed the formation of twelve states out of the four existing regions of Nigeria. There had been five regions originally but one had become part of the Republic of Cameroon.

From 1967 to 1970 the former Eastern Region, attempted to secede from the Federation as then constituted under the Lagos centered military government. Certainly control of the revenues from burgeoning oil industry activities in the southern and south eastern part of the country were involved in the decision to secede. This act resulted in the so-called Biafran War, with France playing a selfish part in helping the Ibos, the main tribe involved in the oil grab, with a view to France getting a stronger hold on Nigeria's Delta Oil Province, then largely under control of British and Dutch interests. The "Civil War" or Biafran War" Dependent on whose side you take, lasted for two and a half years. The Biafrans almost succeeded in getting within striking distance of a strategic cross roads near Ijebu-Ode within a few miles of the Capital Lagos, having over-run the whole of the Niger Delta Oil Province. Eventually they were convincingly beaten by the Federal Government Army and the Biafran leader Colonel Ojukwu fled the country to live in exile. At the end of the war the twelve state structure decreed in 1967 became a reality. The Federal Military Government continued in power until October 1979.

The Federal Military Government consists essentially of two parts: The supreme Military Council consisting of commander in chief. Chiefs of Staff, Heads of the Armed Forces. Military Governors of the individual twelve states and Police Chiefs; and the Federal Executive Council consisting of the Commander in Chief and Military and Civilian Members.

Power clearly resided with the military establishment but the principal civilian members of the Executive Council held responsibilities as Commissioners (Secretaries) and Permanent Secretaries (Permanent under-Secretaries) of the various Departments of the Federal Government. The government body primarily concerned with oil and gas in Nigeria was the Federal Ministry of Mines and Power now the Ministry of Petroleum Resources. Its former Chief Petroleum Engineer Chief M.O. Feyide became Secretary General of OPEC.

1968: Total volume of clean oil produced 1967 and 1968 (end 31 March) was 69.8 million bbl representing about one third previous year's production.

Oil exploration companies spent in Nigeria about two thirds (\$45 million) of what they spent in the preceding year. The first formal change in France's attitude to the "rebellion" was announced in July 1968 when the French Cabinet announced "France believed that the Nigerian conflict should be resolved on the basis of the right of people to self determination" and went on to suggest that their tenacity justified diplomatic recognition. This attitude cost France subsequently and certainly prevented Safrap's early return to Nigeria.

The British Government, United States Government formally and actually supported the Federal side.

The war continued through 1968 and the Biafrans or "rebels" were slowly encircled and by mid year Onitsha, Ikot Ekpene, Abakaliki, most of the River State including Port Harcourt has been liberated.

Throughout 1968 the Federal Government offered the Biafrans many opportunities to end the fighting if they would renounce secession and recognize the 12 states.

On 1 April 1968 the 12 new states erected by decree on 27 May 1967 came into administrative existence.

Delta Oil (Nigeria) Limited, the first "indigenous" company to enter the field of exploration, was granted OPL 51 on 15 January 1968.

During the period 1967-68 some 580 Nigerian and 791 non-Nigerians were employed

in the oil industry (Excluding service companies).

Port Harcourt was retaken by Federal troops in May 1968 and most of the River State came under Federal control soon after.

1968: During 1968 apart from Mobil's exploration activities conducted from Fernando Po, all exploration activities were confined to the Mid-Western States with 13 rigs operational at the end of March 1968 or offshore where Gulf continued to produce. Gulf added to production Okan Field and Delta South by bringing in Delta in August 1968, Meren in November 1968.

Shell-BP re-entered some of their former fields and after some repairs were able to use some of the capacity of the Bonny Terminal.

As a result of Shell-BP bringing in some of the East and Mid-West fields back into production, the rate of production rose from 79,350 b/d (mainly from Gulf's offshore fields which produced all during the war) to 576,376 b/d at the end of 1969. This was a truly remarkable recovery. The Nigerian Petroleum Refining Company sent a team headed by George Wimpey Limited to survey the refinery damage at Ales-Aleme and to plan rehabilitation. The Petroleum Control (Amendment) Decree of 1968 (Decree No.15) was enacted. This decree amended the definition of petroleum in section 11 (2) of the petroleum Decree No. 28 of 1967 to include petroleum products of any description. The decree took effect from 13 July 1967. Oil in Navigable Waters Decree (Decree No. 34 of 1968) was enacted. This decree, inter alia, defines where ballast may be discharged, who shall have responsibility for ensuring that harbours and coastlines of Nigeria are kept oil free and prescribes appropriate penalties for pollution.

The Companies Decree 1968 (Decree No. 51 of 1968) was enacted by the Federal Military Government and Part X of this decree took effect from 18 November (other parts took effect from 1 October 1968) stipulated that all foreign companies should be incorporated as domestic companies before commencing business and that a company already operating in the Nigeria was deemed to have been incorporated under the Decree as a separate entity from the company incorporated outside Nigeria in whose name a place of business in Nigeria was established. Every company so incorporated in Nigeria must have as part of its name (unless already therein) the word Nigeria. There was considerable opposition to this law especially by American companies because of State-side tax benefits. Most however re-incorporated because of the decree.

1969: By January 1969 the rebel army was confined to a small area (4000 square miles) around Umuahia into which hundreds of thousands of refugees had fled. By this time the "Republic of Biafran" had been recognized by Tanzania, Zambia, Gabon and the Ivory Coast but at the September OAU Conference at Algiers, a resolution was passed confirming the whole-hearted support of the majority of African states for the Federal Military Government. The new Forcados Tanker Terminal in the Mid-West Region was scheduled to be put into operation in July 1969 to augment Bonny. The Forcados Terminal was designed for 200,000 dwt tankers and upwards. Two single point buoy moorings are situated 12 miles offshore.

In March the Commissioner for Economic Development, Alhaji Yahaya Gussau, at the University of Ibadan Economic Reconstruction Conference stated that oil, or the hope of it, had been one of the major reasons for Biafran secession.

1969: Major "General" or "Lt. Colonel" Ojukwu announced that "Biafran" would henceforth aim to cripple the oil industry which he said was enabling Federal Nigeria to prosecute the war.

The total amount of gas produced (end March 1969) was about 83 x 10' cubic ft and most of this had to be flared. About \$32 million was spent in Nigeria by oil exploration companies; about \$15 million less than the previous year. Total Government Take (end March 1969) amounted to about \$14million.

At 1 October 1969 the pipeline networks of the Nigerian Oil Fields had a total length of 750 miles.

In May 1969 oil company personnel belonging to Nigerian AGIP were tragically killed in the Kwale area by "Biafran" forces. This adversely affected exploration and drilling activities especially in the Mid-West. Mainly because of this and continued "rebel" air attacks only ten rigs were active and three seismic parties were active in the field. Industry estimates for total work force employed in Nigeria by all companies,

service companies and contractors range between 8000 - 10000 persons.

Petroleum Decree 1969 (Decree No. 15) was published in the Supplement to the Official Gazette No. 62, Vol. 56, 27 November 1969, Part A. This useful decree codified most of the scattered and sometimes ambiguous regulations appertaining to hydrocarbons in Nigeria.

The Oil Terminal Dues Decree 1969 (Decree N0.9 of 1969) enabled the Government to control the construction of oil terminals offshore and to charge fees in respect of the loading of oil tankers which call at any such terminals. The main features of this decree are:

- (1) The provision that only a concession holder who has receive the written approval of the Commissioner for Mines and Power can install an oil terminal, the establishment of which must be notified in the Official Gazette.
- (2) The payment of oil terminal dues as prescribed by the Commissioner for Transport.
- (3) The vesting of powers in Commissioner for Transport to make regulations for the provision of services and navigational aids, maintenance control and management of oil terminals. This decree like the Companies Decree of 1968 (No. 51 of 1968) engendered a lot of hard feeling, especially with some companies.

1970: In January 1970 the war between the Federal Government and the Government of the Eastern Region - the Civil War or the biafran War (dependent on view point) ended. War damage was quickly repaired and there was a dramatic increase in production and a "return to normalcy". Production reached 1 million b/d in late April with the six months average over 900,000 b/d.

Bidding was opened between 26 February and 18 March on about 7000 square miles of the continental shelf. Twenty seven blocks were offered composed of areas relinquished according to leasing regulations 30 November 1968 plus additional deeper water acreage up to the 200 fathom line on the outer shelf.

The minimum terms and conditions included:

- (1) A premium of \$N500,000 payable within 30 days of notification of each granted block, except for blocks 72, 92 and 96 on which the premium is \$N300,000 and block 89 on which the premium is \$N50,000.
- (2) Five years duration of lease
- (3) Government participation in each new lease
- (4) The Government reserves the right to purchase up to 12 1/2% of the crude oil production or its total requirements for internal consumption, whichever is higher, at well head value, less agreed discounts.
- (5) All unused associated natural gas reserved free of charge for the Government.
- (6) "Unassociated gas" may not be produced without the permission in writing of the Commissioner.
- (7) The applicant must be willing to give "educational premiums" to the Petroleum Technology Section at the University of Ibadan.
- (8) Sundry additional benefits were required (see below for full details).

1970: A total of 106 applications from 30 oil companies or groups were made for these CSOPLs. In July, Newcomers to Nigeria were offered blocks. Only 15 blocks were offered covering only half of the open area.

The remaining blocks said to be the most prospective, were reserved for the proposed national oil company.

Deminiex (German Consortium) received four blocks, Occidental (Four blocks), Japan Petroleum Company (four blocks); Monsanto (two blocks), and H.V. Stevens and Westates (Block 89).

Although the blocks were offered the companies were slow to take them up. The deep water in many cases was the main reasons for slowness in taking up the blocks offered and worries about availability of good reservoir sands. General Gowan visited Algiers seeking advice and guidance on oil matters especially on the setting up of a national oil company.

September 1970 was given as the date for the formation of a new national oil company.

September. Shell-BP increased their Nigerian posted price by 0.25 US cents from \$2.17 to \$2.42 per barrel so bringing it into line with Libya and Iraq.

By September Occidental was rumoured to be the only company to have signed the July offer by the Nigerian Government of CSOPLs.

On 11 November 1970 a new Four Year Nigerian Economic Development Plan was announced in Lagos with the plan calling for at least 50% participation in all new ventures in the petroleum field. However, the status quo with established oil companies was to remain the same. The Four Year Development Plan officially announced the formation of a Nigerian State Oil Corporation. This corporation among other things would operate the offshore blocks reserved for the state in the previous round of leasing.

By November, following the increase in the Shell-BP posted price, all other companies producing in Nigeria offered the same 0.25 per cent increase etc.

By the end of 1970 the Government was asking for a review of Taxation with the companies.

Pan Ocean Oil Corporation joined Delta Oil in a farm-out agreement covering OPLS 51 and 71.

Mobil announced that the 24 and 28 inch pipe required for its Idoho-?Qua Ibo subsea line was to be delivered by British Steel Corporation by the end of the year.

Mobil started production on 15 February 1970 producing 8321 bbl during February.

Gulf's average production exceeded a quarter of a million b/d standing at 260 216 b/d in November 1970.

Texaco commenced production on 1 March 1970 and was joined by AGIP in December 1970.

1971: In 1971 oil exports accounted for 55% of Nigeria's foreign exchange earnings and the total Government Take from oil was said to be \$N250 million, (\$75 Billion). Lagos Government in late 1971 announced its intention to start negotiations to offset dollar devaluation.

The Offshore Oil Revenues Decree 1971 was passed by the Federal Military Government vesting all offshore oil revenues and ownership of the territorial waters and the continental shelf in the Federal Military Government. Details of this Decree No. 9 of 1971 are given below.

Also in 1971 taking effect from 1 April 1971 the Nigerian National Oil Corporation generally referred to as NNOC was incorporated. Details of this Decree No. 18 of 1971 are given below.

Nigerian National Oil Corporation (NNOC) in April acquired a 35% interest in Safraps (French) four onshore OMLs. This stake included the Obagi Field which was then producing at the rate of 40 000 b/d. NNOC's share rises to 50% maximum when production reaches a level of 400 000 b/d. The bargain is said to have been driven in exchange for allowing Safraps to operate again in Federal Nigeria after France's outspoken and actual support of the "rebel" Biafran regime.

In September 1971 Nigerian acquired a one third interest in AGIP's Nigerian subsidiary and in the four AGIP/Philips onshore licenses areas where production is about 40 000 b/d. AGIP's original agreement provided for a government option. On 23 April negotiations were concluded between the Federal Military Government and Shell-BP Development Company of Nigeria increasing the posted price for Nigerian 34 API crude to \$3.21 per barrel. This represented an increase in 85. U.S cents over the basic posted price of \$2.36 (net of \$0.06 harbour and terminal dues) fixed in September 1970 (Details are given below). This agreement also provided for inflation and a sulphur premium and the tax rate was increased from 50 to 55%. The royalty will be paid on the full posted price applicable to the gravity of the crude.

1971: Nigeria became the eleventh member of OPEC.

Dr. R.A.B. Dikko retired from the post of Federal Commissioner for mines and Power to take over the Transport Sector. Alhaji Shettima Ali Monguno succeeded Dr. Dikko as Commissioner for Mines and Power.

The large onshore areas held by Great Basins Petroleum Company in the Cretaceous Bida basin or Niger Embayment were relinquished. No wells had been drilled and no seismic had been run in these areas.

In May 1971 Safrap restarted production producing 36 000 b/d in May.

This year saw zealous enforcement of Decree 51 of 1969 regulations concerning "Nigerianization" in an attempt to control its own oil industry.

France was rumoured to have advanced \$20 million for aid including refining and petrochemical installation.

Co-operation agreements were signed with Rumania for technical assistance and with the

Soviets (USSR) who undertook to make an extensive mineral survey as well . It was said that they were willing to provide \$N225 000 towards the establishments of a \$N900 000 petroleum institute at Warri in the Mid West.

1972: The Federal Ministry of Information announced that the Nigerian Government and the Guadalupe Gas Corporation of Houston. Texas has established a company to extract and export LP gas. The government stake is said to be 60% and that of Guadalupe 40% and the plant was to be built at Port Harcourt. A source for the Government-Guadalupe gas was not identified and both Shell-BP and Nigerian Gulf are reported to have been examining the possibilities of exporting liquefied gas.

1972: On 15 February 1972 the Nigerian Government issued an official statement stating:

- (1) The Nigerian National Oil Company (NNOC) has been assigned all areas not covered by present licenses and all areas which will be relinquished in future.
- (2) No further leases will be granted to any company.
- (3) NNOC can select minority partners.
- (4) All application for licenses pending are canceled.

The last offshore leases were awarded to H.L. Stevens, and to Monsanto as exceptions, after the above mentioned statement had been issued.

On 9, 10 and 11 March Mr. Philip Asiudu, Permanent Secretary, Federal Ministry of Mines and Power, wrote a series of articles for the Lagos Daily Times spelling out what he meant (and presumably the Government) by indigenous control of the oil industry; how to implement the indigenization of the Oil Industry in Nigeria; and how Nigeria could control her oil resources for economic progress and political unity. Essentially he put a socialist point of view "The important things is not to create Nigerian Millionaires, as it were by mere designation through the Government handing over concessions to what necessarily must be only a handful of people with no defensible criteria of previous oil industry experience but to enable Nigerian geologist, geophysicists, engineers and others to do the exploration for and production of our oil".

In May 1972 the Nigerian Government increased its share by 10% to 60% in the Nigerian Petroleum Refining Company. Shell and BP hold 20% each so giving the Nigerian Government a clear majority holding.

The Japan Petroleum Company entered the exploration field. Provisional industry statistics (OPTs Lagos Chamber of Commerce and Industry) for November 1972.

NOVEMBER 1971 B/D

Gulf	350 371	306 514
Shell-BP	1 238 000	1 194 772
Mobil	181 000	88 744
Agip/Phillips	61 000	40 818
Texaco	9 507	12 068
Safrap	60 715	37 820
	1 901 325	1 680 736

1972: NOVEMBER: THE OPEC MEETING IN LAGOS WAS OPENED BY GENERAL YAKUBU GOWAN.

1973: Ashland Oil (Nigeria) entered the Nigerian Oil scene despite the setting up of the Nigerian National Oil Company. They signed a production sharing contract with the government for 2 prospecting licenses covering onshore and offshore acreage.

1973: Deminex acquired half of Occidental's 49% interest (51% government) in 4 offshore blocks (OPLs 85, 87, 88, 90) totaling 1115 square miles in which 2 oil discoveries were reported in 1972.

1973: A total of 24 wildcat discoveries was listed during 1973 giving an overall success ratio of 53%. Notable among these were Pan-Ocean-Delta's onshore Ogharafe-1 North-West Niger Delta and Japan Petroleum's Offshore Obe-1 the most westerly oil discovered in Nigeria to date

1973: Twenty five rigs were drilling at the year's end and development totaled 912 969ft, an increase of 64 979 ft in 1972.

1973: Twelve new onshore fields were brought into production in 1973 bringing the total number of producing fields to 87.

1973 Average production for 1973 attained 2 054, 932 b/d an increase on 1972 of 12.7%

1974 Substantial relinquishment of offshore acreage were made by Occidental, Deminex and Japan Petroleum and onshore acreage by Shell-BP. Most of the acreage relinquished in the offshore was in deeper water and probably had poor reservoir characteristics.

1974 By the end of 1974 the Nigerian National Oil Corporation had acquired a 55% equity interest in all producing companies in Nigeria.

1974 SAFRAP because of historical associations associated with the Civil War, among other reasons, changed its name to ELF Nigeria.

1974 Exploration activity continued at a high level with a total of 94.4 party months of seismic work completed of which 11.5 were offshore.

1974 Twenty three exploratory discoveries were reported in 1974.

1974 The success ration declined to 45%, an 8% decrease on 1973.

1974 Exploratory drilling totaled 1 952 400ft and 28 rigs were active on both exploration and development at year-end.

1975 Occidental relinquished its last offshore license.

1975 Seismic surveys constituted the only exploration activity as in 1974. Some 50.2 party months were recorded, 47% less than in 1974. Most of the seismic work was done onshore.

1975 Drilling activity decreased 23%. The success ratio was 45% (same as 1974). Thirty wildcats were drilled and 15 were successful.

1975 At the year end 21 rigs were active in Nigeria. Exploration drilling totaled 417 707 ft.

1975 Production decline 25% on 1974 to 1 784 693 b/d despite the fact that 13 fields started or resumed production. The decrease was said to be due to marketing difficulties.

1976 Occidental's release of acreage officially accepted.

1976 Shell released 12 000 sq km onshore officially accepted.

1976 Pan Ocean converted OPL 71 into OML 98 (for production).

1976 Deminex are said to have applied for release of OPL 76 and 80 and for an extension of 2 years of OPL 79

1976 June. Daily average production climbed to 2 074 586 b/d from 1870 b/d in January.

1976 Five offshore drilling units active during first half of 1976.

1976 Final quarter of the year registered daily average of 2.16 x 16 b/d.

1976 Nigerian crude currently sold at 12.75 per barrel and production stood at 1.9 x 10 b/d

1976 August. Nigerian National Oil Company found oil in its first offshore well about 10 miles off the Opopo Coast off the Cross River area.

1976 Nigerian crude oil production reached a record of 2.2 x 10<sup>6</sup> b/d but exploration and development had declined compared with previous years. The governments periodic imposition of production limits and price increases on output by foreign owned operators had the effect of shutting down on new capital investments.

1976 Wildcat drilling activity decreased by 35%; 21 wildcats were drilled of which 12 were successful.

1976 Production reached 2 071 618 b/d some 16% greater than in 1975.

1976 Nigeria's principle imports were:

	%		%
	TOTAL		TOTAL
Machinery (non-electric)	16	Food	9
Iron and Steel	12	Machinery (Electrical)	7
Motor Vehicles	12	Textiles	6
Chemicals	11		

The main source of imports were United Kingdom 23% West Germany 15%; United States 12%; Japan 6% and France 7%.

Nigeria's main exports (1976) were:

	%TOTAL
Crude Oil	91
Cocoa	3
Palm Oil and nuts	1
Others (Tin, Hardwoods, etc)	5

The main destinations of exports (1976) were United States 27%; United Kingdom 17%; Netherlands 14%; France 10% and West Germany 7%. (Source the Economist 1976)

The main ports are Lagos and Port Harcourt. Lagos besides being a major ports is the Federal Capital; however because of the problems of overcrowding (population - 1 million) congestion, physical limits to expansion (Lagos is built on islands in a swamp) the decision was taken to build a new capital in a more central location.

1976 Nigeria's armed forces at the end of 1976 were thought to number around 250 000 which outside Egypt made the Nigeria forces the second largest standing force in Africa. At the start of the "Civil War" in July 1967 the army consisted of around 20 000 men.

General Gowon's failure to come to grips with the problems of reducing the armed forces was certainly contributed to his downfall.

General Murtala Mohammed who took over in July 1975 lost his life in an attempted coup by Lt. Col. Dimka in February 1976. This coup among other things had its basis in an army demobilization dispute. Murtala Mohammed's Military Government immediately after taking power declared its commitment to return to a democratically elected civilian Government. The nineteenth anniversary of independence, 1 October 1979, was named as the date for handover to civilian rule and this promise was held to.

Committees on increasing the number of states in the Nigerian Federation to nineteen and on the constitution were set up. The new states were created in April 1976 so bringing the total to 19 (Figure 1).

1977 The Nigerian National Petroleum Corporation (NNPC) was officially created on 28 April 1977 to replace the Nigerian National Oil Corporation and the former Federal Ministry of Petroleum Resources to combine the functions of both organizations. An independent Petroleum Inspectorate was set up to enforce regulatory procedures.

The Nigerian Government discussed with Shell-BP and AGIP groups the possibility of laying pipelines to collect "vast gas reserves" and to build two 1 billion cfd LNG plants so that gas could be exported.

The Nigerian national Petroleum Corporation paid about \$71.8 million for equity ownership in offshore producing properties of Texaco Inc. and Standard Oil of California Nigerian subsidiaries. This acquisition covered the fields of North Apo, Pennington. And Middleton which were then producing about 55 000 b/d. Texaco were to continue as operator.

1977 in 1977 of all the non-producing companies that had drilled in Nigeria's offshore, only the Japanese Nigeria Oil Company was still drilling and they eventually released interests in 1977.

Deminex (West Germany) suspended its oil operations in Nigeria early in 1977.

Field drilling decreased during the year to 270 350 metres from 342 000 metres in 1976 and five different operators were working in 44 different fields or discoveries areas

New incentives to encourage hydrocarbon exploration were introduced. These "Fiscal" incentives to Oil Companies took five forms: Exploration incentives. Petroleum Profit Tax Modification. Royalty Rate Modification. Enhanced Annual Allowance and Investment Tax Credit Royalty.

1977 According to "The Economists World in Figures 1976" the 1973, 74 Gross Domestic Product (GDP) was Naira  $8.9 \times 10$  or  $13.5 \times 10$  pounds. The Financial Times 14 February 1977. however, put the 1974 GDP at  $14 \times 10$  Naira figure which approached that of South Africa and which is more than twice that of any developing country in Africa.

1977 AGIP, ELF, Gulf and Shell-BP continued to explore giving a total of 36.53 party months of seismic survey. This figure was slightly lower than in 1976 and even lower than in 1975. Wildcat well success rate was 12% less than in 1976.

1977 Reserves stood at around  $0.4 \times 10$  Naira (\$1 sterling = 1.176 Naira Feb. 1977) in early 1977 and it was clear that most of Nigeria's planned developments would have to be financed from capital raised overseas. Some of these are large and schemes such as the Shell-BP - Government liquefied natural gas plants (the first of two planned) upon which outline agreements were then said to have been signed could only be financed from borrowings outside Nigeria. The estimated cost for the liquefied natural gas. An obvious revenue producer, was put at between  $2-3 \times 10$  naira. Nigeria has large reserves of natural gas.

Many other schemes were planned including an iron and steel complex located near the confluence of the Benue and Niger near Lokoja but quite clearly with oil prices standing as they were after the Qatar OPEC Meeting 1976. Production of  $2 \times 10^9$  barrels of oil per day was insufficient to meet all the Nigerian Government's plans and aspirations. Such is the predicament of a newly emergent major oil producing nation with



a large population and aspirations to develop and industrialize.

1977 Affecting foreign investment and development in Nigeria in her government's commitments to "Indigenization" The new Nigerian Enterprise Promotion Decree was published in January 1977. The first decree was promulgated in 1972 for application by 1974 and created two schedules; the first dealing with simple types of business decreed that they were to be wholly owned by Nigerian as the second dealing with much large concerns (brewing, metal box etc.) considered to be of strategic importance were to be owned 40% rule was changed to 60% Nigerian ownership and was to apply to major trading companies such as United Africa Company, John Holt, subsidiary of Lonbro, Leventis and Briscoe (Danish). Indigenization of the petroleum industry had been approached quite separately and procedures were embodied in Nigeria's Petroleum Law.

1978 The Nigerian National Petroleum Corporation commissioned its 100 000 b/d refinery at Warri. These installations were built by Snamprogetti.

The Japan Nigeria Oil Consortium pulled out of Nigeria, having been wildcatting mainly in offshore Nigeria since 1972. Six wells had found oil in six subsea permits but the aggregate of 30 million bbl of estimated reserves was considered insufficient for commercial development.

A refinery was started in the Kaduna area, well away from the producing zone.

1978 NNPC became the most active operator in seismic data acquisition with operations taking place in the Upper Niger Delta, Anambra Basin, Chad basin, the Lower Niger Delta both onshore and offshore. Some exploration extended into the deeper offshore "fringe" areas. Seismic activity increase on 1977 was 67%. The wildcat well success ratio was 63% or 15% higher than in 1977. NNPC drilled 3 wildcats and announced plans to drill 54 explanatory wells with joint partners.

1979 In October 1976 the Military Government, then under General Obasanjo accepted the constitutional committees draft (drawn up under Lagos Lawyer Chief Rotimi Williams) and announced ground rules for local government reform. The draft constitution broke with inherited British tradition and recommended an elected executive President and a two house Federal Congress similar to the American model. The proposed constitution separates executive, legislative and judicial powers. The president and Vice-President must come from separate states and must be elected on a nationwide basis also. A 350 member House of Representative and Senate consisting of five members from each state were proposed. Bills could originate in either House, or from the President.

A Governor and Deputy governor were proposed for each state on a statewide election basis. The State legislature is a single chamber State Assembly with three times the number of Federal House of Representatives men. The constitutional changes envisaged which took place on 1 October 1979 are so fundamental that it was almost like starting again after Independence from British rule.

How these changes would affect oil and gas legislation was not at all clear and uncertainty in the run up period, and until civilian rule had established itself, only acted a deterrent as far as investment and new development plans are concerned.

Nigeria currently is a member of the United Nation; the Organization of African Unity; the British Commonwealth of Nations; OPEC and is an EEC-Acp state. Nigerian takes a hard line view over the Rhodesian and South African problems and is the largest single contributor to OAU Liberation Committee Funds.

1979 Alhaji Shehu Shagari was sworn in on 1 October 1979 as Nigeria's first civilian head of States since 15 January 1966 when the military took over from the chaos of the First Republic.

1979 The population of Nigeria is around 70 million and the GNP expressed on a per capita basis is around N200 (320), which is low by any developing country's standards. The income of the average Nigerian working in the rural areas is on an average per capita basis around 30 - 40 Naira per annum and the average urban worker has an income between 500 - 600 Naira per annum., The greater part of the population lives as small, poor almost subsistence farmers in small nucleated villages or as unskilled manual workers, clerks etc. in small towns. Despite these almost astronomical increases in revenues consequent on the great increase in oil prices of 1973 - 74. the standard of living of the bulk of Nigerians has changed very little since World War II.

1979 The Nigerian Government nationalized all British Petroleum's assets in Nigeria claiming that the British Government approved a swap agreement under which BP stepped up deliveries of North Sea crude in exchange for an equivalent quantity of oil from a non-embargoed source which was supplied to South Africa. BP's interest were held jointly

with Shell in 10 producing fields (Shell operated) plus pipelines, storage and export facilities, a 20% share in the Port Harcourt refinery, and a 60% share in the BP Marketing company in Nigeria.

1979 Nigeria's production was planned to be cut back by 10% from hitherto high records to around 2.15-2.2 x 10<sup>6</sup> b/d through field by field production ceilings. The official reason given was that high production rates could damage reservoirs.

1979 The Nigerian National Petroleum Corporation opened up all unallocated licence areas for oil exploration under "new relationship" terms for foreign oil companies. Some 312 000 sq km (120 463 sq mi) (compared with 178 000 sq mi for total onshore sedimentary basin area). This acreage occurs on the continental shelf and in the deep offshore out to 750m water depth; the Niger Delta Framework, in the Anambra Basin; and in the Bida, Benue, Sokoto and Chad Basins.

1979 Late in the year the Nigerian National Oil Company Corporation announced, under "new relationship" terms, the awards of licenses to AGIP of 3 onshore and 3 offshore blocks who will be joined in exploration of 2 of the offshore blocks by Hispanoil. ELF was awarded 3 near shore blocks (out to water depth 200m) and 3 permits in the Sokoto basin (already abandoned many years ago by Mobil) Crown Central, like Hispanoil, a newcomer to Nigeria was awarded a 1026 sq km offshore tract.

1979 The Nigerian National Oil Corporation in late 1979 announced that it had agreed a draft sales contract with four American Utility Companies for 800 MMCFD natural gas from proposed LNG plants. Discussions were reported to be underway also with potential customers in Europe for the remaining 800 MMCFD gas from the proposed LNG plants.

1980 Nigeria's gas reserves were placed at 75 x 10<sup>12</sup> cu ft by NNPC of which 15 x 10<sup>12</sup> cu ft are said to be associated gas. The Petroleum Economist cited even larger Nigerian estimates of 58 - 73.8 x10<sup>12</sup> cu ft associated gas. Some 200 to MMCFD gas is already being produced and all but one tenth is flared off.

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