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AFRICAN OIL AND GAS SERVICES SECTOR SURVEY**

VOLUME 1 – NIGERIA

**CREATING LOCAL LINKAGES
BY EMPOWERING INDIGENOUS ENTREPRENEURS**



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Research and Publications Group

Calag Capital Limited
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PREFACE

The oil service subsector is the nexus between the oil and gas industry and the Nigerian economy. The sector yields revenues in excess of \$US 8 billion annually. However, only about 10 per cent of this revenue accrues to indigenous companies. In view of this, the Nigerian Government has focused its attention on achieving increased participation of indigenous companies in the oil and gas industry. The Government is pushing for increased local content in the upstream sector through the reallocation of marginal oil fields to indigenous companies and the encouragement of local companies to bid for oil blocks. The Government also plans to increase local content in the oil and gas services sector to 45 per cent by 2010 and to 70 per cent in 2015.

In embarking on this survey, Calag Capital and the United Nations Conference on Trade and Development (UNCTAD) realize the huge potentials in the oil services subsector in particular and the oil and gas sector of the Nigerian economy in general, the challenges facing local oil service firms and the need to ensure that these firms have access to much-needed financing to be able to compete favourably in their markets.

This survey is aimed at providing a clear understanding of the opportunities in the Nigerian oil services subsector. It contains a critical analysis of the nature, dimension and scope of the oilfield services business and attempts to highlight policy, environmental and legal issues.

The survey is divided into three vital parts. The first part seeks to establish the justification of the study. It includes a succinct description of the evolving global oil services business. The second part focuses on a peer-group analysis between the Nigerian oil services subsector and selected oil-producing countries; the opportunities and challenges in the Nigerian deep-water fields, marginal fields and joint development zone are also highlighted. The legal and other dispute-resolution frameworks in the industry are examined in great detail, and the nature, characteristics and opportunities for foreign investments are analysed.

The final part of the survey deals with financing issues, highlighting the various sources, structure, availability and constraints of oil and gas financing in Nigeria. Deliberate attention is paid to the historical development of oil and gas in Nigeria with respect to the industry's challenges and prospects and the country's future targets. The survey also touches on the challenges posed by community relations and environmental degradation and how they affect investment opportunities and decisions. The survey briefly profiles some indigenous oil services companies operating in Nigeria.

This survey will be an invaluable source for stakeholders in the oil industry in Nigeria, regulators and operators in the upstream sector, and foreign and local financial institutions which desire to do business in the Nigerian oil and gas industry or hitherto have not adequately supported the indigenous oil and gas and oil services companies, as well as for universities and research institutes as a major source of research and study material, for environmentalists and legal practitioners as a true reference source, and generally for any party interested in understanding the Nigerian oil and gas sector.

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ABBREVIATIONS AND ACRONYMS

AENR	Agip Energy and Natural Resources Limited
AG	Associated Gas
BBL/D	Billion Barrels Per Day
BCF	Billion Cubic Feet
BCR	Business Community Relation
CAC	Corporate Affairs Commission
CENL	Conoco Energy Nigeria Ltd
CEPNL	Conoco Exploration and Production Nigeria Ltd.
CNL	Chevron Nigeria Limited
DPR	Directorate of Petroleum Resources
E & P	Exploration & Production
EEPNL	Esso Exploration and Production Nigeria Limited
EGASPIN	Environmental Guidelines and Standards For The Petroleum Industry In Nigeria
ELA	Environmental Impact Assessment
FEPA	The Federal Environmental Protection Agency
FPSO	Floating Production Storage & Offloading
ILO	International Labour Organization
JDZ	Joint Development Zone
JOA	Joint Operating Agreements
JVCs	Joint Venture Companies
LNG	Liquefied Natural Gas
MON	Mobil Oil Nigeria
MOU	Memorandum of Understanding
MPN	Mobil Producing Nigeria
NAPIMS	National Petroleum Investment Management Services
NGC	Nigeria Gas Company
NLNG	Nigeria Liquefied Natural Gas Company Ltd
NNDC	Niger Delta Development Commission
NNPC	Nigeria National Petroleum Company
NPDC	Nigeria Petroleum Development Company
OECD	Organization for Economic Cooperation and Development
OEL	Oil Exploration License
OGGS	Offshore Gas Gathering System
OML	Oil Mining Lease
OPEC	Organization of Petroleum Exporting Companies
OPL	Oil Prospecting License
PENL	Philips Exploration Nigeria Ltd
PSC	Production Sharing Contract
SC	Service Contract
SNC	Shell Nigeria Gas
SNEPCO	Shell Nigeria Exploration Production Company
SPDC	Shell Petroleum Development Company
TCF	Trillion Cubic Feet
TOPCON	Texaco Overseas (Nigeria) Petroleum Company Limited

TERMINOLOGY AND CONVERSION FACTORS:

Mcf	Thousand Cubic Feet
MMcf	Million Cubic Feet = 0.0283 million cubic meters
MMcf/d	Million Cubic Feet per day
Bcf	Billion Cubic Feet
Tcf	Trillion Cubic Feet
Bcm/y	Billion Cubic Feet per year
LNG	Liquefied Natural Gas
mt/y	Million tonnes (metric tons) per year (of LNG)
mt of LNG	1.350 billion cubic meters of natural gas
LNG train	Basic LNG and production unit consisting of pre-treatment and liquefaction including refrigerants, compressors, drivers, heat exchangers, and associated facilities (eg steam supply plant); LNG trains are generally 1-2 mt/y and can be operated separately in the same project

LNG tankers are raised in terms of cubic meters of cargo capacity.

“Reserves” are volumes of hydrocarbons proven by drilling, testing, and interpretation of geological, geophysical, and engineering data that are considered to be recoverable using current technology and under present and anticipated economic conditions.

“Resources” are volumes of hydrocarbons expressed at 50% probability of occurrence assessed to be technically recoverable that have not been delineated and have unknown economic viability.

Source: American Petroleum Institute and various.

EXECUTIVE SUMMARY

After more than four decades of oil exploration and production in Nigeria, the country is at an important crossroads in petroleum production. With large new discoveries made in deep and ultra-deep water offshore, the country's production capacity is estimated to increase by about 1 million barrels by end 2005 to early 2006. The national objective is to raise reserves to 40 billion and oil output to 4 million barrels per day by 2010. An ambitious LNG programme that will result in the construction of two more LNG plants, apart from the Bonny LNG project, coupled with projects for domestic gas utilization will involve a huge foreign currency outlay in the next several years.

The Government is concerned that oil and gas development should begin to have a significant impact on the development of the overall Nigerian economy so that benefits should accrue to society at large in terms of employment generation and the development of significant linkage industrialization and manufacturing processes. A key strategy to achieve this is the implementation of a vigorous local content policy in the services sector of the petroleum industry in order to retain in the country an increasing share of the huge foreign exchange outlays of some \$US 8 billion expended in the sector every year. This will in effect be essential for creating skills and a sustainable process of development in Nigeria. 'Unless countries can create the necessary skill and supplier bases, the host country may not be able to benefit from foreign direct investment to move up the value chain and develop other sectors' (Pigato 2001).

This survey, the first of its kind in the country, examines a full range of topics related to an understanding of the Nigerian oil services sector and the realization of the Government's objective of increasing local-content production in Nigeria. The report examines the characteristics, size and features of the oilfield services business and discusses recent initiatives aimed at the implementation of local content within the industry by the oil majors and the moves to introduce legislation on local content.

To put the state of the Nigerian oil service sector into perspective, developments in three countries (Norway, Venezuela and Malaysia) are briefly discussed. Opportunities and challenges to operators in the sector are examined, especially with regard to deep-water operations and the development of marginal fields. The opportunities in the oil services sector are considerable, and international firms should see this as a positive challenge rather than as a threat to their competitive position. Mathews and others (2004) noted that, 'it is entirely plausible for the contractor to go beyond the current practice of developing the capabilities of subcontractors and suppliers to meet the internal requirements of an asset

support contract. Working alone, or in partnership with the client, governmental agency or non-governmental business support organization, contractors may soon perceive commercial advantage in assisting subcontractors to apply their newly acquired capabilities in quality control, reliability, cost and HSE to access other market opportunities unrelated to projects, both within the oil and gas sector and further afield. In short, both oil and gas operators and their principal contractors need to shift their perception of the immediate project as the main market for supplier enhancement programmes to one that views the project as the ‘springboard’ to other further broader and more sustainable market opportunities.’

It is important for both domestic and foreign investors to acquire an understanding of the legal framework for petroleum operations in Nigeria, and this is extensively discussed. Issues relating to dispute resolution are a corollary of the latter, and a discussion of this topic this follows immediately.

To undertake the magnitude of investments needed in the next few years in order to meet targets in crude production, domestic and regional gas utilization and downstream projects, Nigeria needs to attract a high level of foreign direct investment. Accordingly, the report also discusses where the opportunities exist for such investments to make an impact. Environmental and community relations are also discussed, for they have been the Achilles heel of petroleum operations in Nigeria since the early 1990s. Lastly, issues of financing, its sources and availability, which are crucial especially to empowering indigenous operators are presented. The concluding chapter discusses the findings of the survey and includes salient recommendations for improving the enabling environment for successful local-content development and ideas about further research tasks in this area.

PART ONE – OVERVIEW

CHAPTER ONE

INTRODUCTION AND JUSTIFICATION OF THE PUBLICATION

A. Introduction: the world petroleum market

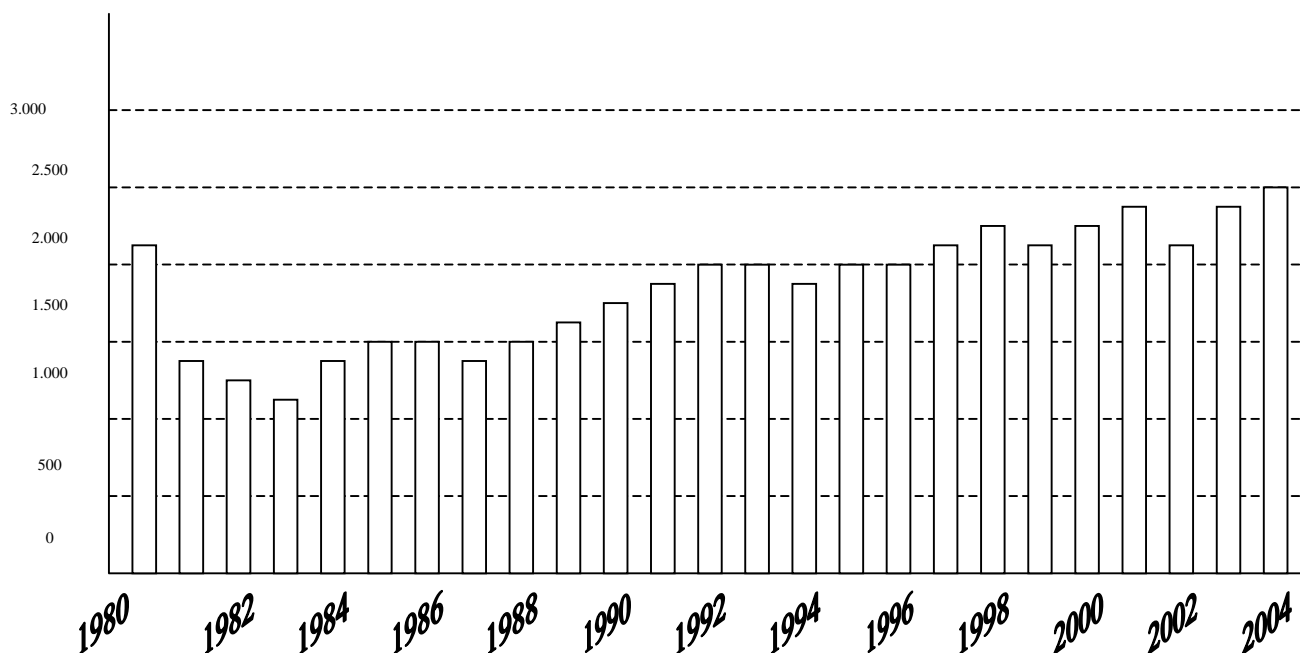
1. At the end of 2001, the Brent oil price (the price reference for Nigeria's crude oil exports) stood at less than \$19 a barrel. It then started a gradual increase, to a monthly average of \$28 a barrel in December 2002 and \$30 a barrel in 2003. Prices surged after May 2004, reaching in October of that year hitherto unimaginable levels of \$50 a barrel. According to the Central Bank of Nigeria, the price of the country's main export crude, the Bonny light, averaged \$54.93 per barrel by June 2005 (CBN Monthly Report, June 2005).

2. There is widespread agreement that historically high prices will stay for quite some

the centre stage of world attention. As petroleum inventory levels in the countries of the Organisation for Economic Co-operation and Development (OECD) remain low and with world surplus capacity falling to its second lowest level over the past three decades, crude oil prices are expected to average over \$50 per barrel in 2005.

3. Global economic expansion is fuelling the biggest increase in world oil demand in 23 years, according to the International Energy Agency (IEA). In an increasingly prosperous world, the demand for hydrocarbons will increase from today's levels of 75 million bbl/d of oil and 220 bcf of gas to a projected 90 million bbl/d of oil and 280 bcf of gas per day by 2010.

Figure 1
Nigeria Crude Oil Production, 1980-2004



Source: US Energy Information Administration, Nigeria Country Analysis Brief

time, and this has brought energy issues back to

4. United States petroleum demand, the highest of the OECD countries, is projected to increase by an average of 370,000 barrels (1.8%) in 2005, thereby maintaining the upward pressure on prices. Phenomenal economic growth in Asia, especially China and India, is expected to keep demand for petroleum on an increasing level for many years. With limitations on capacity availability worldwide (by the end of 2004, many oil exporting countries were producing at near full capacity), increased demand will spur increased development activity in all oil-producing regions of the world. This is translating into increasing levels of investment in exploration and production activities.

5. In response to the rising oil price OPEC, at its extraordinary 131st meeting in Beirut, Lebanon, 3 on June 2004, agreed to raise the official output ceiling of 23.5 million bbl/d by 2.0 million bbl/d in July 2004 and by a further 0.5 million bbl/d in August. In 2004 OPEC raised Nigeria's oil-production quota three times, first to 1.935 million barrels per day, then to 2.142 million, and to 2.6 million barrels by the end of August 2004.

6. These quota increases may not be enough to keep Nigeria in OPEC. The country has regularly exceeded its official OPEC quota, and with new gigantic deep offshore discoveries, the Nigerian Government plans to increase oil production to 3 million bbl/d in 2006 and 4 million bpd in 2010. The NNPC is concerned that the country will increasingly find it difficult to adhere to OPEC quotas and the corporation is looking seriously at ways to address this important problem. Since October 2004 a committee headed by the NNPC has been pondering measures to tackle this problem.

B. The impact of oil on the Nigerian economy

7. The oil and gas sector is of crucial importance to Nigeria for export revenues, government revenues, investments and country-wide growth and development. Thus, a small increase in oil prices coupled with increases in export volumes can have a very large impact on the Nigerian economy, for oil accounts for more than 90-95 per cent of its export revenues, over 90 per cent of foreign exchange earnings and 80 percent of

government revenues. The country's crude-oil export revenues were forecast to increase by 2 per cent in 2004 to \$21.8 billion, compared to \$21.3 billion in 2003 and \$16.9 billion in 2002 (and less than \$10 billion 1998). Realized export revenues in 2004 were \$27 billion.

C. The relevance of the oil and gas services sector

8. According to estimates by the African Export Import Bank (Afreximbank), oilfield services now account for 90 per cent of the total cost of producing one barrel of oil. This translates into a total market size of some \$30 billion a year for the African producing countries. For Nigeria, the sixth largest exporter in the world and the largest producer in Africa, the market size in some estimates ranges from \$ 8 to \$10 billion a year (Kupolokun 2004). Oilfield services estimated to be worth \$800 million to \$1 billion are contracted out each year to local companies, with the bulk of the remainder going to the big foreign multinational oil services companies resident in the country.

C.1. Oil and jobs

9. According to the International Labour Organization (ILO, 2002), '... each job in production or refining generates from one to four indirect jobs in industries that supply the needed inputs and that benefit from the value added by oil/gas activities. In the sense that the overall economy requires suitable and reliable energy supplies, the employment effects of these sectors are even greater and extend throughout the economy.' In other words, it is hard to imagine any industry or sector that does not depend in one way or another on oil or gas products or derivatives for fuel or raw materials.

10. Technology development and transfer and capacity-building form integral parts of the oil and gas business and a major area in which the industry contributes to economic development and generates wealth for society at large. Capacity-building encompasses the management systems and skills to operate complex equipment safely and efficiently and to improve business performance, and this will bring economy-wide benefits. Greater participation of local

companies in providing services will introduce to the Nigerian economy, myriad industrial production and manufacturing processes, including novel technologies to control or reduce the environmental impacts of activities and products.

11. The Nigerian Government has taken bold steps to implement a vigorous local-content policy which will result in more contracts in the value-added chain of the petroleum industry going to local contractors. The stated policy is to attain targets of 45 per cent by 2007 and 70 per cent by 2010. If successfully implemented, it will have multiplier effects on the supply chain of other related industries in the country. Depending on their source, estimates vary as to the current value of the total annual spend for services accruing to local companies. It ranges from 3-5 per cent to 11.5 per cent, which is very low when compared to over 45-75 per cent in Malaysia, Indonesia, Brazil and Venezuela.

12. Increasing the level of participation by indigenous contractors in the supply chain of the oil and gas sector would bring about a rapid transformation of the oil sector, which for three decades of oil production in Nigeria has remained largely an enclave sector. Such a development would lead to integration of oil and gas exploration, production and distribution activities, with the larger economy heralding major direct and indirect benefits to society as a whole.

13. Since the advent of democratic government in Nigeria, the Obasanjo administration has embarked on a wide-ranging economic reform programme, including the privatization of State-owned companies, deregulation of the downstream sector of the petroleum industry, and government support for a rapid Nigerianization of the value-added chain of the upstream sector. A survey of the activities, prospects and prognosis for the sector is now necessary.

D. Purpose and organization of the survey

14. Large deep-water oil discoveries in recent years in Angola, Nigeria and Equatorial Guinea have turned the world's spotlight on the region

as a world leader in oil-production growth and a counterweight to oil from the strife-torn Middle East. West African oil-production capacity is projected to increase from 4.9 million bbl/d in 2003 to 8.2 million bbl/d in 2010. Nigeria and Angola will account for more than two thirds of this growth. The region is thus on the verge of an unprecedented oil boom, with just a few States expected to earn revenues of up to \$200 billion by the end of the decade.

15. The oil and gas services sector in Nigeria is sufficiently well positioned to transform the Port Harcourt/Onne axis into the Aberdeen or Houston of the whole Africa region, if a pragmatic and bold local-content policy is vigorously implemented. Large investments in the sector and realistic government policies are needed to achieve this aim. Availability of reliable information on which to make investment decisions will be crucial in facilitating the required equity and debt inflows. This survey is intended to provide such information. As the first of its kind in Nigeria, the survey will also provide benchmark data against which the sector's future performance and the impact of targeted governance policies can be assessed. It will also examine the opportunities and challenges facing the development of indigenous participation in the years ahead and look at ways and means to realise them. A directory of oil services companies annexed to this survey will also provide information on available capabilities within the Nigerian oil service sector. It is hoped that this information will assist intra-African cooperation that will foster the growth and development of this vital sector, in which the region possesses comparative advantage in terms of volume of oil and gas resources.

16. The survey is organized into three parts containing nine chapters in all and a concluding chapter. Some chapters contain illustrative tables and figures. A number of issues pertinent to the subject matter of the report are discussed in annexes.

17. Part One (Overview) has two chapters: the first takes a brief look at the evolution of crude-oil prices since mid-2004 and what they mean for Nigeria and provides a justification for the

survey; the second gives an overview of evolving trends in the global oilfield services business. Part Two contains six chapters dealing with the core subject matter of the survey: Chapter Three presents the analytical framework used to investigate the Nigerian oil services sector, its size and characteristics, location and organization, highlighting some of the achievements of local companies. Chapter Four examines the opportunities and challenges facing operators in the industry. Chapter Five gives essential background information on the legal and institutional framework of petroleum operations in Nigeria, and Chapter Six looks at dispute resolution in the petroleum industry. Chapter Seven examines the nature and characteristics of oil services contracts, and Chapter Eight looks at the opportunities for foreign direct investment in the Nigerian oil services sector. Part Three (Financing the sector) is organized into one chapter - Chapter Nine, with several sections dealing with issues of financing for the sector. Chapter Ten is the concluding chapter.

A total of 15 annexes are attached at the end.

CHAPTER TWO

THE EVOLVING GLOBAL OIL SERVICE BUSINESS

A. Overview

18. Developments in the global oil service business are driven primarily by the state of exploration and production investments by the oil majors in the different oil-producing regions of the world. Investment decisions by the oil majors are rooted in the delicate balance between global supply and demand for oil, and key variables in the revenues of these companies are the prices of crude oil and natural gas. When prices are low, companies tend to focus on acquiring or developing new reserves. When prices are relatively high, companies step up drilling programmes, seeking to produce greater quantities.

19. The current outlook for the industry is bullish in the light of three significant factors:

- Global energy demand. World oil demand is projected to continue growing by an average of about 2.2 per cent in 2004 and 2005, after a 1.6 per cent gain in 2003; while in 2004 natural gas demand is expected to increase by about 1.3 per cent. Over the next two decades, global energy demand would expand by about 40 per cent. Fuelling this positive demand environment is the rapid economic expansion and population growth taking place in the developing world, especially in China, India and much of South-East Asia and to a much lesser extent in Latin America and Africa.

- Deep-water discoveries. Increasingly, future supplies of oil will come from the spectacular new discoveries being made in several regions of the world, especially in West Africa (Angola, Nigeria and Equatorial Guinea). These discoveries have been made possible by the introduction of new cutting-edge technologies into exploration and production activities.

- Enhanced oil recovery from existing fields. Greatly improved technology for extracting oil stranded in mature fields is offering opportunities for smaller oil companies in many parts of the world.

- Risk of future interruption of supplies. The risk of a severe interruption of supplies owing to possible terrorist activity in the Middle East, especially Saudi supplies has had a speculative near- to medium-term hold on the world oil market, adding about \$4 to \$8 a barrel to the price - the so called "terror premium".

20. Upstream oil sector activities are heavily influenced by both the current and future world oil prices as they impact on new field developments. The volatility of oil prices has led to changes in the structure of the oil sector encompassing both the oil companies and their various contractors. In particular there has been consolidation both horizontally and vertically in the traditional contracting supply chain. In the UK, the strengthening of public-private partnerships, particularly through industry-led initiatives such as LOGIC (Leading Oil and Gas Competitiveness, an industry-funded organization to improve competitiveness) and Pilot (a quarterly meeting of 23 top government and private-sector executives in the oil and gas sector) have improved the sharing of responsibilities between the oil companies and their major contractors. This development may begin to have an impact on the structure of the supply chain industry elsewhere in the world, including Nigeria.

B. The worldwide market for oilfield services

21. The total worldwide oilfield services market has been expanding rapidly in recent years as a result of several developments. First, the oil majors have all been outsourcing non-core activities, including many service activities which they previously handled in-house. Second, the role of independents in worldwide oil exploration and production has increased, and these companies normally follow a stringent policy of keeping capital charges low through outsourcing. Third, in recent years high prices and the resulting big profits for oil companies, have led to an upsurge in investments.

22. In 2003 the size of the market was approximately \$140 billion, compared to \$74 billion in 2000. This has already surpassed estimates made in 2002, presented at the World Energy Summit, that \$100 billion a year of services is needed to keep up with projected demand. In 2004 Stiffel, Nicolau & Co. Ltd estimated in their oilfield services update that the market had grown another five per cent.

23. Oilfield services cover a range of activities that originate from exploration and continue at every level of production up to the final delivery of crude. These services include operation and management services in connection with developing, producing or distributing hydrocarbon resources. Also classed as oilfield services are consultants and engineers recruited on a permanent or continuing basis at the well site or inside the oil field who contribute to the exploration and production of oil and gas, the monitoring and reduction of the environmental impacts of these activities, and the management of relationships with local communities. Finally, oilfield services include the routine maintenance activities are required to keep the oil and gas flow uninterrupted and delivered. Descriptions of oilfield services often overlook the decommissioning phase of oil activities but it is worth noting its importance to the oil and gas industry in the light of the environmental concern about unplugged wells and the costs of dismantling rigs and of demolition and refurbishment work.

24. The above description of oilfield services is often categorized into services in the exploration phase, development phase, production and decommissioning. In recent years, production-phase services have seen the highest growth, with increased activity in well stimulation, testing, pumping and maintenance, and in work-over services for old wells.

25. The exploration phase is characterized by high technology activities. Both onshore and offshore exploration utilises seismic surveys and detailed laboratory work for an improved understanding of the subsurface structures. Other activities involved in the exploration phase include data management and data interpretation, processing and modelling usually

undertaken by specialist geologists, petroleum professionals and engineers.

26. Many oilfield services are of a global nature and can be supplied out of a central hub in, say Houston or Aberdeen (e.g. directional drilling or completion services); others are more localized (e.g. transport of workers located on the oil platforms). Some aspects of the oilfield services market are very large and rising in importance. In 2001, for example, out of a total market of \$94 billion, equipment manufacturing accounted for \$14.9 billion (16%) (by 2004, this had increased to \$26 billion), pressure pumping \$5.9 billion (6%), and well-serving \$2.5 billion (3%). Other operations are worth more than \$3 billion a year (geophysical equipment and services, land contract drilling, wireline logging, drilling completion fluids). Several others worth between \$1 billion and \$3 billion a year include directional drilling, completion equipment and services, subsea equipment, artificial lift, speciality chemicals, and logging while drilling. Many of these activities are controlled by a few firms. Table 1 shows that the degree of concentration in the business is such that only three major firms control between 26 and 89 per cent of the different markets that constitute the sector. The degree of concentration reflects the technological and funding barriers to market entry.

27. Globally, the top ten firms account for 55 per cent of total worldwide oilfield services business. The leading companies are Halliburton and Schlumberger (which both account for more than a tenth of the market), followed by Baker Hughes. The world's largest geophysical services company, WesternGeco, is a joint venture between Schlumberger and Baker Hughes.

28. While the three largest companies have strong capacities across much of the range of oilfield services, none of them covers the full range. Therefore they usually act as prime contractors in projects and then subcontract various specific tasks to smaller and more specialized suppliers (including local companies where conditions merit it). Also, larger suppliers may form bidding consortia with smaller suppliers.

C. The worldwide rig count

29. The number of rigs and their utilization rate reflect drilling activity (one rig is normally used to drill several wells during a year), a major source of business for oilfield services companies. Baker Hughes reported that the worldwide rig count reached a 15-year high in 2004, attaining a peak level of 2,454 rigs; other sources indicate an even higher number (see Table 2 below). In addition, the utilization rate of rigs has been improving (as of end 2004 most rigs were under contract). Industry analysts estimate that rig supply will continue to increase by an average of 10 per cent a year for the next three years. This development means significant upward earnings and stock-price appreciation for the major international oilfield services companies. Table 2 shows estimated world rig count by region of the world. While land drilling accounts for the major part of rig activity in financial terms, offshore drilling accounts for some two thirds of a worldwide drilling market of over \$20 billion.

30. Because of increased exploration spending in 2004 by several national oil companies, offshore drilling projects in West Africa and other projects in the region, the number of wells drilled in the region is expected to show a continued increase, from 1,108 in 2004 to 1,179 in 2005. An expected 217 of these are offshore drillings. (*World Oil*, "A special report on the oil and gas outlook", 24 January 2005). Most of this activity will be in Egypt (280 wells expected to be drilled during the year), Sudan (220), Algeria (200), Libya (130), Nigeria (90) and Angola (60).

31. For service companies the business prospects will remain good for the next couple of years, barring any major disruptions arising from political and civil strife in West Africa. Indigenous services-provision is expected to begin to play an increasing role in the small to medium service category as countries begin to implement local-content participation in the sector particularly in Nigeria (with an objective of 70% by 2010) and Angola (10% by 2005) particularly.

Table 1
Share of the largest three companies in key worldwide oilfield services markets (2002)

Pressure pumping	89%
Wireline logging	88%
Directional drilling	87%
Speciality chemicals	87%
Casing/tubing/services	85%
Drilling fluids	84%
Completion products	83%
Drill bits	75%
Artificial lift	73%
Coiled tubing	60%
FPSOs	56%
Production logging	52%
Offshore O & M	48%
Rental & fishing	48%
Land drillers	28%
Offshore drillers	27%
Offshore construction	26%

Source: Taken from Bernard J Duroc-Danner, Chairman and CEO, Weatherford International, Inc., "Implications of the Consolidation of the Oilfield Service Sector", based on Spears & Associates Oilfield Market Report.

Table 2
2004 rig demand

Region	Average number of rigs in 2004	Number of rig additions, 2003 to 2004, annual average	Comments
1. US Land Drilling	1305	208	The number of land rigs showed a 19% growth. At the end of December 2004, 1,398 rigs were in use. Many of the rigs put into business had not been used for years, and the potential for growth in the near term is limited because there is hardly any spare capacity left.
2. US Offshore Drilling	112	-7	In the whole of the Gulf of Mexico the number of wells drilled in the course of 2001 remained fairly stable compared to 2003 (around 830). In the US part of the Gulf (which accounts for the majority of rigs) the number of rigs was reduced in the course of 2004 as several rigs left the region.
3. Canada	Land: 342 Offshore: 5	9	Although the average number of rigs in Canada in 2004 was little different from 2003, 2004 did see a strong growth towards the end of the year. In December, the number of land rigs reached 427.
4. CIS	Land: 197 Offshore: 9	64	The CIS saw the strongest growth in rigs worldwide, reaching 221 in December 2004.
5. Europe	Land: 79 Offshore: 75	1	In Europe, the number of land rigs increased by 12 from 2003 to 2004 (reaching 90 in December), while the number of offshore rigs fell by 11 (reaching 77 in December).
6. Latin America	Land: 265 Offshore: 83	59	Latin America saw many new rigs, mostly on land (in December 2001 the number had reached 294), but also offshore. Various operators in Argentina, PEMEX in Mexico and PDVSA in Venezuela together accounted for the majority of the additions.
7. Middle East	Land: 191 Offshore: 45	12	Land drilling in Iraq accounted for most of the growth. In Saudi Arabia growth is held back by the difficulty of acquiring new rigs.
8. Asia-Pacific	Land: 146 Offshore: 89	18	Growth was mostly in land drilling. Activity is fairly stable in China (the country with the most rigs), but picking up in India, Malaysia and Thailand.
9. Africa	Land: 141 Offshore: 58	9	The net increase in rigs in Africa was fully on land, and mostly in Sudan (where the number of rigs increased from 9 to 15), Algeria and Libya. New land rigs were also added in Congo (from 1 to 3), and Gabon (from 3 to 4). Most new offshore rigs became operational in Egypt (from 11 to 16), while Mauritania and Morocco each saw their first offshore rig. In Nigeria, both the number of land rigs (from 11 to 16) and offshore rigs (from 1 to 13) fell.
Total	3142	372	

Source: Rig numbers from *Petroleum Africa*, February 2005, based on Schlumberger data; further information from various industry sources.

PART TWO – NIGERIA: OIL AND GAS SERVICES SECTOR

CHAPTER THREE

CHARACTERIZING THE NIGERIAN OIL FIELD SERVICES SECTOR

A. Introduction

32. Since the discovery of oil in Nigeria in 1959 up to the 1970s, the oilfield services supply chain was dominated to a very large extent by foreign oilfield services companies employing foreign technical experts and technicians. The leading names in the industry such as Schlumberger and Halliburton have been in the Nigerian oilfield services industry for well over four decades. There were very few Nigerians employed in the sector except in semi skilled jobs. As the Federal Government implemented a rapid indigenization and Nigerianization policy in the late 1970s in several sectors of the economy, with registered companies in the country required to apply for job permits under an expatriate quota regime for certain categories of staff, many oil company multinationals began to comply by hiring qualified Nigerian professionals. Many leading oil companies - Shell, Mobil, Gulf (later Chevron) - began intensive training programmes for their Nigerian staff both locally and overseas, and it was this first group of Nigerian employees who later attained top executive, technical and managerial positions in these companies.

33. When the world oil industry slumped in the late 1980s and many jobs were threatened, some Nigerian executives facing the possibility of redundancy or early retirement opted to leave voluntarily and established enterprises in the services segment of the industry, which itself was badly affected as many foreign oil service firms closed down operations. Simultaneously, NNPC created the National Engineering & Technical Company Limited (NETCO) in 1989, to train Nigerians in designing and building oil and gas facilities (and NETCO has since been responsible for most of the technologically advanced local oil and gas services provision in Nigeria, e.g., in 1993 the engineering of the

Escravos field onshore gas plant). It was this first crop of Nigerians that became the pioneers of an indigenous service sector that has since struggled to realize its large potential.

34. This chapter sets the stage for an understanding of the Nigerian oil services sector and recent developments therein. It is broken down into six sections. Section A presents the analytical framework used in the survey to investigate the Nigerian oil services sector and describing the design of the survey. (Annex 8 contains questionnaires developed according to the framework). Section B presents the basic features and location characteristics of the industry. Section C discusses local-content development and its relevance to sectoral development and growth. Section D examines the Nigerian industry relative to developments in Norway, Malaysia and Venezuela. In section E the survey examines the results of the survey and finally in section F it discusses the size of the supply-chain market.

B. Analytical framework for the survey

B.1. Oilfield services defined

35. Traditionally oilfield services were restricted to the provision of logistical services, principally marine services, provision of facilities and maintenance services. However, as the oil industry expanded in the early 1990s, most oil concession holders, the majors, began to outsource a great number of related activities hitherto undertaken in-house. These include:

- Provision of marine support vessels
- Cranes and deck services
- Operating services
 - Pigging
 - Marine pilotage
 - Supply of operational chemicals
- Maintenance services
 - Oil and gas metering

- Gas-turbine generation units
- Process gas compressors
- Inspection services
- Pump maintenance
- Provision of gases and cylinders
- Manpower services
- Catering and supply services

A typical oilfield development project showing typical service contracts is illustrated in Figure 2.

B.2 Typical contracts in the Nigerian oilfield services sector

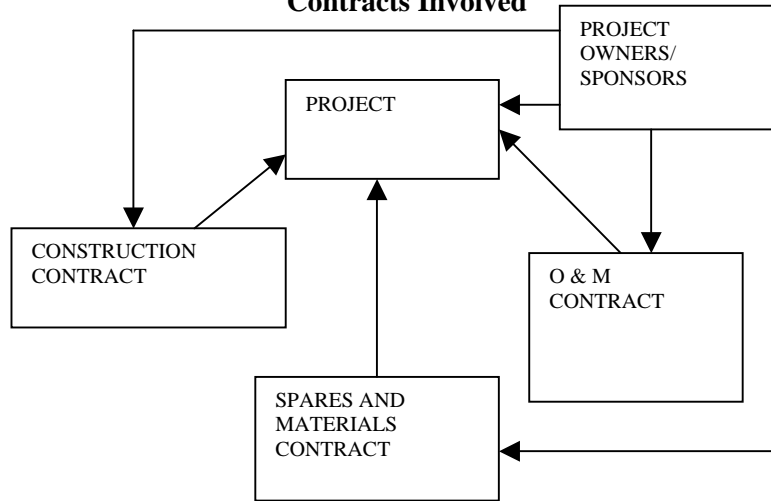
The contracts typically used in the Nigerian oilfield services sector are:

- (i) Those signed between oil producers (the oil majors operating JV/PSC contracts with the State-owned oil company, the Nigerian National Petroleum Corporation) and major oilfield services companies, mostly foreign, such as Schlumberger, Halliburton, Brown & Root Energy Services Nigeria, Foster Wheeler, Vetco Gray Nigeria Ltd., Etc. These companies are classified as first-tier companies for the purpose of this survey.
- (ii) Contracts between major oil producers and minor highly specialized (foreign and local) oil services companies
- (iii) Subcontracts between major service providers (foreign) and major (local) oil services providers
- (iv) The small-contract category: between major oil producers, major services providers, minor services providers and small micro-firms, all local.

B.3. Sample selection

36. The sample was carefully selected to be representative of the existing structure of the oilfield services business comprising firms by type of service provided, ownership structure and number and value of contracts executed, to facilitate a cross-cutting analysis of firms in the sector. The selected companies were drawn from a directory of service companies in Nigeria

Figure 2
Oilfield Development Project, Showing Typical Service Contracts Involved



- ▶ Services
- ▶ Ownership interest
- ▶ Service Contracts awarded through JV operator

compiled from several sources listed in the annexes.

B.4. Interviews:

37. Using a questionnaire, the first field interviews were conducted in late May/June 2004 for a sample of 20 companies. The sample was compiled in such a way as to ensure that an equal proportion of respondents was selected from each oilfield services category. A second field exercise in late September/October enlarged the number of companies involved to fifty.

38. Before commenting on the field surveys and presenting their results, it is pertinent to an understanding of the sector to present our findings concerning a major feature of the location and industry characteristics of the sector as it exists in Nigeria today. This aspect of the survey findings is crucial to the design of future policies aimed at dynamizing the sector and putting together an industry-wide development and investment programme to foster rapid growth of the sector which would significantly multiply linkage effects on other interrelated sectors of the economy. We shall then examine

another important characteristic of the industry which is propelling rapid developments in the sector and thus the rapid entry of new firms and the expansion of existing ones. This is the drive to increase the level of indigenous participation in the industry, usually referred to as local content.

C. Location, size and characteristics: basic features

39. The Nigerian oil and gas industry comprising the exploration and production (E & P) companies and their service providers is located and clustered around the Port Harcourt/Onne urban sprawl, with some lesser concentrations around the city of Warri. More than 300 firms comprising the world's leading oil companies and oilfield services companies, as well as other foreign and indigenous companies, are found in the Port Harcourt/Onne location. The services industry as it currently geographically exists has the structure and characteristics of an emerging potential cluster, though as yet embryonic in scale and significance. It is a supply chain feeding the upstream oil and gas exploration and development industry, which embraces the entirety of an economically linked set of related industries.

D. Local-content policy and development

40. An exposition of the term local content as it applies to the Nigerian oil and gas industry is important to an understanding of the possible developments in the structure of the supply-chain sector in the near to medium term. Local-content development in the Nigerian oil and gas industry has long been viewed as the means by which Nigeria can maximise the benefits of oil and gas exploration and development for the greater good of its economy and its citizens. There are varying estimates of the level of local content in the industry, ranging from 3 per cent (Presidential Adviser on Energy, September 2004) to 11.5 per cent (Instok study 2001) or to 5 per cent (Kupolokun GMD NNPC March 2004). The 3-5 per cent level probably reflects the situation in 1999 and earlier years (although even for these years, it may be an underestimate). In the years thereafter it

Box 1

The role of National Petroleum Investment Management Services (NAPIMS) in the Nigeria oilfield services industry

NAPIMS is part of the Exploration & Production (E&P) Directorate of the Nigerian National Petroleum Corporation (NNPC). It is, among other things, responsible for investments in the upstream sector, exploration in frontier areas where multinational firms hesitate to enter, promoting gas utilization through developing in-country technological capability.

Given this last responsibility, NAPIMS is the focal point for local content policy in Nigeria. It has been given a mandate by the Federal Government to increase local content to 45% by 2006. NAPIMS has direct responsibility for overseeing contracting practices in the upstream industry, and through this means, can ensure that these practices enable the use of local resources.

NAPIMS is also the responsible agency for expatriate workers in the Nigeria oil and oil services industry, and each oil company must negotiate its expatriate worker allotment with it. By law, oil companies must hire Nigerian workers unless they can demonstrate that particular positions require expertise not found in the local workforce. Positions in finance and human relations are almost exclusively reserved for Nigerians; certain geoscience and management positions may be filled by expatriates with the approval of NAPIMS.

In the past few years, NAPIMS has been instrumental in developing thinking about local content policy in the country. It has also commenced building data on local engineering and technical companies to know their capacities and determine which jobs they can handle successfully.

increased rapidly, according to NAPIMS, from 5per cent in 1999 to 14 per cent in 2003 and close to 20 per cent in 2004. The percentage is much lower for natural gas than for crude oil.

41. Whichever figure is correct¹ it is a rather insignificant performance given half a century of oil production and three decades of membership in the Organization of Petroleum Exporting Countries) and compared with figures in Brazil, Malaysia, Venezuela and Norway, where the local contribution ranges from 45 to 75%. As

¹ For a good overview of the methodological difficulties of measuring local content, see Wade Locke and Strategic Concepts, "Exploring Issues Related to Local Benefit Capture in Atlantic Canada's Oil and Gas Industry", April 2004.

Box 2

What is a cluster?

A cluster is a sectoral and geographical concentration of firms with a clearly identifiable product and support firms, service providers and institutions faced with common opportunities and threats and with linkages. The English classical economist Alfred Marshall was the first to argue that Britain's economic leadership in the 19th century was due to the development of several examples of localized industries: of the modern cluster concept and the term "industrial cluster", which is associated with Michael Porter the founder of the cluster approach in economic policy decision – making.

Porter defined industrial clusters as "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions (for example, universities, standards agencies, and trade associations) in particular fields that compete but also cooperate."

Contrary to much of the received wisdom at the time, Porter did not believe that competitiveness could be built, on a sustainable basis, around a single company (this received wisdom was the logic on which many governments based their efforts to attract key companies to their regions, offering tax incentives and the like), or around new "growth poles" established by Governments (usually in the form of free trade zones). Rather, competitiveness will be built only if one can move from isolated firms to an array of companies that together form one or more clusters. The next step would then be to upgrade the breadth and sophistication of these clusters.

Clustering does bring a wide range of benefits to both business and the wider economy, some examples of which are the following:

- Companies can increase the expertise available to them if they can locate amongst a cluster of other firms.
- They can also draw upon others with complementary skills to bid for large pieces of work which each of the individual companies would have been unable to compete.
- Advantage can be taken of economies of scale by further specializing production within each firm, by joint purchase of raw materials to attract bulk discounts or by joint marketing.
- Reputations spread quickly within the cluster, enabling finance providers to judge who the good entrepreneurs are and people to find who provide good support services.
- The cluster enables an infrastructure of professional, legal, financial and other services to develop.

Successful clusters require a balance of competition and cooperation. They are invigorated by strong competition, very often "personal" and driven by a strong individual desire to show who is best. Inside successful clusters there is recognition that some issues are best solved through collective actions. To sustain any cluster, its members must develop a mode of cooperation while maintaining competition. Clusters gain power through personal collaboration. To quote from a paper by Global Network (<http://www.globalnetworkindia.com/clusterdevelopment.html>), "**Underachieving clusters are characterized by environments where information does not flow easily and where the various actors are not accustomed to talking with one another.** In stark contrast with their counterparts in clusters which perform well, especially in developed countries, entrepreneurs in under-performing clusters rarely if ever meet one another, do not usually have ongoing relationships with providers of business development services and are not accustomed to presenting articulated calls for action to the local policy makers."

This gives perhaps an indication of why the oilfield services sector in Nigeria has not taken off, compared to other regions.

another indication of the inability so far of Nigerian entrepreneurs to benefit from the possibilities offered by the oil sector, a committee set up by the Government, the Local-Content Group, found in 2004 that only 10 of the 2000 indigenous contractors in the DPR register met international standards for handling contracts in the oil and gas industry – a number similar to that found in Norway in the early years of its oil production.

42. Prior to 2001 local content in the oil industry was an issue which politicians and government oil agencies usually talked about without proposing any concrete action for implementation. The Federal Government is only now reported to be in the process of sending a local-content bill to the National Assembly. The content of a private member's bill to that effect was discussed by industry stakeholders in a seminar sponsored by Chevron in Lagos, in March 2004. We shall dwell more on this later in this chapter.

43. The oil industry has made progress in improving local content and building up the capacity of local firms in recent years. For example, Chevron Texaco has formed a partnership with a local company, Vision Reservoir Management Technologies International (VRMT), to set up Nigeria's first advanced technology centre for sub-surface studies. It has also initiated an alliance between one of its foreign oil services companies, Schlumberger and an indigenous company, Water Oil and Gas (WOG), with the aim of developing WOG into a world-class drilling company.

44. However, it is the opinion in many industry and government circles that without a formal policy backed by law, local content will be open to many interpretations and lead to confusion and implementation problems. For example, does local content mean Nigerian content, local contracts, naira-currency content, etc. This would lead to several interpretations such as naira value of spend, value of contracts to local vendors, number of local manpower/staff involved, number of contracts awarded to local contractors, etc.

Table 3
Recent national action on local content

DATE	EVENT
1. 1997	Vision 2010 report issued, defining local-content targets
2. Aug. 2001	National workshop on local content – NNPC initiative
3. Oct. 2001	Joint Industry Committee (JIC) established to prepare draft policy in support of legislation
4. Nov. 2001	National Assembly Advisory Committee set up to prepare the new Act and Laws governing local-content
5. Feb. 2002	Shell/NNPC collaborative workshop on modalities for implementing local content challenges in deep-water offshore environments
6. Mar. 2002	JIC issues draft report
7. Apr. 2002	First set of instructions from NNPC, invoking JOA terms
27 Nov. 2003	Deep-water local-content workshop, SNEPCO
24 Mar. 2004	Stakeholders seminar on Nigerian-content development; Abuja

45. The first of a series of important national forums organized to address and clarify the issues was the national workshop on improvement of local content and indigenous participation in the upstream sector of the petroleum industry, hosted by NAPIMS (National Petroleum Investment Services) on 2-3 August 2001 in the federal capital, Abuja. The workshop was attended by participants from federal and state governments, the National Assembly, government agencies and para-statal, the oil and gas industry, banking and financial institutions, the maritime and shipping industry, Nigerian and international contracting companies, universities and research institutes, and the organized private sector.

46. As a result of the success of this workshop, a National Committee on Local Content was set up in 2001 with the following terms of reference:

- i. To review all the papers prepared at the NAPIMS workshop, including the workshop communiqué and recommendations;
- ii. To prepare a report encapsulating a draft local-content policy and implementation programme;
- iii. To prepare draft legislation to support the local-content policy and implementation programme.

47. It was this Committee that made the first attempt at a definition of the term local content, as follows: **‘Local content in the upstream sector of the Nigerian oil and gas industry is the quantum of composite value added to, or created in, the Nigerian economy through a utilization of Nigerian human and material resources and services in the exploration, development, exploitation, transportation and sale of Nigerian crude oil and gas resources.’** This definition which has been expanded to include **‘without compromising quality, health and safety and environment,’** is the standard operating doctrine governing the oil and gas services sector in Nigeria today. All foreign oil companies operating in the country are putting up action plans and strategies in furtherance of this important national objective.

48. In order to assist regulators continuously to measure and track local-content implementation and development in the industry, the Committee developed simple matrices for the categorization of service companies, operating companies, jobs and core competencies, value addition and the impact of research. (See Annex 4 for a presentation of the value matrix)

49. In furtherance of its local-content goals, the Government is becoming more explicit in terms of activities that should be executed locally. In late 2003 it announced that henceforward:

- All seismic jobs in the range of 0-800 square kilometres are to be done by local companies;
- All front-end engineering and design (FEED) jobs for some key projects are to be handled by local firms;

- Oil-prospecting firms must carry out locally all fabrication jobs except for highly technical projects with particular reference to deep offshore projects;
- All geological and geophysical studies are to be carried out in the country.

50. In March 2005 the Government announced that in the 2005 bidding round only bids specifying more than 30 per cent local content would be accepted; and then, to analyse the bids, local content is given a 20 per cent weighting in the overall evaluation – quite a high weighting when compared, for example, to 40 per cent for the proposed signature bonus (briefing by Edmund Daukoru, Presidential Adviser on Petroleum, on the Nigeria 2005 oil and gas exploration and production acreage bid, Abuja, 11 March 2005).

51. In addition, in April 2005 the Government issued the following guidelines:

- Henceforth, all fixed platforms (offshore and onshore), piles, anchors, buoys, jackets, bridges, flare booms and similar structures and storage tanks are to be fabricated in-country, to maximize utilization- of local fabrication yards.
- FEED and detailed engineering for all projects, as well as seismic-data-processing projects and all reservoir-management studies, are to be Nigerian from the end of 2005.
- All floating production storage and off-loading terminal (FPSO) topsides integration to be done within the country from mid 2006.
- In procurement operations, oil companies need to apply international codes and standards, which will support utilization of locally manufactured products such as paints and cables.

52. To facilitate local contracting, an electronic market place should be established by the third quarter of 2005. NAPIMS will review compliance by the operating companies, using a computer-based joint qualification system (JQS).

As a policy implementation tool, the Federal Government established a Steering Committee with seven subcommittees, namely Fabrication, Engineering, Manufacturing, Banking/Insurance,

Shipping, Well and Drilling Services, and Petroleum Engineering. They will meet monthly and report quarterly to the country's President. They have the responsibility of defining strategies to meet and exceed the Federal Government's targets for local content, formulating an approach for upgrading the skills and technology of indigenous companies, developing initiatives to guide the transfer of skills and technology to local companies, and liaising with local companies to identify opportunities and modalities for investment.

D.1 Categorization of service companies

53. Service companies were classified into five

Table 4: Categorization of service companies

CATEGORY	TITLE	DESCRIPTION
A	Wholly Indigenous Company	An indigenous company or contractor is one, which is WHOLLY owned by Nigerians; has recognizable establishment and its own resources in Nigeria appropriate to the type and level of work which it claims to be able to perform: <ul style="list-style-type: none"> • Equipment must be 100% owned by the company • At least 80% of Directors must be Nigerian nationals • A minimum of 80% of top management must be Nigerians • And a minimum of 90% of senior field personnel must be Nigerians.
B	Majority Nigerian Shareholding Company	Company registered in Nigeria with majority Nigerian shareholding that has the establishment, expertise, assets and financial capability appropriate to the type and level of work it claims to be able to perform
C	Alliance or Joint Venture	An alliance between a Nigerian Company (category 'A') and a foreign company (category E).
D	Majority foreign shareholding Company	Company registered in Nigeria with minority Nigerian shareholding that has the establishment, expertise, assets and financial capability appropriate to the type of work it claims to be able to perform.
E	Foreign Company	A foreign company whether registered in Nigeria or not with no Nigerian shareholding and whose assets belong to the offshore company.

Source: Report of the National Committee on Local Content, January 19, 2002.

categories on the basis of equity and institutional structure, as shown in the Table 4.

The clear objective of the local-content policy is to ensure that, over time, the market share of category A companies in the oil industry will be predominant; this is fundamental to an understanding of the present structure and prospects of the industry. The Federal Government has set specific targets for local-content value at a minimum 40 per cent by 2005 and 50 per cent by 2010 for supplies and materials and engineering and construction contracts.

54. With respect to recent national and oil company actions on local content, the most important milestone was set at the beginning

with the local-content targets defined in the Vision 2010 Report. In April 2002 NNPC issued the first set of instructions invoking its rights under the Joint Operating Agreement (JOA) terms which were issued to the operator partners on the utilization of local content/ contractors, especially for fabrication and routine maintenance services. As a result of this, all the major oil-producing companies are implementing sustainable local-content development programmes designed to enhance indigenous participation in their various projects.

55. The deep-water local-content workshop organized by SNEPCO (Shell Nigeria Exploration and Production Company) in November 2003 was an important milestone,

for it yielded the first report by a major oil producer in the country to highlight its

achievements with regard to local-content development and share its experience with indigenous services operators, banks and other stakeholders. (See chapter 4 for more on this.) A summary of some of the recommendations from the seminar on discussion of a private member's bill on local content sponsored by Chevron in March 2004 follows below.

E. Summary of recommendations: proposed local-content bill

1) The new act should be structured in such a way as to encourage private initiative and also protect foreign investors.

Action party: the sponsor of the bill

2) A national think-tank of industry experts is needed for ensuring compliance with the act. The think tank's membership should be drawn from appropriate local experts, who will work with the legislative authorities and all stakeholders to drive forward the implementation of the new act. This proposed team will, among other things, also coordinate the drive to achieve the two key elements for the sustainable implementation of the Nigerian-content plan: adoption of new procurement principles and strategic approaches as defined in the Malaysian experience.

Action party: the Speaker of the House of Representatives (in consultation with Office of the President of the Federal Republic of Nigeria)

3) The ongoing efforts being made and the successes achieved by NNPC and some E & P operators in the development of local service-providers (such as for example SNEPCO, Shell Nigeria Exploration and Production Company (see chapter 4) need to be recognized and encouraged.

Action party: Department of Petroleum Resources (DPR)

4) DPR needs to be autonomous to be able to police the industry and enforce the local-content laws. It's financing, training and resources need to be enhanced in order to facilitate this important role.

Action party: the sponsor of the bill

5) The concept of *lowest bidder* in the contracting process appears not to be clearly understood. It is therefore necessary for the oil companies and NNPC/NAPIMS to brainstorm on the concept of the "lowest bidder" versus "cost-effective bidder" in order to drive forward the process and methodology of tendering and contract-bid evaluation and award into a more reliable regime.

Action party: NNPC/NAPIMS

6) Given that for various reasons the number of expatriates **working with multinational oil and gas companies has been rising instead of falling**, the responsibility for monitoring the programme of technology acquisition and skill development provided for in the Petroleum Act 1969, as amended, needs to be re-examined and the regulatory responsibility re-established or reflected in the Nigerian-content development bill.

Action party: the sponsor of the bill

7) It is necessary to take a cue from the experience of the United Kingdom, which has the most developed independent operatorship scheme in the world.

Action party: NNPC, DPR

8) Linkage industries to support the oil and gas sector must be set up (for example a steel sector) as the amount expended on this item is enormous. The Government should take decisive steps to revitalize the hobbled steel plants and similar industries for proper effective local-content development

Action party: Ministry of Mines and Power

9) The upstream sector should look at the Cabotage Act and the Nigerian-content development bill in order to synchronize the implementation stages and treat them as a core issue. A team from DPR, Nigerian Maritime Authority (NMA) and industry experts could drive this effort forward.

Action party: DPR and NMA

10) Fiscal incentives, including tax rebates, credit insurance schemes, use of SMIEIS (Small and Medium Enterprises Investment Scheme) and a special energy fund, need to be properly examined and developed for the benefit of the

local contracting community. These matters should be included in the bill in order to enable subsequent regulatory management by the appropriate government authorities.

Action party: the sponsor of the bill

11) There is a need to harmonise the many definitions of local content and Nigerian content found in different documents.

Action party: the sponsor of the bill

56. Some of these recommendations are to form the core content of the proposed forthcoming government bill to be presented to the National Assembly, which has many implications for the future development and growth of the technology, expertise and funding needed to support E & P activities in the rapidly expanding deep-water operations in Nigeria. Great care and thinking should be given to the specific provisions of the bill as they affect foreign company participation in the industry, which will remain vital to the sector in the near to medium term. For example, if a wholly owned foreign services company decides to set up a world-class fabrication plant in Nigeria, how would his participation be valued in terms of local-content participation? We believe that lessons should be drawn from some countries that have successfully implemented indigenous-participation programmes, to which we now turn.

F. Comparative Analysis

57. A brief comparative analysis of the development of the petroleum industry in three countries, Norway and Malaysia and Venezuela, with that of Nigeria will provide instructive lessons to inform the current moves to enact a local-content bill.

F.1 Norway

58. When oil was discovered in large quantities in Norway in 1969, it required enormous amounts of money and technical know-how to develop, which the country did not possess. It had a limited number of geologists, petroleum economists and lawyers specializing in petroleum issues. It was one of the world's important maritime and fishing countries but for

oil prospecting, production and refining Norway had virtually no knowledge to build on.

59. The Government thus had to develop a new policy for what was soon to become the country's major industry. It could leave the industry in foreign hands, and international enterprises would in any case have to provide the necessary capital and skills, or it could try to develop a new local industry. Despite widespread scepticism, it decided on the latter policy option. It set as an objective the development of a local oil and gas field supply industry (for goods and services) which would be sustainable on a long term basis.

60. To achieve its objective the Norwegian Government adopted a three-pronged strategy. The first element of the strategy focused on building human capacities. Adapting the education system and developing new training programmes were key and obvious requisites. After initial targeted training activities, an important initiative to maintain the strength of the country's cluster was the establishment of the Statoil School of Business and Technology (Statoil is Norway's State Oil Company). The School's development activities cover about 900 programmes and it had trained over 75,000 students by 2003. The second element was directed at enabling traditional maritime, mining and processing companies to cope with the transformation into oil and gas sector suppliers. The third element built around the need for holistic industrial development by balancing growth between the oil and non-oil sectors.

61. A Ministry of Petroleum was set up and oil legislation was enacted. A national oil company, Statoil, was created, together with a Petroleum Directorate whose job was to procure the necessary professional skills. At the heart of the Government's policy was the Supplier Development Programme. This Programme not only addressed the commercial needs of the industry by drawing together its complementary skills, but also opened the gates to new ideas and new business. The attitudes that were promoted were *'The sky's the limit'* and *'Everything that foreign companies can do, local companies can learn'*. Statoil played a central role in developing technology and bringing it to the market. It went into link-ups with private

companies to develop new products for which they and Statoil would receive royalties. The products were developed by the private companies, but Statoil defined product requirements, ensured overall project control, and provided technical skills and advice on the newly developed products. Thus, in its role as a buyer in the supply chain Statoil was instrumental in institutionalizing quality benchmarks.

62. The Government invested large sums of money in research and development activities related to petroleum and gas in selected universities and institutes and put in place incentive schemes, as well as implementing infrastructure development projects – expansion of shipyards, construction of fabrication yards, etc. – and through deliberate policy fostering the emergence of industry clusters which served the domestic market and then grew into exporters of services to other world petroleum markets.

63. The Norwegian Government signed agreements with foreign oil companies to secure the transfer of skills and know-how to Norwegian actors. A special office, the Goods and Services Office, was established in the Ministry of Industry to act as a watchdog on the procurement and technology policies of foreign companies and, when allocating new acreage, the past record of the foreign bidders in using and developing Norwegian content was one of the key criteria. The process put strong pressure on foreign companies to carry out research and development in Norway and, when possible, buy Norwegian goods and services.

64. Nevertheless, the policy towards foreign firms was not adversarial. Rather, the Government worked with foreign firms to ensure that their practices and procedures would enable them to contract out to local providers. This entailed tender procedures that ensured the selection of contractors in a transparent, non-discriminatory manner, the development of technical solutions and contract management structures to accommodate the domestic oil and gas industry (which at least in the early years consisted of relatively small, specialized companies that would not be able to undertake large, complex projects), and the formation of a

proactive information policy to facilitate the exchange of information (so that local companies would have the necessary lead time to prepare for tenders). Today, Norway is a world leader in exploration, production and services, exporting expertise to many countries, Nigeria included.

F.2 Malaysia

65. Perhaps the record of achievements in Malaysia's petroleum industry is more revealing given its similarities in development characteristics to Nigeria. The first oilfield was discovered in Malaysia in 1971. The Malaysian Government promulgated a Petroleum Development Act in 1974 and formed a national oil company, Petroleum Nasional Berhad (Petronas), to ensure that the nation's petroleum resources could be developed in line with the needs and aspirations of the nation. Article 2 of the Act vested the entire ownership in Petronas, together with the exclusive rights, powers, liberties and privileges of exploring, exploiting, winning and obtaining Malaysia's petroleum, whether onshore or offshore. Today, Malaysia has the 24th largest crude oil reserves and 13th largest gas reserves. The Petronas group employs about 23,000 staff worldwide (compared to NNPC's 15,000 almost exclusively in Nigeria) and is Malaysia's only Fortune 500 company.

66. Petronas is engaged in a broad spectrum of petroleum activities ranging from upstream oil and gas exploration and production to downstream oil refining, marketing and distribution of petroleum products, trading, gas processing, gas transmission and pipeline operations, liquefaction of natural gas, etc. A substantial share of the nation's petroleum mining acreage is allocated to Petronas. Its exploration, development and production activities in Malaysia are carried out through production sharing contracts (PSCs) with international oil and gas companies. Current PSCs are based on the 'revenue over cost' concept (RC/PSC) to encourage additional investment in Malaysia's upstream sector. RC/PSC allows PSC contractors to accelerate their cost recovery if they perform within certain cost targets. The underlying principle is to allow

the PSC contractor a higher share of production when Petronas profitability improves.

67. Malaysia's enabling law invests Petronas with the responsibility for developing and adding value to its oil and gas resources. Local supplier development was strongly encouraged through a mix of measures. Among other things, non-Malaysian firms are permitted to participate in oil services only in partnership with local firms or as contractors. Bidding for oil and gas services contracts is only possible for companies registered with Petronas, and in order to obtain such a registration companies had to:

- Incorporate in Malaysia, with sufficient local equity participation; the foreign company is restricted to a 30 per cent equity stake.
- Agree to observe official guidelines regarding management, employment and use of local resources; and
- Agree to acquire all materials and supplies locally or, if not available locally, to purchase them directly from the manufacturer. Furthermore, as part of the PSCs between Petronas and foreign oil companies, the latter are required to purchase goods and services locally to the maximum extent possible. Finally, all contracts valued at more than 150,000 ringgit (about \$50,000) have to be approved by Petronas before being awarded outside the country. As a result of this aggressive government policy, Malaysia has developed a strong oil services industry, which has become an active player in other parts of the world as well.

F.3 Venezuela

68. The experience of Venezuela provides another example of how a Government can successfully adopt market-friendly policies that provide the local industry with the much needed technological strength to become involved in increasingly sophisticated sectors. In the mid-1970s, Venezuela, a member of OPEC, felt a strategic need to reduce its technological dependence on transnational corporations. At that time only 15 per cent of the engineering and capital goods procurement for the oil industry was nationally procured and only five local construction firms were capable of undertaking

major assignments. Furthermore, the available local technological skills were weak, with most local companies not believing that they were capable of competing in technologically advanced areas.

69. The Government embarked on a programme of capacity development through research and development, in particular in engineering and construction services. A first element of this programme was the creation in 1976 of the National Institute of Petroleum Investigation (INTEVEP). An affiliate of the oil para-statal PDVSA, INTEVEP was created to take over technological research. This was combined with efforts to develop human resources in the research field and with a policy for transferring technology on a commercial basis. Through this effort INVEP has over 1,184 patents registered to its credit.

70. After the establishment of a research base, a supportive framework was created for engineering and construction firms, in particular by making it clear to foreign companies that they were expected to collaborate with local suppliers; and joint ventures between foreign oil field services providers and local companies were encouraged. However, performance requirements for the international firms were non-mandatory. Contracting rules were reformed to introduce project disaggregation, whereby tenders for smaller projects could be won by local contractors. Continuous improvement and quality-control practices were adopted for all contracts, with one important goal being to ensure that local companies were able to meet the quality requirements of international clients.

71. A third element of the programme was the direct support given to domestic suppliers of capital goods and services. Focused programmes for enhancing the quality and competitiveness of small and medium enterprises, including the promotion of exports of capital goods and services were undertaken. These supplier development programmes were also coupled with incentives and financial support.

72. The Government's programme led to increased participation by local enterprises in the provision of engineering and construction

services to the oil industry. Nevertheless, lack of transparency has been a problem in the programme, leading some local companies to make quick earnings not through their technical skills but through their contacts.

F.4 Nigeria

73. The Nigerian National Oil Corporation (NNOC) was established in 1971, with powers to acquire any asset or liability in existing oil companies on behalf of the Nigerian Government; it was also authorized to participate in all phases of the petroleum industry. In 1977 NNOC was merged with a number of departments of the Ministry of Petroleum Resources to form a new corporation, the Nigerian National Petroleum Corporation (NNPC). In March 1988, NNPC was reorganized as a commercial integrated oil company with a mission statement profitably to explore, develop, produce, process and market crude and refined petroleum and their by-products and derivatives at internationally competitive prices both at home and abroad.

74. Today, it would hardly be an understatement to say that the NNPC has not accomplished this mission. It is largely a passive equity holder for the Government (treasurer for the Federation) in the joint-venture (JV) operating arrangements dominated by six multinational companies and in production sharing contracts (PSCs) with eight multinationals. Its wholly owned exploration and production subsidiary, the Nigerian Petroleum Development Company Limited (NPDC), established in 1988, has production assets of less than 50,000 barrels a day and even this is in association with a foreign multinational.

75. Why then has NNPC not been able to secure achievements comparable to those found elsewhere in the developing oil-producing countries, as is the case with Petronas in Malaysia, Petrobras in Brazil, PDVSA in Venezuela or Pemex in Mexico? Its gross under performance in the downstream sector, where it has a virtual monopoly in distribution assets (pipelines and depots) and refineries, has been a cause of serious national concern as it is continuing to have a negative impact on vital sectors of the national economy.

76. Industry experts and other stakeholders attribute NNPC's lack of achievement and problems to the overarching control of the central Government (currently, the Ministry of Petroleum Affairs is with the Presidency) and insist that only the granting of full autonomy to the corporation will enhance its competitiveness and efficiency. Only very few will recommend outright nationalization as a way of transforming the corporation into a real and effective national enterprise in oil production both in Nigeria and in the world. One middle way would be for Government completely to divest itself of some of its equity holdings in the JVs and use part of the proceeds to capitalize a restructured and reorganized autonomous national oil corporation having a governing board with oversight and general policy responsibilities, in which the Government will be fully represented. This corporation would have to be sufficiently capitalized and have enough autonomy to pursue the development of the Nigerian petroleum industry.

77. NNPC is currently undergoing reforms designed to move it away from regulation and total ownership by the Government towards commercialization and deregulation. New group executive directors and managing directors for its subsidiary companies have been appointed and the number of directorates reduced from six to four by eliminating the Directorates of Development, Engineering and Technology as well as Commerce and Investment. More such reforms will be undertaken. The commercialization and re-engineering reforms mentioned earlier should include authority for the corporation to retain the proceeds of its equity crude but pay royalty and petroleum profits tax just as its joint-venture partners do. If this is the case then NNPC, if properly managed and allowed to function independently, can be turned into a viable enterprise, from which the Government would receive a sizeable dividend as the owner of the corporation.

G. Cluster development in Nigeria: the Onne Oil & Gas Free Zone

78. In 1996 the Government of Nigeria declared a 16 square kilometre area in Rivers State a

dedicated “Oil & Gas Free Zone”. A year later, the zone opened, and since then it has developed fast, competing only with the new (2002) Luba Freeport in Equatorial Guinea as the prime cluster for oil services in the region.

79. The Free Zone serves as a distributive hub for Nigerian and West African oil and gas activities. The facility is strategically located in the centre of Nigeria’s Delta region and the Gulf of Guinea. It provides direct access to onshore, offshore and deep-water projects in Nigeria as well to the producing platforms in the Gulf of Guinea.

80. The Free Zone offers suppliers, operators and other users several incentives, including the following:

- 100% import and export duty exemption
- 100% exemption from commercial levies
- 100% repatriation of capital and profits
- 100% foreign company ownership
- No quota system for expatriate staff
- No corporate and personal income tax for offshore companies or their employees
- Duty rebates for goods assembled, processed or manufactured in the Free Zone.

81. The zone affords vessel operators, warehousing and cargo-handling companies and service providers significant inventory and cost benefits, for it permits duty-free stocking, which facilitates build-up of buffer stocks. At present there are over 100 licensed companies operating in the Zone, including the leading foreign and local services companies in the oil and gas business.

Onne (like Luba) has emulated several of the best practices of cluster development. The Zone includes local as well as foreign companies, covers a broad range of services, and targets regional rather than just national markets. The Government provides key infrastructure and an enabling regulatory framework. Onne Free Zone has already become the world’s largest free zone dedicated to the oil and gas sector, and its management points out that with the many billions to be spent on exploration and production operational and capital expenditures in West Africa (of which about 25% goes on logistical costs), opportunities are only improving.

82. The Onne Free Zone contains dry docks, machine shops, a cement factory, pipe-coating companies, environmental services, rig suppliers, a base for support vessels, etc. – a fairly comprehensive set of the activities that make up the oil services sector. The large indigenous firms such as Adamac and Intels are present, as well as the oil majors, foreign oil services firms, and smaller indigenous suppliers. The zone forms a perfect basis and catalyst for oil services cluster-development efforts – keeping in mind that according to the experience of cluster-development successes worldwide, what matters is not so much who owns the company, but where the work is done.

H. Sample survey results

83. We now return to the sample survey conducted in May/June and September/November 2004. Research assistants sent copies of a questionnaire directly to a total sample of 50 firms selected from the Directory of Oil Service Companies attached to the Annexes. Fifteen firms were located in Lagos and the remaining 35 in the Port Harcourt area. Senior research staff conducted information interviews with some key industry operatives. The survey experienced long delays in receiving responses from the various companies even after repeated reminders and visits by staff. It was especially difficult to secure access to the offices of firms located in the Port Harcourt area at the time because of the serious security problems in the delta area during the survey period. Most companies enforced tough security measures. A large number of companies, especially the smaller firms but even the very large indigenous and foreign companies, were suspicious of ‘strangers’ - a symptom of the tense operating environment in the Niger Delta. Moreover, many firms exhibited a clearly negative attitude to releasing information. We can confirm from experience that these are very practical constraints which independent researchers encounter in Nigeria; this is partly a cultural problem but it also illustrates the state of business development at the small- and medium-enterprise level.

84. The above limitations notwithstanding, the study determined that a large number of firms (about 30% are mainly single-proprietor entities. Usually, the owner/executives of these firms were not present in their offices, and survey staff were given to understand that the ‘owner’ or ‘MD’ had gone to his other businesses. In effect, not only are many firms listed as oil services companies small in size but they are not true oil services companies. They are opened to cash in on periodic opportunities that may occur from minor contracts from small contractors/subcontractors to oil services companies. In effect they are an indirect link to the supply chain but their activities may however sometimes be important. The bigger firms, both indigenous and foreign, regarded data on their firm’s profile, ownership structure, manpower and financial resources, project number and value completed and/or ongoing, etc., as *confidential information*. When we did not receive adequate responses from the companies (only 10 firms in all responded to our questionnaire) the survey decided to approach the Department of Petroleum Resources (DPR) and NAPIMS formally to request such information. DPR in particular has the statutory responsibility to register all companies intending to participate in services contracts in

the petroleum industry in Nigeria. We assumed that such comprehensive company data we assumed would readily be available in the public domain for use by researchers.

85. We had assured DPR that we were not interested in the names of the companies but only in data on the major characteristics of a sample of companies in terms of size, average number of workers, ownership structure, average number and value of projects completed, etc. DPR maintains a list of firms in five categories as shown in Table 5. A table showing the number of firms in each category with some other additional data would have been very useful for the purpose of this survey, but DPR replied in an official letter that it regards such information as *strictly confidential*.

86. Table 5 provides our estimate of the percentage number of firms in each category. It does not reflect their importance in the sector, especially in terms of the size of the workforce or the equipment, machinery, technical expertise or type of contract executed. We estimate that the industry is dominated by firms in categories C, D and E, with a significant shift occurring in recent times in ownership structure towards joint-venture alliances between foreign services

Table 5
Categorization of Nigerian oilfield services companies

Category	Title	Brief description	Percentage number
A	Wholly indigenous company	Wholly Nigerian-owned, has recognizable establishment and own resources (unquantified, italics ours) 1. Equipment must be 100% owned by company 2. 80% Nigerian directors minimum 3. 80% top management Nigerians 4. 90% senior field personnel Nigerians	50%
B	Majority Nigerian shareholding company	Company registered in Nigeria with majority Nigerian shareholding	10%
C	Alliance or joint venture	Alliance between a Nigerian company (category A and a foreign company (category E)	20%
D	Majority foreign shareholding company	Company registered in Nigeria with minority Nigerian shareholding	10%
E	Foreign company	Foreign company, whether registered in Nigeria or not, with no Nigerian shareholding	10%

Source: DPR and Survey Result

providers and highly qualified and financially capable Nigerian entrepreneurs. Firms in category A are dominated by single-proprietor ownerships, the more successful ones acting as agents of non-resident foreign services companies.

87. The INSTSOK report on enhancement of local content in the upstream oil and gas industry in Nigeria (August 2003) notes that many indigenous oil services firms are very small in size, with an average manpower level of under 50. ‘Management of these companies is often in the hands of non-technical entrepreneurs who are wary of delegating authority to those with the required competence to run the outfits. With several retired oil-industry personnel working in relative isolation as consultants and suppliers of goods requiring little or no value addition, their areas of competence are fragmented and cannot match the strength of the foreign companies. This lone-star syndrome has been an obstacle to the merging of small contractors to create larger and more efficient indigenous companies.’

88. The same was noted by Henry MacPepple, Chairman/CEO of the Adamac Group (Nigeria’s largest indigenous oil services company) at a conference in 2002: ‘The peculiar tendencies of Nigerian entrepreneurs to persistently stick to sole ownership of business do not help matters in the competitive and capital-intensive terrain of the oil industry. Their penchant to fly alone rather than partnering and alliancing has made the local upstream business growth stunted.’

89. One symptom, perhaps, of the lack of transparency of the sector and the lack of interest of many indigenous oil services companies to change this is the failure of the Nigerian Energy Services Business Directory (www.nesbd.com) to take off. This website is relatively well-designed and gives

straightforward functions. It has a notice board for prequalification notices, open tenders and contract plans; and oil services companies can register themselves in a searchable directory. However, the latest prequalification notice dates from November 2004 (10 months prior to the drafting of this report) and, in the 18 months prior to that, a total of only 20 notices were advertised. Some oil majors, such as Addax, BP, Statoil and Total, never used the system to advertise their tenders. On the directory side, much of the information is out of date (incidentally the majority of the Nigerian companies listed use ‘yahoo’ email addresses - another indicator that their companies tend to be very small). A hopeful sign of change, though, is a recent trend towards partnerships with foreign counterparts.

90. The INTSOK report further analyzed the characteristics of the contracts signed in 2002 by the three major operators (Shell, Chevron and ExxonMobil) with 447 operators. Table 6 gives an overview of the data. In 2002 a quarter of the contract value was with companies having significant value-added in Nigeria.

91. Two results merit emphasis. First, the larger part of value addition in Nigeria is by foreign-owned companies in terms of contract size, their contribution is twice the size of the much larger number of Nigerian companies. Second, the large majority of the Nigerian companies active in the sector actually have most of their value-addition abroad (the Nigerian companies function more as ‘middlemen’ or local assembly

Table 6
Major contracts in Nigerian oil and gas companies by location of their value-addition activities and ownership, 2002

	Companies with significant value-addition in Nigeria		Companies with most value-addition abroad	
	Nigerian-owned	Foreign-owned	Nigerian-owned	Foreign-owned
Number of companies	55	24	201	167
% of total number of companies	12%	5%	45%	37%
% of total contract value	8%	17%	10%	65%

Source: Per Heum and others. Enhancement of local content in the upstream oil and gas industry in Nigeria: a comprehensive and viable policy approach, INTSOK, August 2003.

plants than as genuine 'productive' enterprises). This underscores a common theme in studies on cluster development: what matters is the location and nature of the activities, not the ownership of the companies; therefore, policies for developing local content should focus on local value-added rather than on the ownership of the companies involved.

92. Local value-addition, according to this study, is strongest in United States dollar terms in projects/construction EPC, followed by drilling and well completion. According to the INTSOK study, potential for local content is greatest in fabrication, followed by well completion, transportation (where Nigerian-owned companies with most value-addition in the country had only 5% of the market), subsea installation, control systems, development drilling, enhanced/improved oil recovery, and design and engineering (topside facilities, which according to government regulations now have to be produced in the country, are lower on the list).

H.1 Size of the market

93. The oil and gas field services market in Nigeria in the past few years was worth approximately \$8 billion a year (Kupolokun GMD, NNPC and industry sources), of which it is estimated that less than one fifth accrues to local contractors. Investments by NNPC and its joint-venture partners are projected to reach \$60 billion from 2005 to 2009 (\$27.5 billion on procurement; \$10.6 billion on construction; \$10.6 on fabrication; \$4.2 billion on engineering), and of this, 70 per cent *should* be spent locally, according to the Government's express wish.

94. The potential is therefore large. It is a highly competitive market as policies and practices for contract tendering and award are open and reasonably transparent. The industry employs state of the art technology in delivering services, employing a highly trained and skilled multinational workforce and utilizing the best practices in management and environmental standards (see chapter 7). Technical capacity in Nigeria is good in several areas, including some where local content is currently low. For

example, in the natural gas sector a 2002 survey found that for natural gas/LNG, 'large concrete substructures may be constructed in Nigeria at costs and on schedules comparable to those of similar construction in Northern Europe.' (*Examining Nigerian-built concrete substructures for floating or gravity based liquefied gas production facilities*, [http://www.fwc.com/publications/tech_\[a\[ers2/files/ALKAPLAN.pdf](http://www.fwc.com/publications/tech_[a[ers2/files/ALKAPLAN.pdf))

95. The industry has all the classic features of an enclave sector with very few linkage and multiplier effects on the local and national economy. However, there are firm indications that this is changing as oil majors have begun actively to implement sustainable local-content development strategies. Large international oilfield services firms have also reacted by intensifying their contacts with (potential) local sub-contractors. SAIPEM, for example, started having intensive meetings with local suppliers in October 2003 and currently subcontracts to a number of them.

96. Given existing capacities in the local oil services industry, the roles that local companies can play in inland and offshore locations in the Niger Delta is much larger than that in deep-water fields. In the Niger Delta fields, most of the engineering work and much of the other services can be provided by indigenously owned companies. As Table 7 shows, a total of more than \$14 billion is expected to be spent on onshore operations in Nigeria in 2003-2007. Capital expenditure accounts for more than 40 per cent, and 28 per cent of this is for civil engineering (mostly large construction projects).

97. In deep-water fields, the major activity will be drilling. The topside integration jobs for FPSOs can be done locally, but not necessarily by indigenous companies; nevertheless, local companies can benefit indirectly. For other deepwater services, Nigerian firms by and large still need to build up the necessary capacity in the most relevant areas (platform engineering, engineering of flowlines and subsea equipment, and reservoir management and well design).

Table 7
Nigerian offshore and onshore expenditure, 2003-2007 (\$US mln)

	2003	2004	2005	2006	2007
Offshore					
Seismic acquisition	30	32	40	40	38
Seismic equipment	4	5	7	7	6
Reservoir modelling	4	4	5	8	8
Drilling & wells	1,028	1,172	1,431	1,280	1,152
Downhole & well services	297	338	413	368	340
EDPM	120	140	130	163	242
Fixed platforms	623	690	421	605	588
Floating platforms	578	712	842	987	1,717
Subsea fields	152	320	327	266	145
EI&T	24	28	29	35	55
Marine equipment	47	58	68	80	139
Maintenance	122	130	146	165	177
Modifications	490	521	582	640	688
Operations	612	652	727	805	865
Onshore					
Operational expenditure	1,429	1,458	1,472	1,486	1,501
Capital expenditure	1,154	1,177	1,189	1,201	1,212
Drilling expenditure	115	138	138	173	177

Source: Douglas-Westwood, 2003, quoted in Per Heum and others, Enhancement of local content in the upstream oil and gas industry in Nigeria: a comprehensive and viable policy approach, INTSOK, August 2003.

H.2 Drilling operations

98. Drilling activity is a signpost of activity in the services industry. Table 8 gives an impression of the kind of costs in well-drilling, which gives some indication of business potential for local services providers.

By January 2004 drilling activity had been recorded in 15 locations, with a total of 10 rigs operating offshore, three onshore and two in shallow swamp waters.

99. Offshore drilling continues to dominate as a significant proportion of E & P activities by the major operators since the giant deep-water discoveries were made offshore. As at the end of 2003, 110 wells had been drilled in these deep-water and ultra-deep-water oil blocks; 18 of the wells were dry, 41 were exploratory and 21 were first and second appraisal, while 30 were drilled as ordinary wells. Deep-water drilling activity is

expected to peak in 2005. Onshore drilling is expected to grow strongly in 2003-2007, with the number of wells increasing by a third.

100. Table 9 shows drilling activities during January 2004. SNEPCO (Shell Nigeria Exploration & Production Company) with its giant Bonga project was the clear leader in rig activity, with rigs operating on six wells, namely Bonga N & W, Bonga 6, Bonga 20, Bonga 16 and Bonga 7, located in deep water with depths of 7,514 ft, 11,500 ft, 10,000 ft, 11,472 ft, 10,820 ft and 1,840 ft respectively. The current subsea system contract for the Bonga project, with ABB, calls for 32 subsea trees for the period up to 2009, but eventually, in order to optimize production levels, as many as 75 wells might be connected to the Bonga FPSO platform.

101. SNEPCO was followed by ExxonMobil and AGIP. ExxonMobil had three rigs through its ESSO subsidiary, namely Erha 5, Bosi 3 and Erha, and another two rigs through Mobil. AGIP had five rigs, three onshore through Nigeria Agip Oil Company (NAOC), and a further two through its deep-water subsidiary, Nigeria AGIP Exploration. ChevronTexaco had four rigs operating during the period, and two through Total (registered in the Table under the name of its indigenous partner in the field in question, South Atlantic Petroleum), all offshore. Elf also had two offshore rigs. Moni Pulo Ltd, an indigenous oil firm established in 1993, was active in the Abana field, in shallow water at the mouth of the Calabar river. The average depth of wells being drilled is 5,137m with a range of 12,000m to 499m.

Table 8
Overview of expenses for well-drilling: the example of Ofon
well 11, sub-horizontal well, shallow-water drilling, 2002

WELL COST PER DETAILS \$ '000					
PHASE AND NUMBER OF DAYS		1 23.10	2 22.20	3 2.00	TOTAL 47.30
RIG	1 Rig fees	1,582.35	1,520.70	137.00	3,240.05
	2 Catering	25.41	24.42	2.20	52.03
	3 Mob/demob				
	Subtotal	1,607.76	1,545.12	139.20	3,292.08
SERVICES	1 Electrical logging		650.00	50.00	700.00
	2 Cementing/pumping	39.27	37.74	3.40	80.41
	3 Well testing			7.00	7.00
	4 Mud logging	32.30	36.67	2.80	71.77
	5 Mud engineering	23.10	22.20	2.00	47.30
	6 Directional drilling		220.78		220.78
	7 MWD		457.33		457.33
	8 Casing/tubing sces		134.16	67.08	201.24
	9 Downhole equipment		94.40	1.00	95.40
	10 Waste management	46.20	49.41	4.00	99.61
	11 Filtration/GP/Stim/CT				
	12 Wire line				
	13 ROV				
	14 Coring		200.00		200.00
	15 Wellhead sces	13.90	13.28	1.20	28.38
	16 Other services	46.20	44.40	4.00	94.60
	Subtotal	200.97	1960.37	142.48	2303.82
CONSUMABLES	1 Fuel/lubricants	138.60	133.20	12.00	283.80
	2 Bits		134.16		134.16
	3 Mud/comp. Products		603.72	335.40	939.12
	4 Cement/additives		134.16	20.00	154.16
	5 Tubular		168.52	134.16	302.68
	6 Wellheads				
	7 Bottom hole equip.				
	8 Other consumables				
	Subtotal	138.60	1173.76	501.56	1813.92
SUPERVISION	1 Rig supervision	46.20	44.40	4.00	94.60
	2 Other supervision				
	3 Technical studios	34.70	33.25	3.00	70.95
	Sub Total	80.90	77.65	7.00	165.55
TRANSPORT	1 Road	9.24	8.88	0.80	18.92
	2 Air	92.40	88.80	8.00	189.20
	3 Sea/river	693.00	666.00	60.00	1419.00
	4 Base facilities	184.80	177.60	16.00	3778.40
	Subtotal	979.44	941.28	84.80	2005.52
INSURANCE	1				
NEAREST BASE	1				
SUBSIDIARY	1 Allocation in	142.10	132.20	15.00	289.30
	Subtotal	142.10	132.20	15.00	289.30
TOTAL		3,149.77	5,830.38	890.04	9,870.19

Source: Menas Associates, *Nigeria Focus*, January 2003.

Table 9
Drilling activities, January 2004

NO	COMPANY	RIG NAME	WELL	OML/OPL	CLASS	LOCATION	TERRAIN	SPU DATE	DEPTH
1.	SNEPCO	Sedco 709	Bonga N&W	212	Dev.	East	offshore	05/12/03	7,514 ft.
2.	SNEPCO	Sedco 709	Bonga 6	212	Dev.	East	offshore	10/12/03	11,500ft.
3.	SNEPCO	Sedco 709	Bonga 20	212	Dev.	East	offshore	25/11/03	10,000ft.
4.	SNEPCO	Sedco 709	Bonga 5	212	Dev.	East	offshore	23/12/03	11,472ft.
5.	SNEPCO	Sedco 709	Bonga 16	212	Dev.	East	offshore	03/01/04	10,820ft
6.	SNEPCO	Sedco 709	Bonga 7	212	Dev.	East	offshore	19/10/03	11,840ft.
7.	ESSO	Saipem vii	Erha 5	209	Dev.	West	offshore	22/06/03	1,920m
8.	ESSO	Saipem viii	Bosi 3	209	Dev.	West	offshore	26/08/03	3,479m
9.	MOBIL	Adriatic viii	Yaho Water	104	Dev.	East	offshore	26/06/03	3,781m
10.	ESSO	Hulme MG	Erha	209	Dev.	West	offshore	24/11/03	3,606m
11.	MOBIL	Adriatic viii	Yoho 20A	104	Dev.	East	offshore	26/06/03	3,850m
12.	SOUTH ATL.	Discovery	Preowei 1B	246	App.	East	offshore	20/09/03	3,110m
13.	SOUTH ATL.	Hulme MG	Akpo 6	246	App.	East	offshore	05/09/03	3,895m
14.	ELF	Adriatic 1	Amkp 1-16	99	Dev.	East	offshore	23/11/03	756m
15.	ELF	Adriatic 11	Amkp 2-15	99	Dev.	East	offshore	24/11/03	567m
16.	CHEVRON	Roy Butter	Mefa 45	90	Dev.	West	offshore	15/12/03	3,378m
17.	CHEVRON	Roy Butter	Rebekiri	55	Dev.	West	offshore	22/11/03	11,570m
18.	SHELL	Parker 75	Kamb 0-6	46	Dev.	West	onshore	08/11/03	4.99m
19.	SHELL	Don Walker	Opukoshi	46	Dev.	West	onshore	13/05/03	12,000ft
20.	MONEPULO	Don Walker	Abana	114	Dev.	East	offshore	15/08/03	2,583ft
21.	NAOC	Saipem 3832	Obiafo 34	61	Exp.	East	onshore	21/11/03	2,405m
22.	NAOC	T6	Kwale 17	60	Dev.	East	onshore	22/11/03	2,503m
23.	NAOC	T6	Kwale 16	60	Dev.	East	onshore	03/11/03	2,112m
24.	NAE	Saipem 1000	Abo 6	125	Dev.	East	offshore	10/10/03	2,556m
25.	NAE	Deutag 6	Ogbo. Neme	61	Dev.	East	Swamp	01/11/03	697m

Source: *Oil and Gas Monthly*, June 2004.

BOX 3
The Nigerian experience with clusters

An interesting example depicting some of the positive benefits of clustering are the gains to both oil operating companies and local indigenous service providers made through the oil-industry-wide Materials Management Forum devised by NAPIMS and inaugurated at the end of 1995. The Forum's mission statement is "to improve materials and logistics management in the Nigeria upstream petroleum industry through sharing of resources and information on best practices for the benefit of the Nigerian oil and gas industry without infringing an individual company's competitive edge." The following are some of the milestone achievements of the Forum:

- Sharing of information on best practices and experience/benchmarking, i.e. stocking system, sources/acquisition/utilization of materials etc.
- Resources/facility-sharing, i.e. aircraft, boat services, fuel storage facilities etc. (about \$150 million has so far been saved as a result of these activities).
- Encouragement of in-country coating of pipes (through the concerted efforts of the Forum, Bredeso Price Nig, Ltd. (subsidiary of Brodero Price Inc., USA.) A world-class plant specialising in polyethylene (PE) and Fusion Bonded Epoxy (FBE) was commissioned in December 1997 in Warri, Delta State.

The group has organized series of international trade exhibitions and suppliers' forums and actively promoted local-content development through the sharing of information on contractors.

CHAPTER FOUR

OPPORTUNITIES AND CHALLENGES FOR OPERATORS IN THE INDUSTRY

A. Introduction

102. Over the next several decades, the oil and gas industry faces challenges as well as opportunities, as oil and gas will continue to remain two of the most important fuels propelling the engine of global prosperity. The discovery of gigantic new deep-water oil resources in Nigeria and neighbouring Equatorial Guinea and huge prospects in the Joint-Development Zone (JDZ) between Nigeria and the island nation of the Democratic Republic of Sao Tome and Principe have heralded a new oil and gas age in Nigeria, one with tremendous opportunities but daunting challenges. It is an age in which the country's leaders and communities in the oil-producing areas have come to the common realization that the oil and gas industry must, in conjunction with Government, adopt new strategies to foster overall national development. An overriding aspect of this process will be the need for it to be responsive to the economic and welfare aspirations of the oil communities and local contractors and suppliers in the services industry.

103. The process of globalisation has increased worldwide awareness and generated urgent demands in key world institutions (United Nations, World Bank group, OECD, Group of 8) for the extractive industries, principally oil and gas, to take a leading role in addressing the needs of their host countries for economic growth and enhanced social well-being and quality of life. A first important step in this direction is for the industry to create jobs and economic activity for suppliers, contractors and local communities and transfer technology through appropriate training and skills development. In its 2005 bidding round (in which 78 blocks were put up for tender and 30 were finally awarded) the Nigerian Government highlighted such aspects more explicitly than in the past, not only including the new concept of "local-content vehicles" as tools for indigenous enterprises to get a 10 per cent share (fully paid) in oil production but also explicitly providing that operators for the blocks will be selected

according to the weight given to local content in the bidding session; furthermore, for some blocks there was an explicit link between the upstream opportunities and commitments that the bidder would have to make in the downstream sector (refining, power). In the bids that were finally accepted, \$3 billion was committed in work programmes, with 42 per cent earmarked for local content.

B. Opportunities in Nigeria's deep water

B.1 The SNEPCO case study

104. The Shell Nigeria Exploration and Production Company Limited (SNEPCO), the developer and operator of the Bonga deep-water oilfield located in OPLs 212 and 219, is pioneering the creation of opportunities for local content in its implementation of the project as part of its sustainable-development strategies.

105. The project is operated on behalf of the NNPC by SNEPCO in a joint venture between Shell (55%), Esso Exploration and Production Company Nigeria Ltd (20%), Nigeria Agip Exploration Ltd (12.5%) and Elf Petroleum Nigeria Ltd (12.5%) under a production sharing contract (PSC). The project provides an excellent case study of the kinds of opportunity open to local contractors and the challenges they face in coping with them.

106. The development of the blocks located some 120 km offshore in water depths of between 200 and 1400 metres required cutting-edge technology that was unconventional, unavailable locally and very different from the technology used in traditional onshore fields. From the inception of the project as part of its overall sustainable-development strategy SNEPCO evolved a plan for developing local capabilities in deep-water engineering and construction that comprised a capacity-building programme for its staff and other personnel associated with the project and the stipulation of a Nigerian-content objective for its contractors (see Table 10).

Table 10
Efforts made to increase local content in the Bonga project

ISSUE	GOVERNMENT EXPECTATION	CONTRIBUTION
Indigenous staff recruitment	Recruit to achieve a given indigenous profile Provide employment for Nigerians	<ul style="list-style-type: none"> Recruitment through (SITP) Shell Intensive Training Programme. Steady growth plan for Nigerian staff.
Nigerianisation	Reserve some categories of job and percentage of jobs for Nigerians: 90% in 2004, 99% in 2010.	<ul style="list-style-type: none"> Policy in place to ensure Govt. 2004/2010 targets are met. Currently, 50% Mgrs; 80% overall.
Training & education	Plan & programme for industrial training & education of Nigerians. Submit annual programme for recruitment & training of Nigerian personnel to Govt.	<ul style="list-style-type: none"> Annual skills appraisal and planning process established to identify and place staff on local and overseas training/workshops.
Indigenous contracting	Preference for goods available in Nigeria or services rendered by Nigerian nationals. Percentage premium for local contractors' commercial bids over those of foreign competitors.	<ul style="list-style-type: none"> Policy on indigenous contracting. Preferential 10% premium for local contractors' commercial bids. Exclusive use of local contractors in identified areas of capability, e.g. oil-sample testing and IT supplies Establishment of cyber-café for on-line bidding in Warri and Port Harcourt to help local contractors bid through the internet without disability. Over 300 local suppliers have been trained with this (e-commerce) advantage
Capacity-building	Transfer of technology. Local business/capability development. Development of alliances/partnerships with local companies.	<ul style="list-style-type: none"> Cross-posting assignment/overseas training. Collaborative workshop projects/development of local contractors' capability. Use of ITT with built-in incentive for foreign contractors who demonstrate use, partnership or development of local contractors/local content. Pre-Bonga survey of local contractors; Bonga EPIC contracts implemented in Lagos, Warri & Port Harcourt. 3D Visualisation Centre in Lagos. Business contractor (BIPIC) designed to build improvement programme for indigenous capacity of contractors, help them with better contract and cash flow management so as to enable them to offer higher and better-quality services, established in partnership with Africa Project Development Facility (APDF).

107. The Nigerian-content objectives contain specific obligations which contractors for the project are required to stipulate when bidding for contracts:

- Percentage of Nigerian workforce in company
- Nigerian share of company ownership
- Investment policy for Nigeria
- Commitment to Nigerianisation in terms of employment, training and procurement.

In order to pre-qualify, contractors obtain a high score in overall ranking when they give (a) a description of the Nigerian BASE operation – interest or future plans or proposals, and (b) a strategy for enhancement of Nigerian content within the contract.

108. The specific tender requirements for Nigerian content and knowledge-transfer include:

a) Nigerian content:

- Use of made-in-Nigeria goods
- Value-addition/fabrication/assembly of components within Nigeria
- Involvement of Nigerian banks, insurance and other financial institutions

b) Transfer of knowledge and technology:

- When goods and services are not available in Nigeria, provide a knowledge/technology transfer plan
- Search for experienced Nigerians and encourage engagement
- Increase Nigeria's skills pool through training, exposure and certification

All the five big contractors which were awarded the major EPIC contracts adhered to these guidelines and principles, with the result that substantial contracts were executed in Nigeria by Nigerian firms, some in alliance with foreign firms based in Nigeria, as shown in Table 11 below.

Table 11
Major local contracts awarded by SNEPCO in 2003

	Contractor (Subcontractors)	EPIC Contract	Activity	Location
1	ABB Vetco Gray (TBD)	Subsea systems and Umbilicals	Welding of flow line jumpers	Lagos
2	ABB Vetco Gray (TBD) (Ascot Eng. Nig. Ltd.)	Subsea systems and Umbilicals	Construction of manifold foundations, piles, stabilisers and guide bases	Port Harcourt
3	ABB Vetco Gray (TBD)	Subsea systems and Umbilicals	Delivery of sub-sea equipment to installation contractors	Orme
4	SBM (Robey Donnan Long and Navy Dockyard)	Mooring and Installation	Fabrication of FPSO/SPM foundation piles	Lagos
4a	SBM (Nigerdock)	Mooring and Installation	Fabrication of SPM Buoy	Lagos
5	SBM and CSO	Mooring and Installation	Transportation of Sub-sea equipment from SNEPCO contractors (ABB Vetco Gray) base Orme to Bonga offshore location	Orme
6	Stolt (Globestar)	Flowlines and Risers	Fabrication of Jumper spools, flow line termination etc.	Warri
7	Stolt (Nigerdock)	Flowlines and Risers	Fabrication of double joints for water injection lines	Lagos
8	Stolt (socothem)	Flowlines and Risers	Concrete coating of gas export line pipe and insulation coating of production risers	Orme
9	AMEC (Daewoo Nig. Ltd)	Topsides Design, construction and pre-commissioning	Fabrication of flare boom, gas metering and lay down modules	Warri
10	AMEC	Topsides Design, construction and pre-commissioning	Base support for offshore commissioning activities	Orme

SOURCE: SNEPCO

109. The Five major EPIC contracts were awarded to:

- Samsung – vessel hull
- Amec – top sides
- ABB – subsea workscope
- STOLT – flowlines/mooring
- SBM – loading buoy

Local content in the EPIC contracts was low at only four per cent, principally through subcontracting of the single-point moorings (SPM) piles to Nigerdock. This compared to an overall local content of 25 per cent in the Bonga project as a whole (high local content in drilling (37%) and operations (50%) making up for the low EPIC local content).

B.2 Main features of the Bonga project

110. The Bonga project consists of a permanently moored non-weather-vaning floating production, storage and offloading (FPSO) unit with subsea wells for producing oil with associated gas and injecting water. The FPSO consists of topsides modules, provided by AMEC, mounted onto and integrated in Wallsend UK with a very large crude carrier (VLCC) size hull (length 303m, beam 58m, depth 33m and draught 24m) built by Samsung in Korea. It was at the time of construction the world's largest FPSO, with a length equal to almost three football fields, the height of a 12-floor building, and a deadweight of 312,500 tons.

111. The FPSO has facilities for oil, gas and water handling. Oil will be exported by shuttle tankers, gas exported via a pipeline to an offshore gathering system. The Bonga operations and support staff consisted of:

- 40 technicians (various disciplines, Nigerian staff)
- Operations line staff - OIM, production supervisors (Nigerian Development)
- Various engineers (Nigerian)
- OPRM leads (expatriates)
- Mentors (various disciplines, expatriates)
- Reviewed staffing strategy after peer review
- AMEC support during commissioning, start-up and warranty.

B.3 Operational contracts

112. Examples of the range of contract services that have been under development/tendering and award to support the operational phase of the Bonga since late 2003 include:

- Marine-support vessels
- Cranes and deck services
- Operations services:
 - Pigging
 - Marine pilotage
 - Supply of operational chemicals
 - Maintenance services
 - Oil and gas metering
 - Process gas compressors
 - Gas turbine generation units
 - Inspection services
 - Pump maintenance
 - Provision of gases and cylinders
- Manpower services

113. A majority of these contracts are well within the competence and capabilities of a few large and medium local contractors; SNEPCO with its well-defined strategy for local content on the Bonga is a pioneer case study in offering significant opportunities for local contracting firms in deep-water projects; this strategy is serving as the preferred industry standard for ongoing and future Nigerian deepwater oil and gas E & P programmes.

C. Opportunities in marginal fields

114. The Petroleum (Amendment) Decree No.23 of 1996 provided the farm-out option holders of an oil mining lease (OML) or for the Head of State, with regard to marginal fields. Marginal fields are small fields which cannot produce 10,000 barrels per day and are judged not viable for development by the leaseholder. These fields were acquired by the Federal Government from the multinational oil companies, which had abandoned them owing to low reserves and productivity as well as high operating costs. The objectives of the programme are to:

- Enhance indigenous participation in the upstream sector of the oil and gas industry;
- Enable indigenous E & P companies to gain vital skills and technology; and
- Provide additional job opportunities for Nigerian professionals and skilled workers.

115. The Government has issued licenses to 31 indigenous companies for the development of these fields in 24 locations in the Niger Delta with recoverable reserves of 800 million barrels. As part of this process, following a competitive bidding exercise in which 40 companies bid for Shell's 12 marginal fields, in February 2003 the Government announced the names of 16 indigenous companies awarded the oil fields. Similar procedures took place for another eight marginal fields released by Total and ChevronTexaco. Since then, negotiations have taken place between the oil majors and the awardees in conjunction with DPR and NNPC. These negotiations were centred on farm-out agreements, especially such issues as deep-drilling rights, liabilities of the parties, and insurance requirements of the marginal field companies. Shell announced on 24 November 2004 that all outstanding issues had been successfully resolved and farm-out agreements signed with all the 16 local companies, resulting in the formal handover of its 12 fields to the companies. In the same period Chevron signed farm-out agreements for its eight fields, and ELF for its four fields. The local firms are to pay \$150,000 as mandatory signature bonuses. See annex 8 for an overview.

116. The indigenous companies are encouraged to farm out part of their lease holdings (up to a maximum of 40%) to foreign partners to help address the usual problems of technical expertise and funding, and several had already done so by the start of 2005. Shell, Chevron and ELF built into the farm-out agreements key provisions that will enable them to offer ongoing support to the incoming indigenous operators under their capacity-building programmes.

117. Shell has made a commitment to review the work programme of the marginal-field operators and comment on them, as and when necessary, especially with regard to their technical quality, to which they will make contributions. With regard to deep drilling, the farm-out agreements require Shell to review the technical and safety aspects of deep-drilling programmes advising on them. Shell will offer at no cost to the marginal operators health, safety and environmental (HSE) audits, which are a critical aspect of E & P operations. Further actions taken by Shell to

facilitate the effective participation of the local marginal operators include:

- The completion of environmental evaluation studies (EES) for all 12 marginal fields and delivery of an environmental evaluation report (EER) for each field. The company has concluded the EERs and issued them to the operators as well as submitting the terms of the oil mining leases (OML) to them.
- Shell has submitted land documents relating to the marginal fields encompassed within well-defined farm-out areas.

118. As a measure of its commitment to the success of the programme, Shell has appointed a non-operator manager to handle all the issues and challenges that the operation of the marginal fields will pose to operators. Local indigenous operators are now producing about 150,000 bbl/d of total oil production in Nigeria, and output is expected to increase to 200,000 bbl/d by 2004. If the successful indigenous owners of the marginal fields can find the finance and overseas technical partners to work with, the technology now exists greatly to increase the productivity of these wells, thereby enhancing their contribution to production and the related services.

D. Opportunities in the Joint Development Zone

119. Nigeria and the Democratic Republic of Sao Tome and Principe (STP) have entered into an agreement to develop jointly the oil reserves in a total area of some 28,000 square kilometres in the Gulf of Guinea under a Joint Development Authority (JDA). The area is regarded as one of the most prolific oil and gas provinces in the world today. The JDA has the task of developing the oil and gas resources in the overlapping maritime area of the two countries. The resources of the JDZ will be shared, with Nigeria taking 60 per cent and STP 40 per cent; the duration of the treaty is 45 years, with a review after 30 years. Nine blocks have been put up so far for development. The winners of Block 1 were ChevronTexaco, Exxon Mobil and Dangote Energy Equity Resources (a joint venture between a Norwegian and a Nigerian company). A production sharing contract (PSC) was signed in February 2005. The Joint

Ministerial Council of the JDZ opened a second licensing round in December 2004, and PSCs for five more fields were to be signed in November 2005.

120. The JDZ offers immense opportunities for service contractors in Nigeria as no similar entities or structures exist in Sao Tome at present, nor can they be expected in the foreseeable future. Nigerian E & P operators who have just been empowered to develop marginal fields within the country have in the JDZ a much greater potential to widen the scope of their activities and become big players in the oil industry in West Africa.

E. Issues and challenges

121. The SNEPCO Bonga local-content strategy cited above has brought to light some issues during project implementation which will inform and assist other programmes for local-content development. These issues were discussed at a workshop organized by SNEPCO for all major stakeholders in November 2003. The issues were raised by representatives of local contractors, and recommendations made to the SNEPCO management. This is indicative of the kind of business-to-business links and interaction typical of clustering which promotes a wide range of benefits, increasing knowledge and spreading best practice fundamental to the rapid development of enclave industries. Some of the issues are summarized in Table 12.

122. Deep-water exploration and production involves the use of state-of-the art techniques and systems. They are at the cutting edge of engineering technology which is scarce and available only to a few-world class oilfield services companies. Moreover, such systems, processes and applications are immensely expensive and operations are in very difficult terrain – deep and ultra-deep water. Participation by local companies in the value-added chain of the deep-water exploration and production environment will be severely limited despite governmental demands for rapid local-content development unless a conscious national strategy is evolved along the following lines:

(i) Operator and contractor collaboration integrated into major deep offshore

development activities, as shown in the SNEPCO Bonga case study;

- (ii) Plans and programmes for industrial training and education of Nigerians, especially in specialised training programmes in selected universities within the oil-producing areas;
- (iii) Capacity-building programmes to ensure a rapid transfer of technology through the development of collaborative partnerships between operating companies and local companies.

123. Petroleum exploration and production responds largely to economic logic and the dynamics of technology. It follows that the centrepiece of any action to mitigate the constraints of local entrepreneurs in the oil and gas services sector, as mentioned earlier, must aim not merely at the enactment of a progressive local-content policy but at a specific set of policies and action programmes to invigorate the existing clusters in the oil and gas sector in Nigeria. The support firms, service providers and institutions that make up the bulk of firms in the sector are faced with common opportunities and threats, and strong interlinkages between firms can bring about big economies of scale that will sow and reap industry-wide benefits. Major projects in SNEPCO now have focal points for local-content development (LCD) in technical teams on Bonga-main and OML-118 second-phase development. All phases of projects are expected to include plans for LCD. Bidders are required to indicate their LCD plans as a technical input for technical pre-qualification for all contract tendering (including major EPICs and subcontract tenders).

124. The Federal Government has recently taken through NAPIMS further initiatives to widen the scope of opportunities for local contractors in the deepwater sector. NAPIMS has recently announced a baseline of 25 per cent for local contractors to be included in the tender process for the multi-billion-dollar Agbami field development operated by Chevron Texas. More importantly, it has ruled out the fabrication and construction of the single-point mooring (SPM) buoy outside Nigeria, following the success recorded by an indigenous company, Nigerdock plc, in the fabrication of the Bonga SPM.

Table 12
Issues relating to design and construction contracts and recommendations:
Lessons of SNEPCO Bonga Project development

ISSUES	RECOMMENDATIONS
<p>1. <u>LOW LEVEL OF EPIC</u> The Bonga Project is expected to achieve 25% local content, specifically 4% in EPIC, 37% in drilling and 50% in operations. The level for EPIC was considered very low.</p>	<p>1. SNEPCO needs to do more supportive work in maintaining and promoting more widespread participation of local companies in the EPIC area. Industry operators (including the major foreign services companies) should protect the local contractors by clearly oil contractual terms and managing the Nigerian local subcontractor to ensure that he keeps up with required project-control and management standards.</p>
<p>2. <u>SUSTAINABILITY</u> SNEPCO observed that some competent local companies have not been able to sustain their performance standards. It noted that it is essential that local contractors put in place measures to enhance their capabilities continuously.</p>	<p>2. Local contractors (LCs) should strengthen their organizations by employing competent and professional people to ensure that their organizations stand on a firm footing. Combinations and mergers should be considered in certain cases to achieve initial mass. LCs should make use of the services of retired industry executives in management or advisory positions to improve corporate governance.</p>
<p>3. <u>MANPOWER</u> There is need to educate and train high-quality personnel in skill areas that are in high demand in the industry.</p>	<p>3. The Petroleum Training Institute (PTI) must be redirected to follow its original mandate of specialising in training manpower for the industry. <u>Its links with the industry must be strengthened</u> to ensure that the courses taught are relevant to the needs of the industry. Also some <u>selected universities should be encouraged to collaborate closely with the industry and specialize in industrial issues.</u> <i>The underlined are some of the benefits that a targeted cluster-development policy can yield to promote growth in the sector</i></p>
<p>4. <u>PRICE PREMIUM FOR LCs</u> It was emphasised that local contractors need to be encouraged by allowing a price margin in bids where their prices are higher than those of the foreign counterparts.</p>	<p>4. This is a very fundamental aspect of the local-content development policy which the local contractors' representatives recommend strongly. This concession should temporary and should be eliminated as soon as the local contractors can hold their own. This survey notes that grants, subsidies, etc., once in place, are difficult to remove. Other incentive schemes that enhance price competitiveness should be devised.</p>
<p>5. <u>UNDERUTILISED INFRASTRUCTURE</u> As is evidenced by the role the Nigerian Naval Dockyard has played in fabrication for the offshore oil industry, there is need for collaboration between agencies of the Government or the private sector and local contractors to seek underutilized manufacturing capacity that can be leased to local contractors. <i>Again here a targeted cluster development initiative for the sector will facilitate this kind of linkage and benefit.</i></p>	<p>5. Local contractors must go out of their way to seek underutilised fabrication facilities and infrastructure for leasing until they are in a position to set up such facilities for themselves.</p>
<p>6. <u>DELAYED PAYMENTS</u> Prolonged delays in payment of local contractors beyond the period stipulated in their contracts have a negative impact on their cash flow and consequently on their performance. It also negatively affects their creditworthiness in the eyes of offshore bankers.</p>	<p>6. The industry should honour agreements with contractors, no matter what the reason for the unavailability of funds. It goes against international best practice to delay payments from 45 days up to 120 days without any form of compensation.</p>

Source: SNEPCO, report on deep-water local-content workshop, 2003.

CHAPTER FIVE

LEGAL AND INSTITUTIONAL FRAMEWORK OF PETROLEUM OPERATIONS IN NIGERIA

A. Introduction: the concession era

125. The laws and policies guiding petroleum development in Nigeria date back to 1914, when the British colonial administration enacted the Mineral Oils Ordinance No. 17 (1914) and the Mineral (Amendment) Ordinance No. 1 (1925). These ordinances vested the ownership of oil in Nigeria in the British Crown, thereby granting Britain a total right of alienation or disposition of all crude oil discovered in Nigeria. Typical of concession regimes of the period, the concession covered the whole territory of the country and barred non-British companies and citizens from acquiring mineral-oil rights, thus making the exploitation of petroleum resources in Nigeria at the time a British monopoly. The Mineral Oils Ordinance (1914) provided that “No lease or license shall be granted except to a British (citizen) or a British company registered in Great Britain or in a British colony and having its principal place of business within Her Majesty’s dominions, the Chairman and Managing Director (if any) and the majority of the other directors of which are British subjects.” Strangely, however, history records that Nigeria’s earliest concessionaire was a German bitumen company granted rights to prospect for oil in the British protectorate of Lagos in 1908. A consortium of Shell D’Arcy Petroleum Company and British Petroleum Company (Shell BP) acquired the second concession in 1937.

A.1 Characteristics of concession regimes

126. The term ‘concession’ has no clear legal connotation in many legal systems. Sometimes the term is referred to as an administrative contract, and in some common law jurisdictions a concession may take the form of (a) a grant or (b) a license or (c) a lease, or even sometimes all three lumped together. The mineral-concession regime as applied in Nigeria had similar characteristics commonly found in other oil-

producing countries of the then so-called underdeveloped world, namely:

- (i) The area of the concession was very large, in most cases covering the whole national territory;
- (ii) Royalty payments, taxes and other payments were very modest in size;
- (iii) They were not subject to local laws and courts. Dispute-resolution was by international arbitration; and
- (iv) They were of long duration: 30-40 years, renewable for the same duration.

A.2 Entry of foreign oil companies.

127. The amendment of the Mineral Oils Ordinance No. 17 (1914) and the Oil Mineral (Amendment) Ordinance No. 1 (1925) by the Mineral Oils (Amendment) (Act) of 1958 paved the way for the entry of foreign (non-British) companies into the Nigerian petroleum industry. However, the terms of the concession granted to Shell-BP gave it an early start and ensured the dominance it maintains today in the Nigerian petroleum industry. Its concession was for a period of 30-40 years for onshore and offshore areas, covering the whole of mainland Nigeria, with an option to renew for another period of 30-40 years. The concession lasted until 1959, when the duration was reduced to 20 years and the area to 40,000 square miles (103,600 square kilometres) around the Niger Delta basin. The first oil was discovered in Nigeria at Oloibiri in the Niger Delta in 1956. This discovery spurred other multinational oil companies to enter the scene, such as Gulf oil (now Chevron), Elf Petroleum, Texaco, etc., which acquired areas relinquished by Shell. Up to 1968, nine years after independence, the Government exercised minimal control over the manner in which the concessions were operated by the oil multinationals.

B. The Petroleum Act of 1969

128. The promulgation of the Petroleum Act of 1969 marked a watershed in the history of crude-oil legislation in Nigeria. Its significance is that, among other things, it stipulated for the first time that the entire ownership and control of all petroleum in the country is vested in the Federal Government of Nigeria. It also revised all the terms and conditions under which pre-1969 concessions were granted and indeed repealed *in toto* the Minerals Oils Ordinance of (1914), as amended. The Act has been amended by the following decrees:

- i) Petroleum (Amendment) Decree (No. 16) 1973;
- ii) Petroleum (Amendment) Decree (No. 49) 1976;
- iii) Petroleum (Amendment) Decree (No. 37) 1977.

129. One of the fundamental changes introduced by the 1969 Petroleum Act is that it prescribes three types of grant to regulate petroleum operations in the country: (i) the oil exploration licence (OEL); (ii) the oil prospecting licence (OPL); and (iii) the oil mining lease (OML). These collectively form the legal framework for petroleum development in Nigeria, and the Petroleum Act Cap 350 and its subsidiary legislation, the Petroleum (Drilling and Production) Regulations of 1969, govern the industry's operations. Other local legislation, including the provisions of the 1979 Constitution, as amended, have transformed the petroleum industry in Nigeria into a highly regulated one, propelling the country into the ranks of the world's greatest producers of crude. Companies, foreign and local, wishing to participate in the exploration or production of petroleum and/or natural gas require a formal written authorization in the form of an OEL, OPL or OML.

B.1 The oil exploration licence (OEL)

130. An oil exploration licence confers on the licensee a non-exclusive right to carry out aerial and surface geological and geophysical surveys, excluding drilling below 300 feet or 91.44 metres. The OEL areas of operations must not exceed 12,950 square kilometers and, as the

right granted is non-exclusive, another OEL can be granted for the same area. The duration of the OEL is one year, with possible extension for one further year.

B.2 The oil prospecting licence (OPL)

131. A licensee under an OPL has an exclusive right (a) to search for, (b) to drill, (c) to extract samples, (d) to export crude oil, and (e) to refine in Nigeria. The exclusivity of the license ensures that no other OPL can be granted for the same area as is covered by an existing OPL. The area covered must not exceed 2,590 square kilometres, and the holder may drill to any depth. The duration of an OPL is three years but it may be extended for another two years, giving it a possible total life of five years.

B.3 The oil mining lease (OML)

132. An OML is in the nature of a mineral lease (which does not involve an estate in land) but which permits the lessee the use of the land to explore and dispose of any petroleum discovered within the leased area for a definite time. An OML confers all the rights of an OPL in addition to the exclusive right within the leased area to:

- (i) Conduct exploration and prospecting operations;
- (ii) To win, get, work, store, carry away, transport, export or otherwise treat petroleum discovered in or under the leased area.. OMLs are granted in Nigeria to cover two separate zones: (i) land and territorial waters; and (ii) the continental shelf, which may cover the submarine areas of the Exclusive Economic Zone (EEZ). An OML may be granted only to the holder of an OPL who has:
 - (i) Satisfied all the conditions imposed on the license or otherwise imposed on him by the Act;
 - (ii) Discovered oil in commercial quantities and is capable of producing at least 10,000 barrels of crude oil per day from the licensed area; but
 - (iii) The term of OML may not exceed 20 years, but may be renewed. The area covered by the grant must not exceed 1,295 square kilometres;
 - (iv) Ten years after the grant of an OML, one half of the area of the lease must be

relinquished, but this does not apply where a lease has been renewed. The shape and size of the areas to be retained and relinquished are to be approved by the Minister.

Several important issues pertaining to the operational rights and privileges of holders of these licenses are described below.

B.4 Assignments

133. Assignments are regulated as follows:

- i) The holder of an OPL or an OML may not assign his licence or lease or any right, power or interest therein or thereunder without the prior consent of the Minister;
- ii) The Minister may not give his consent to an assignment unless he is satisfied that the proposed assignee is of good reputation, or is a member of a group of companies of good reputation, or is owned by a company or companies of good reputation.

B.5 Terminations

134. The holder of an OPL or OML may at any time terminate it by giving the Minister not less than three months' notice in writing to that effect. He is entitled to surrender the license or lease in respect of any particular part of the licensed or leased area.

B.6 Revocations

135. The Minister may revoke any OPL or OML if its holder becomes controlled directly or indirectly by a citizen or subject of or a company incorporated in any country which is:

- a) A country other than the holder's country of origin; and
- b) A country whose laws do not permit citizens of Nigeria or Nigerian companies to acquire, hold and operate petroleum concessions on conditions which in the opinion of the Minister are reasonably comparable with other conditions under which concessions are granted to subjects of that country;
- c) The Minister may revoke any OPL or OML if in his opinion the holder has failed to comply with any provisions of the Act or any regulation or direction given thereunder or is not fulfilling his obligations under the special conditions of his license or lease; or

- d) Is not conducting operations continuously and in a vigorous business-like manner and in accordance with good oil practice or is not paying his rent or royalties;
- e) Fails to furnish reports on his operations as the Director of Petroleum Resources may lawfully require.

136. Lastly, in addition, and more importantly in the light of the later development of the relations between oil operators and local communities, the Act states that the holder of an OPL, OEL or OML, in addition to any liability for compensation to which he may bear under any other provision of the Act, shall also be liable to pay fair and adequate compensation for the disturbance of surface or other rights of any person who owns or is in lawful occupation of licensed or leased lands. The duration of an OML is 20 years and the area covered by the grant must not exceed 1,295 square kilometres. It is clear from a comparison of the three types of grants, in terms of their nature, rights conferred, duration, royalties, area of coverage and assignment, that it is the OML that confers the greatest benefits in petroleum exploration and production. The OEL and OPL are but the means whereby the end - an OML - is attained.

B.7 Interpretation

137. Section 14 of the 1969 Petroleum Act gives the following definitions:

- "Barrel" means a barrel of forty-two United States gallons; "Minister" means the Federal Minister for Mines and Power.
- "Continental shelf" means the seabed and subsoil of those submarine areas adjacent to the coast of Nigeria, the surface of which lies at a depth no greater than two hundred metres (or where its natural resources are capable of exploration at any depth) below the surface of the sea, excluding so much of those areas as lies below the territorial waters of Nigeria. This definition has occasioned an intense legal and political dispute between the Federal Government and the five littoral states relating to the sharing of revenue derived from oil production off Nigeria's shores. (This is discussed in the next chapter (Dispute-

- resolution in the Nigerian petroleum industry).
- “Crude oil” means mineral oil in its natural state before it has been refined or treated (excluding water and other foreign substances).
- “Explore” means, in relation to petroleum, to make a preliminary search by surface geological and geophysical methods, including aerial surveys but excluding drilling below three hundred feet.
- “Natural gas” means gas obtained from boreholes and wells.

C. Petroleum arrangements

138. There are five different types of petroleum arrangement operated in the Nigerian oil and gas industry. Four of these arrangements provide the contractual framework within which the Nigerian National Petroleum Corporation on behalf of the Federal Government cooperates with multinational and national oil companies in the conduct of petroleum operations in Nigeria; and one governs operations in which NNOC has no part.

C.1 The joint operating agreement (JOA)

139. The JOA is the basic standard agreement governing the terms of operation of joint ventures (which are not separately incorporated) between NNPC and its partners. It sets out the guidelines/modalities under which the JOA partners, NNPC (which so far has never been the operator) and operators carry out operations. The main provisions of the JOA are:

- One of the partners is designated the operator
- NNPC reserves the right to become an operator
- All parties are to share in the cost of operations
- Each partner can lift and separately dispose of its interest and share of production subject to the payment of the petroleum profits tax (PPT) and royalty
- The operator is the one to prepare proposals for annual programmes of work and expenditure budgets, which must be shared on shareholding basis

- Each party can opt for and carry on sole-risk operations
- Technical matters are discussed and policy decisions taken by operating committees in which the partners are represented on the basis of equity holdings

Some 80 per cent of oil and gas production in Nigeria is currently subject to JOAs. There are seven such JOAs between NNPC on the one hand (with a 55-60% share), and on the other:

- Shell/Total/AGIP
- ExxonMobil
- ChevronTexaco (through two operating companies: Chevron Nigeria Ltd. and Texaco Overseas Petroleum Company)
- AGIP/Phillips
- Total
- Pan Ocean

Annex 1 gives more details of the five main joint ventures.

C.2 The production sharing contract (PSC)

140. The PSC arrangement was introduced to remove the serious deficiencies in the old JV arrangements, primarily with regard to cash-call funding problems of the State-owned NNPC, which were placing serious constraints on the development of Nigeria’s potential in the production of crude oil. In addition, it was designed to encourage more foreign investment in the sector.

141. At present the PSC arrangement governs contractual relations between NNPC and all new participants. Its main features are:

- The contractor bears all costs of exploration and production without such costs being reimbursable if no find is made in the acreage
- Costs are recoverable in the case of crude oil in the event of a commercial find, with provisions made for:
 - a) Tax oil. This is to offset actual tax and concession rentals due and payable/deductible in full in the year.
 - b) Royalty oil. Royalty rates are set according to the location of the field (water depth).
 - c) Cost oil. To reimburse the contractor for capital investments and operating costs.

- d) Profit oil. The balance after deduction of (a), (b) and (c), which is to be shared between NNPC and the contractor in agreed proportions according to a sliding scale of production (the Government's share rises from 30% if production is less than 350 barrels a day to 50% for production of between 701 and 1,000 barrels, and to 65% for production of between 1,500 and 2,000 barrels).

142. PSCs are the standard now for deep-water operations. Several new entrants in the Nigerian petroleum industry are currently operating under PSCs, as are some older companies. Among those using PSCs are Statoil, SNEPCO (Shell), Esso, Elf, Nigerian Agip Exploration Limited, Addax, Conoco, Petrobas, Star Deep Water, Ocean Energy, Chevron, Oranto and Phillips.

C.3 The service contract (SC)

143. Under this arrangement the operating licence title (OPL) is held by NNPC. The operator is designated the service contractor and provides all the funds required for exploration and production work, as under the PSC arrangement. In the event of a commercial find, the contractor's costs are recouped in line with procedures enunciated in the contract. One major difference between the SC and the PSC is that while the SC covers only the OPL, the PSC may span two or more OPLs at a time. Also the SC covers a period of five years, and should the programme result in no commercial discovery the contract automatically terminates. Under the SC, exploration and development costs are paid in installments over a period of time, and the contractor has no title to the crude oil produced, although he may be allowed the option of accepting reimbursement and remuneration in oil. As an incentive for the risk taken, the contractor has first option to purchase certain fixed quantities of crude oil produced from the SC area. Currently only Agip Energy and Natural Resources (AENR) operates under a SC in Nigeria.

C.4 The memorandum of understanding (MoU)

144. In order to increase the current level of investment and make the petroleum industry in Nigeria one of the most competitive and investor-friendly in the world, the Nigerian Government devised the MoU arrangement, which sets out rules and fiscal regimes for the companies operating in partnership with NNPC.

145. The first MoU was signed between NNPC and Shell, Mobil, Chevron, Agip, Elf and Pan Ocean. That major policy shift guaranteed the companies a minimum profit margin of \$2.30/bbl after tax and royalties on the company's equity crude. This encouraged the companies to accelerate exploration activities, and by 1992, one year after the policy came into force, Nigeria's crude reserves had increased from 18 billion barrels to 22 billion barrels. The MoU arrangement had an inherent mechanism which permitted review to reflect changing economic circumstances; such a review became necessary in 2000 when the MoU was revised. The revised MoU stated inter alia: "It is the intention of parties to this Memorandum to encourage investment in the petroleum industry and maintain cost efficiency. Some of the highlights of the MoU are:

- To encourage unit-cost efficiency, a tax inversion rate of 35 is applied.
- Guaranteed notional margin of \$2.50/bbl after tax and royalty for the company on its equity crude, and a minimum of \$1.25/bbl after tax and royalty on the NNPC crude which it lifts under the MoU.
- The minimum guaranteed notional margin is premised on the fact that the technical cost (TC) of operations is not more than the notional fiscal technical cost, which is currently \$4.00/bbl.
- If in any one calendar year a company's capital investment cost (T2) exceeds \$2.00/bbl on average, the minimum guaranteed notional margin is increased to \$2.70/bbl for NNPC equity crude.

C.5 Sole risk

146. Under the "sole risk" arrangement, the operator owns 100 per cent of the concession,

and NNPC is not a partner. The concessionaire pays taxes and royalties to the Government. Most of the operations of indigenous companies are conducted under this arrangement.

D. Legislation regulating petroleum operations in Nigeria: the principal acts

147. A list of regulations and acts affecting petroleum operations in Nigeria is provided in Annex 5. Brief citations of some of the important provisions of some of the more important acts are given below.

D.1 Petroleum (Drilling and Production) Regulations 1969

148. These Regulations cover such matters as the appropriate form of application for an oil exploration licence, oil prospecting licence or oil mining lease, the documents that should accompany such applications, the withdrawal of applications, applications for assignment, publications, samples and specimens, etc. It also covers the rights and powers conferred on licensees and lessees, reservations and exclusions, restrictions, recruitment and training of Nigerians, exploration and drilling operations, field development, reports, accounts and records, as well as fees, rents and royalties.

D.2 Petroleum Profits Tax Act 1959

148. The law governing the assessment of companies engaged in “petroleum operations” for payment of the petroleum profits tax is contained in the following instruments:

The Petroleum Profits Tax Act 1959 (PPTA), as amended by the Income Tax (Amendment) Act 1966, and the Petroleum Profits Tax (Amendment) Acts 1967, 1970, 1973, 1977 and 1979. The latest amendment of major significance is the Deep Offshore and Inland Basin Production Sharing Contract Act 1999 No.30. Prior to this, an amendment contained in No.9 had provided that the rate of petroleum profits tax applicable to signatory companies of production sharing contracts (PSCs) must be a flat percentage rate of their chargeable profits for the duration of such PSCs. The current petroleum profits tax rate generally applicable to petroleum operations is 85 per cent. The

administration of the Act is vested in the federal Board of Inland Revenue.

149. A company becomes eligible to pay petroleum profits tax, as distinct from company tax, when it engages in “petroleum operations as defined in the Petroleum Profits Tax Act 1959”. “The first accounting period” is a period commencing on the date of the first sale or bulk disposal of chargeable oil by or on behalf of the company and ending on 31 December in the same year; subsequent periods are for the year ended 31 December. “Chargeable oil” is defined as crude oil “casing head petroleum spirit” or natural gas won or obtained by the company from its operations (PPTA, Section 2)

D.3 Oil In Navigable Waters Act 1968

150. This Act was introduced to prevent pollution in the navigable waters of Nigeria following the adoption by Nigeria of the 1954 International Convention for the Prevention of Pollution of the Sea by Oil, which was amended in 1962. Section 1 of the Act deals with the discharge of certain oils into prohibited sea areas. Section 3 deals with the discharge of oil into Nigerian waters, and Section 4 specifies special defences for persons charged with an offence under Section 1 of the Act. Inter alia, “it shall be a defence to prove that the oil or mixture in question was discharged for the purpose of securing the safety of any vessel, or of preventing damage to any vessel or cargo or of saving life”.

D.4 Offshore Oil Revenues Act

151. This Act provides that:

- a) The ownership of and title to the territorial waters and the continental shelf shall be vested in the Federal Government; and
- b) All royalties, rents and other revenues derived from or relating to the exploration, prospecting or searching for or the winning or working of petroleum (as defined in the Petroleum Act 1969) in the territorial waters and the continental shelf shall accrue to the Federal Military Government.

It states that “the references in this Act to the “territorial waters” and the “continental shelf” are references to those expressions as defined in

the Territorial Waters Act 1967 and the Petroleum Act 1969, respectively.

D.5 Offshore Oil Revenues (Registration of Grants) Act 1972

152. This Act, which came into effect on 1 April 1971, provides for the registration of grants in the states of the Federation, as follows:

“1) All registrable instruments relating to any lease, license, permit or right issued or granted to any person in respect of the territorial waters and the continental shelf of Nigeria shall, notwithstanding anything to the contrary in any enactment, continue to be registrable in the States of the Federation, respectively, which are contiguous to the said territorial waters and the continental shelf.

“2) Where there appears any dispute as to whether or not any instrument as aforesaid is registrable in any State, the question shall be determined by the President of Federal Republic; whose decision on such matters shall be final and binding.”

D.6 Oil Pipelines Act 1965

153. All pipelines carrying gas or oil from collecting points such as flow stations and gas dehydration units must be acquired under the Oil Pipelines Act.

A permit to survey must be granted before survey work is started. Thereafter details of the selected route are mapped out and application made for an oil pipeline licence. The dates for the hearing of any objections to the oil company's proposals before an official of the Ministry of Lands and Surveys are given. Disputed compensation is not a valid ground for objection. Permission to pass over another's ground or property, referred to as way leave, is granted until the oil pipeline license is approved. The question of compensation for land acquired under the Oil Pipelines Act is covered by the Act.

E. Agreement with the Government

154. The 1971 Agreement made with the major oil producing companies, which applied from the effective date of 20 March 1971, determines

in conjunction with previous agreements entered into by each oil company the financial obligations of each company to the Nigerian Government in respect of its petroleum operations. The major part of the Agreement has been given formal effect in the Petroleum Profits Tax (Amendment) Act No.15 of 1973 and the Petroleum (Amendment) Act No.16 of 1973.

155. In the Agreement arrangements were made in respect of the oil companies' petroleum operations in Nigeria and the sharing and payment of financial and other benefits between the Federal Government and the companies. Two sets of procedures were established for determining liabilities to the Government, both applicable from 15 February 1972:

- a) The procedure for establishing in Nigeria the posted value of crude oil income for purposes of computing royalty and tax;
- b) The procedure for payment in dollars or sterling of all liabilities to the Government in respect of rentals, royalties and tax.

There are however provisions entitling the Government to seek and the oil companies to examine in good faith and not unreasonably withhold additional adjustments to prices applicable to exports of Nigeria's crude. See Annex 5 for a list of the major legislation governing oil operations in Nigeria.

CHAPTER SIX

DISPUTE-RESOLUTION IN THE NIGERIAN OIL INDUSTRY

A. Introduction

156. By the very nature of its operations the petroleum industry, by virtue of its enabling laws and economic importance, is an inevitable source of dispute and litigation. Primarily, the sources of disputes and litigation are related to (a) the impact of oil operations on the environment; (b) compensation for land expropriated for oil operations and construction of infrastructure; and (c) disputes arising from revenue-sharing between the three different tiers of Government: federal, state and local governments.

A.1 Impact of oil operations on the environment

157. As pointed out in the preceding chapter, the framework for oil operations in Nigeria is set by the Petroleum Act (originally Decree No 51 of 1969). Other relevant legislation pertaining to environmental issues include the Oil in Navigable Waters Act (Decree No.34 of 1968), the Oil Pipelines Act (Decree No.31 of 1956), the Associated Gas (Reinjection) Act of 1979, the Petroleum (Drilling and Production) Regulations of 1969, the Harmful Waste (Special Criminal Provision etc.) Act and various states laws on environmental protection.

158. The Federal Environmental Protection Agency Act (Decree No. 58 of 1988) invests the Federal Environmental Protection Agency (FEPA) with authority and powers to issue standards for water, air and land quality, and regulations made by FEPA govern environmental standards in the oil and other industries. Five states in the Niger Delta region (Akwa Ibom, Bayelsa, Delta and Rivers) have enacted laws protecting the environment and created state environmental protection agencies.

159. The Petroleum Act gives the Minister of Petroleum Resources general supervisory powers over oil-company activities and he may revoke a license under certain conditions,

including failure by the operator to comply with “good oilfield practice”. The Decree does not define the term, but the Mineral Oils (Safety) Regulations of 1963 promulgated under the Mineral Oils Act (the predecessor to the Petroleum Act) state that good oilfield practice ‘shall be considered to be adequately covered by the appropriate current Institute of Petroleum Safety Codes, the American Petroleum Institute Codes, or the American Society of Mechanical Engineers Codes’. Nigerian oil companies are therefor required to adhere to international standards in the conduct of their operations in the country. Oil companies are obliged to ‘adopt all practicable precautions including the provision of up-to-date equipment’ to prevent pollution, and must take ‘prompt steps to control and, if possible, end it’. If pollution does occur, oil companies are also required to comply with all local planning laws; they may not enter on any area held to be sacred or destroy anything which is an object of veneration, and must cause as little damage to as possible to the surface area and to trees, crops, buildings, structures and other properties in their areas of operation. *Licensees (oil operators) are responsible for all the actions of independent contractors carrying out work on their behalf.* The Environmental Impact Assessment Act (Decree No.86 of 1992) requires an environmental impact assessment (EIA) to be carried out ‘where the extent, nature or location of a proposed project or activity is such that it is likely to significantly affect the environment.’ An EIA is compulsory in oilfield and gasfield development and in construction of oil refineries, some pipelines, and processing and storage facilities. The conduct of EIAs is policed by the FEPA and by state environmental protection agencies.

A.2 Sources of oil spillages and pollution

160. In order to understand how claims may arise from oil spillages and pollution, it is useful to list some of the probable main sources. These include:

- (a) Discharge of crude oil or fuel oil by tankers traversing the high seas, through either tanker rupture or leakages, equipment failure or malfunction and deliberate discharge to prevent further damage to tankers or even save lives;
- (b) Wave and wind action which have the effect of widening the area on which the pollutants are discharged; and
- (c) Spillages resulting from petroleum operations on land, swamp and offshore areas resulting from well-testing, damage to oil pipelines, well blow-outs, etc.

B. DISPUTES

161. The protracted dispute between the Ogoni people of Rivers State and Shell during the 1990s, which gained worldwide attention at the time is the most important dispute arising from oil operations in Nigeria. Shell (SPDC) operated more than 90 per cent of the more than 100 oil wells in Ogoni territory at the time. Between 1976 and 1991 almost 3,000 separate oil spills occurred in the Niger Delta region, about one third of them on Ogoni land. Shell like most of the oil companies operating in Nigeria at the time maintained that their activities were conducted to the highest environmental standards and that the impact of oil on the environment was minimal. However, the leader of the Movement for the Survival of the Ogoni People (MOSOP), Ken Saro-Wiwa, maintained that Shell's operations had devastated Ogoni territory and accused Shell of three decades of 'reckless oil exploitation and ecological warfare'. The Federal authorities under General Abacha responded to Ogoni protests against Shell operations with the deployment of federal troops to quell the disturbances. In the ensuing protracted dispute and worldwide condemnation of Shell, the company pulled out of Ogoni territory in 1996 after Ken Saro-Wiwa was convicted and executed in November 1995.

162. Claimants in oil-pollution cases face serious legal hurdles in securing compensation because in accordance with Nigerian jurisprudence the plaintiff in an action in tort (nuisance, trespass or negligence) is required to establish proof of his claim in order for him to recover damages for loss suffered. Moreover, the defendant can put up formidable defenses,

for example by claiming in the case of pollution resulting from discharges from a ship that prompt steps were taken by the defendant to contain the resultant pollution and/or that the action was taken to save lives. Coastal states who may suffer pollution damage along their coastline caused by the discharge of oil pollutants by a vessel on the high seas are faced with the problem of their lack of jurisdiction for prosecuting claims. Under international law an offence committed in an international zone, such as the discharging of oil pollutants, may only be adjudicated by courts of the nation of which the offending vessel or its master is a national or whose flag such vessel flies.

163. Plaintiffs who suffer from pollution caused by onshore operations also are faced with the same basic problem of the burden of proof. However, some legal experts are of the opinion that the plaintiff can successfully invoke the Rylands v Fletcher principle. Ryland v Fletcher (England, 1868) states generally that where someone brings into his land a dangerous object that escapes therefrom and cause damage, it is for such a person to disprove his liability.

164. In practice, many oil-operating companies in Nigeria have shown a preference for settling most oil pollution claims out of court, and as a result there have been no reported court decisions in Nigeria in such cases. For example, Exxon Mobil Corporation settled huge financial claims resulting from a spillage at Idoho (an offshore facility contiguous to Akwa Ibom State) operated by Mobil (MPN), which occurred in 1988.

B.1 Land expropriated for oil operations

165. Oil production requires the expropriation of land for exploration, production and distribution activities, what is referred to as 'land take'. Nigerian law provides for extraordinary control over land use and transfer. Property rights are contentious and difficult to interpret as they are not properly established in law.

B.2 Land Use Act (Decree No.6 of 1978)

166. The principal statute governing real property in Nigeria is the 1978 Land Use Act. The Act provides that ‘all lands comprised in the territory of each State in the Federation are hereby vested in the Governor of that State and such land shall be held in trust and administered for the use and common benefit of Nigerians’. Under this law, urban land is under the control of the Governor, while rural and other lands fall under the control of the local government authority.

167. The Land Use Act provides that, if land is acquired for mining purposes, the occupier is entitled to compensation under the Petroleum Act. If compensation is due to a community, it may be paid ‘to the community,’ ‘to the chief or leader of the community to be disposed of by him for the benefit of the community’, or ‘into some fund specified by the Governor for the purpose of being utilized or applied for the benefit of the community.’

168. However the Petroleum Act makes no provision for compensation to be paid for land acquisition, since Section 1 of the Act vests the entire ownership and control of all petroleum in, under or upon any land within the country or beneath its waters, in the Nigerian State. Holders of oil exploration licenses or oil prospecting licenses or oil mining leases are required by the Act to pay ‘fair and adequate compensation for the disturbance of surface or other rights’ to the owner or occupier of any land or property, and nothing is due for expropriation of the land itself, as rent for properties acquired since the Land Use Act came into effect is paid to the Federal Government only. Also, since oil is federal property, land occupiers are entitled to no royalties for oil extracted from their land.

169. The Oil Pipelines Act (cap 335), provides for compensation both in respect of surface rights and in respect of the loss of value of the land affected by a pipeline. Disputes as to the compensation due may be referred to a court, which ‘shall award such compensation as it considers just’, taking into account not only damage to buildings, crops, and economic trees, but also damage caused by negligence or

disturbance, and the loss in value of the land or interests in the land. Regarding compensation for damage done on in-land waters (rivers, lakes, etc.) by pipelines, especially damage done to fishing rights, adequate compensation must be paid for such items as are affected (fishing stakes, hooks, nets, etc.). Compensation for surface rights is valued at the Government’s rates, which vary according to the structure affected. Uniform compensation rates are paid by all oil companies for spillages and they are much higher than government rates, as they are calculated at on-going market prices. Once compensation payments have been made to the occupiers for the surface right (a one-off payment), a permit to take possession of the land is granted to the oil company. It is important, however, for all claimants and applicants for oil pipeline licences to note the provision of Section 20 (4) of the Act, which states that *no compensation* should be awarded in respect of *unoccupied land* as defined in the Land Use Act. When a dispute arises as to the person(s) entitled to compensation lawfully, Section 19 of the Act stipulates that such a dispute should be determined by a court in the area.

B.3 Provision of alternative infrastructure

170. The holder of an oil pipeline license is required to make and maintain, for the use of the owners or occupiers of any land covered by his license, alternative infrastructure and utilities where such existing facilities are affected by his operation, such as footpaths, tracks, bridges, drains, etc. However, this obligation will fail to subsist where the owners or occupiers have received adequate and due compensation in respect of such interference.

B.4 Procedure for lodging a claim

171. The host community to an oil operation where there has been an oil spillage is required to inform the operating company of the occurrence of such an accident. The company will send its representatives to assess the extent of the spill, after which the community will be instructed to approach the company’s registered and approved claims agents. Alternatively, the community may exercise the right to hire a lawyer and go to court, but few communities

have either the money to pay lawyers up-front or the patience to endure protracted cases in court. Accordingly, a settlement is reached after a series of meetings, and payment is made. Many communities interviewed during the course of the survey complain that the payment process is too slow and bureaucratic, and compensation rates not in line with market rates. More importantly, internal disputes between and within communities about compensation have often turned violent.

B.5 Compensation and the law

172. There is no statutory definition of what is 'fair and adequate compensation for the disturbance of surface or other rights' which oil companies are required to make to claimants whose rights have been affected during the course of their operations. However, in the lead case interpreting this provision, *Shell Development Company v. Farah*, the Court of Appeal, basing its judgment on English and Nigerian case law, stated that compensation should 'restore the person suffering the damnum (loss) as far as money can do that to the position he was in before the damnum or would have been in but for the damnum.'

C. Disputes arising from revenue-sharing

173. During the interim regime of General Abubakar from May 1998 to May 1999, violence in the oil-producing Niger Delta region assumed alarming proportions. The inhabitants of the region were beginning to demand a greater share of the wealth from petroleum revenues derived from the region. From the advent of the new democratic Government the violence increased unabated and the governors of some of the Niger Delta states began to agitate for greater control of petroleum resources produced from the region, and 'resource control' entered the new Nigerian political lexicon. It was perhaps the increasing intensity of these demands, especially by the littoral states, that persuaded the Federal Government to seek adjudication of the issue in the Supreme Court.

174. The issue centred on the states' entitlement as provided under section 162 (2) of the 1999 Constitution, which stipulated how federal

revenue shall be distributed among the three tiers of government. The texts of the relevant provisions are reproduced below.

“162 (1) The Federation shall maintain a special account to be called the 'Federation Account', into which shall be paid all revenues collected by the Government of the Federation, except the proceeds from the personal income tax of the personnel of the armed forces of the Federation, the Nigeria Police Force, the Ministry or department of government charged with responsibility for Foreign Affairs and the residents of the Federal Capital Territory, Abuja.

“(2) The President, upon the receipt of advice from the Revenue Mobilisation Allocation and Fiscal Commission, shall table before the National Assembly proposals for revenue allocation from the Federation Account, and in determining the formula, the National Assembly shall take into account the allocation principles, especially those of population, equality of States, internal revenue generation, land mass, terrain as well as population density, *provided that the principle of derivation shall be constantly reflected in any approved formula as being not less than thirteen percent of the revenue accruing to the Federation account directly from any natural resources.*”

175. This last provision, it should be noted, contains no mention of either 'offshore' or 'continental shelf'. This was the root of the famous onshore/offshore dichotomy that put the Federal Government and governments of the littoral states on a confrontation path for about two years. The dispute was about revenue accruable to the littoral states from offshore as against onshore resources. This dichotomy became important given the migration of oil production in Nigeria from onshore to offshore for a variety of reasons, including the need to reduce disruptions caused by community disturbances.

176. Nigeria's Constitution at the time of independence in 1960 provided in Section 134 (1) that 50 per cent of the proceeds from the royalty and annual mining rent received in respect of any minerals (not natural resources) by the Federation must go to the region from

which such minerals were derived. Section 134 (6) stipulated that for the purpose of section 134 a region's continental shelf was to be regarded as part of that region.

177. However, in 1971 the Offshore Oil Revenue Act, enacted in that year, stipulated that the proceeds of all royalties, rents and other revenue in respect of petroleum from the territorial waters and the continental shelf of Nigeria shall accrue to the Federal Government. This Act, which was incorporated into the 1979 Constitution, remained in force until 29 May 1999, when the 1999 Constitution came into effect; that is the Section 162 (2) of the 1999 Constitution cited above, especially the part in italics.

178. In the subject suit *A.G Federation v A.G Abia State (No.2)* the Attorney General of the Federation (the plaintiff), representing the Federal Government in the case against the attorneys general of the 36 states (the defendants) contended that the southern boundary of the littoral states is the low-water mark of the shore of each state. The littoral states for their part claimed that the territory of each littoral state extended offshore as far as the continental self and even beyond. The states relied in their defence on Section 4A (6) (as amended) of Cap 16 and on Section 1 (1) of the Offshore Oil Revenues (Registration of Grants) Act, Cap 336, as evidence of the Federal Government's acknowledgement or acceptance that the continental shelf forms part of the littoral states to which it is contiguous. The relevant Section 1 (1) of Cap 336 states that registrable instruments and documents by which the Federal Government makes grants covering interest in offshore areas (e.g. oil prospecting licenses, oil mining leases etc.) shall be registered in the Deeds or Land Registry of the State to which such offshore area is contiguous.

179. The Federal Government (the plaintiff) based its case on the constitutional powers of the Federal Government as the only authority in Nigeria empowered to legislate on external matters, its sovereign powers as a Nation State recognized by international law, and on the 1982 United Nations Convention on the Law of the

Sea and 1958 the General Convention on Territorial Sea and the Contiguous Zone.

180. The Supreme Court held that the southern boundary of each of the littoral states (except Cross River State) end at the low-water mark along the coast. It was also held with respect to the boundary of Cross River State, which has an archipelago of islands constituting part of its territory, that the boundary is the seaward limits of its inland waters.

181. This decision raised a storm of unending protest from the littoral states and increased the level of political and violent agitation there. It meant that revenues derivable from the areas southward of or beyond these boundaries belonged exclusively to the Federal Government, and that the littoral states were no longer entitled even to the minimum of 13 per cent provided in the 1999 Constitution. It spelled financial disaster for states like Akwa Ibom, whose share of oil revenue from the Federation account was derived entirely from offshore production.

182. But a political compromise was reached when the National Assembly passed a bill early in 2004 ending the onshore/offshore dichotomy. The consensus reached was that the offshore area for the purpose of Section 162 (2) of the Constitution was put at '200 metres water depth isobar' instead of the 'contiguous zone' or the 'continental shelf', which the President and the legislature had respectively wanted inserted in the bill.

CHAPTER SEVEN

7. NATURE AND CHARACTERISTICS OF OIL SERVICES CONTRACTS

A. Introduction

183. Oil exploration and development has evolved into an industry in which the wholly owned subsidiaries of the international oil majors are mainly concession-holders who farm out large and small contracts to companies to provide a range of value-added services, such as supplying the rig, drilling the oil well, laying the pipelines and a myriad of the lesser but important activities involved in moving the product from the point of production to the final consumer. Contracts for oil services are signed between the international/local E & P Company and oil services contractors, foreign and local. In the Nigerian industry there is a clearly defined procedure to be followed prior to the stage of the service-contract award.

A.1 The contract award process

184. The process commences with all companies having to complete a pre-qualification procedure (see Box 4 for an overview). Except for small contracts, contract notices are published in advertisements placed in the national and

international media. A typical contract notice will begin with an introduction and description of the work and its scope, followed by an invitation for competent firms to submit documentation for pre-qualification. Such pre-qualification documents include, as a minimum, comprehensive company technical and financial information. After firms have been pre-qualified, then they are expected to submit a technical bid, and clarifications on their proposals are sought by the oil major if need be. In some cases, prior to the submission of the technical bid firms are required to enter into a confidentiality agreement with the client, depending on the type of contract.

185. The commercial bid is the next stage in the process, and here a parallel evaluation is undertaken in conjunction with NAPIMS when the contract value is in excess of \$250,000 or 10 million naira. After the commercial bid, the successful company is notified and an initial meeting is held with the company leading to the eventual signing of the contract document.

186. An example of the document-signature

Box 4

How to become a service provider to the Nigerian oil industry

A website by Roger Webb Associates – targeting foreign firms, but the information is valid for Nigerian firms too – explains some of the bureaucratic mechanisms of becoming a supplier of goods or services to oil majors in Nigeria.

To be able to bid: Get on the bidders' list of oil majors. For this, one has to

- Be registered as a company (which may require three visits to Abuja and may take 6-8 weeks)
- Then obtain a licence from DPR (a similar procedure)
- Become pre-qualified. Only companies pre-qualified by the oil majors will be eligible for “small contracts” and “work orders”. But it should be kept in mind that to avoid bureaucracy many large urgent contracts are let as a series of work orders, each one valued below the threshold for public tendering.
- Large contracts are put out to tender, and companies licensed by DPR may bid. But in practice the oil majors usually evaluate bids by pre-qualified companies.

To be pre-qualified: The oil major will audit technical and managerial skills, and will ask for:

- Quality assurance, and health and safety and environmental procedures adapted to the Nigerian environment
- A community and safety manual, dealing also with such issues as training and employment
- Tax clearance and insurance certificates

procedure of a major E & P company requires the line manager/team leader of the sponsoring department to sign on behalf of the company. For the contractor, the managing director, general manager or manager in charge of the service will sign, provided that the signatory has the authority to commit the company and that he/she normally signs the form of tender on his/her company's behalf. For high value contracts, a contractor must appoint person(s) to sign documents on its behalf through a power of attorney.

187. The process described above may vary in detail for each oil major, but it does represent the essential core process adopted by all the majors. Shell estimates that, typically, a contract takes 11-17 months to put in place:

- 1 month to define/agree strategy
- 1-2 for pre-qualification
- 2-4 for the approval of the bidders list
- 1 for the issuance of the tender until receipt of bids
- 1-2 for the technical evaluation
- 1 for the approval of acceptable bids
- 2 from the call for commercial bids to commercial evaluation; and finally
- 2-4 months for award approval

188. After the contract has been executed, payments are expected to be made within 30-45 days of invoice acceptance or issuance of a certificate of work done (CWD) in the case of Shell. However, payment delays do occur, which sometimes add an additional 120 days before payments are received. Payment delays occur especially when NNPC is in arrears on its cash-call obligation, there is a major workers' strike or a strike in an oil major's computing system, community disturbances, account-reconciliation problems with contractors and related problems.

B. Example of a service contract: characteristics and features

189. A contract for the provision of a service between a major E & P company and a services contractor will usually cover these points:

- Definitions
- Scope
- Management
- Licences

- Guarantee
- Authorized representatives
- Term of agreement
- Remuneration and payment
- Liabilities and indemnities
- Secrecy
- *Force majeure*
- Assignment and subcontracting
- Transfer
- Legal construction
- Notices

A brief description of some important aspects of these matters now follows.

B.1 Scope

190. The scope of the contract is divided into two parts: (1) **General**, which states the purpose of the contract and establishes and governs the relationship between customer and service provider; (2) **Technical**, which defines the technical scope of the agreement, specifying the products, standards and technical specifications to be provided by the service provider.

191. Such contracts usually spell out in detail the specific obligations of the parties and are included as part of attachments to the main contract agreement. For example, in the case of a supply contract, obligations of either or both parties during delivery by the service provider and receipt and acceptance by the customer, title and risk, guarantees, storage, etc., are clearly specified in detail. In addition, the conditions for the provision of the services, which is an important element of a service contract, are spelled out in an attachment to the main agreement. For example, a sample contract contained the following conditions for the provision of services:

192. Condition 1 - Basis for provision of services:

“(a) The Supplier shall provide Services to the Purchaser as further outlined on the order form in accordance with the attached pro formas (which shall be signed or initialed by both the Purchaser and Supplier and shall hereinafter be referred to as the ‘Services Order’), at the prices

shown on each Services Order and in accordance with these conditions.

(b) The word ‘Services’ in these Conditions shall mean the services as further detailed in the Services Order and as referred to and described in Condition 2 below.

(c) The parties shall inform each other concerning the identities of their authorized contact persons for the different types of services and the applicable means of contact between them.

(d) For the purposes of these Conditions ‘Products’ shall mean Equipment and/or Third Party Equipment, all as defined in the main Agreement and as detailed in the Service Order.”

193. Condition 2 – Extent of services:

“(a) If requested, the Supplier will provide support in the form of problem resolution and other services described in this Condition 2. The Supplier will furthermore advise on the use of the Products and shall assist in identifying and solving any problems encountered in such use. The Purchaser shall report to the Supplier the problem(s) and the Supplier will render the required assistance in accordance with Condition 2.

(b) On-site Support

If the Products cannot be promptly restored to good working order without on-site support, the Supplier will organize repair personnel to be on-site within the response-time mentioned on the Services Order. Such supplier personnel will then commence and diligently prosecute efforts to correct the noticed problems and to restore the products to good working order and will continue such efforts until the Products are satisfactorily operational.

(c) Provision of maintenance, repairs, spares

(i) If requested, the Supplier shall for the duration of the Services Order carry out such maintenance with respect to the Equipment to ensure that the same continues to be in good working order and shall operate and perform in

accordance with its prevailing technical specifications.

The maintenance shall include, but not be limited to, the following maintenance services;

- Corrective maintenance
- Preventive maintenance

(ii) Replacement parts shall be provided by the Supplier without charge and shall be either new or reconditioned or reassembled parts which are, regarding performance, equivalent to new parts.”

B.2 Management

194. This covers in detail the role and responsibilities of the CUSTOMER and Service Provider. For example, the CUSTOMER agrees to provide the agreed information, procedures, guidelines and policies relevant for the SERVICE PROVIDER to deliver the service or product, while the role and responsibility of the SERVICE PROVIDER is to supply the product/service in accordance with the agreement, to monitor the performance of the product/service and to review that performance with the CUSTOMER on a regular basis.

B.3 Term of contract

195. The term of the contract spells out the duration and termination period of the contract. All such contracts contain clauses on termination and the effect of termination. For example, a sample contract under review had the following clauses:

“This Agreement may be terminated

- (i)** By either Party with effect from the end of the initial 3 year period or any extension thereof with no less than 6 (six) months prior written notice.
- (ii)** Immediately by either Party if the other Party shall commit a substantial breach of any of its obligations under this Agreement and shall not have remedied such breach within thirty (30) days of receiving written notice of the breach from the first Party. The Parties agree that, unless the nature of the breach is such that it is not capable of remedy, they will utilize the provisions of the escalation

procedure as set out in article (...) prior to serving notice under this article.

- (iii) Immediately by either Party if the other Party shall become bankrupt or enter into liquidation (provisional or otherwise) except for purpose of amalgamation or reconstruction or a receiver and/or manager or administrator is appointed in respect of its assets or any part thereof or it enters into any composition or arrangement with creditors generally.”

B.4 Effect of termination

196. This part provides that termination shall only affect (potential) future provision of the services (in question) and will not affect any services provided or rights granted before the Agreement was terminated. It further states that ‘termination ... shall not prejudice the application of its relevant terms to any remedies sought thereafter or to any rights or obligations then outstanding or specified or implied to survive termination.’ The contract also would spell out what would happen in the case of early termination. For example, a transfer period (number of days) is stipulated during which the Agreement shall be deemed to be in the transfer period and, more importantly the extent of transfer and the conditions under which this is implemented are clearly stipulated. Thus, the sample agreement under review states that “the parties undertake to strive for an amicable conclusion of all outstanding undertakings and liabilities and enable a smooth transfer of all Services to a Third Party and the Service Provider will cooperate in full”. It goes on to state without limitation what the transfer may include. Very importantly it states that the SERVICE PROVIDER “may make a reasonable charge for the provision of the handover services”.

B.5 Force majeure

197. Due to the prevalence of community disturbances, pipeline vandalism and other disturbances which may disrupt the smooth implementation of service contracts, an article on *force majeure* is an important part of any service contract. A sample contract states that “neither party shall be liable for any failure to

perform any obligation under this Services agreement if and to the extent that fulfillment has been interfered with, hindered, delayed or prevented by any circumstance beyond the control of the Party concerned and which are not for its risk and which by its reasonable diligence it cannot overcome.”

B.6 Dispute resolution

198. A service contract must state a clearly defined procedure for dispute resolution, by including a dispute-escalation clause stating, for example that “the Parties agree that any dispute which cannot be resolved locally shall, unless the nature of the breach is such that it is not capable of remedy and before any arbitration or court proceedings, as the case may be, are instituted, be escalated in accordance with escalation procedures described”, which are usually set out in an attachment to the Agreement. The clauses provide that if a party is prevented from or delayed in performing any of its obligations under the contract, the party affected shall notify the other party of the occurrence of the circumstance and of the obligation, performance of which is thereby delayed or prevented. The party giving the notice shall thereupon be excused from the performance or punctual performance, as the case may be, of such obligation for so long as the circumstance of prevention or for so long as the circumstance of prevention or delay may prevail. Depending on the nature of the services to be provided by service provider, both parties will consult to seek alternatives if the state of *force majeure* lasts longer than six consecutive months.

B.7 Escalation procedure

199. In a general clause a contract will state that if a ‘disputed matter’ cannot be resolved locally by discussion between the parties, then either party may have recourse to the terms of the escalation procedure under which the disputed matter may be considered for resolution between the two parties at a senior level before either party terminates the agreement and/or, as the case may be, institutes arbitration or court proceedings. Only where the disputed matter is such that no adequate remedy can be provided

by local discussion or escalation may either party exercise its rights to resort directly to termination, arbitration or process of law.

B.8 Remuneration and payment

200. This part of the contract covers (a) charges for the services, (b) payment of taxes – in most cases, the service provider will be responsible for and indemnify the customer for all taxes, levies, social security and other charges and duties imposed in connection with the provision of the services and (c) payment procedures specifying how payment of each invoice shall be made by the customer, who reserves the right to pay only the undisputed portion of a disputed invoice. It may further state that the customer and the service provider shall endeavour to settle at the earliest possible date any matters in dispute. Where dispute resolution results in the confirmation of an invoiced item, the service provider may charge interest on such amounts from the original due date at the rate provided for late payments by law.

B.9 Payment procedures

201. This part specifies how payment of each invoice shall be made by the customer, usually stating that payment of each invoice shall, unless otherwise agreed, be made by the customer when due or within 30 days of receipt of a correctly prepared invoice, whichever is the later.

B.10 Liabilities and indemnities

202. This section will spell out who (customer/service provider) shall be responsible for indemnifying (customer/service provider) for loss or damage to property, personal injury and damage to third parties. The usual obligations of both parties are stated as follows:

B.11 Property: property of service provider

203. The service provider shall be responsible for, indemnify and hold the customer and the customer's personnel harmless in respect of any loss or damage to the property of the service provider or the service provider's personnel resulting from or relating to the service

agreement. However, the foregoing shall not apply in the event and to the extent that any negligent act or omission can be shown by the service provider with adequate proof to have been caused by the customer or the customer's personnel; and vice versa the same obligations fall on the customer in respect of the customer's property, personal injury and damage to third parties.

B.12 Applicable law

204. Service contracts contain provisions stating clearly that the Agreement sets forth the entire agreement and understanding between the parties with respect to the subject-matter thereof and supersedes all prior oral and written agreements and understandings between them relating thereto.

- No amendment, alteration or modification of the Agreement shall be effective unless made in writing and signed by both parties.

- No term or provision of the Agreement shall be deemed waived and no breach excused, unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented. Any comment by any party to, or waiver of, breach of the other, whether express or implied, shall not constitute a consent to, waiver of, or excuse for any other different or subsequent breach.

- If any term or provision of the Agreement shall be found to be illegal or unenforceable, then, notwithstanding any such illegality or unenforceability, the Agreement shall remain in full force and effect and such term or provision shall be deemed to be deleted.

Finally and most importantly, a separate section specifies that the parties to the Agreement shall seek to have the applicable law and jurisdiction of all binding agreements arising from implementation of the contract set out in the Agreement to be laws of the Federal Republic of Nigeria.

- Any disputes arising out of or in connection with this Agreement shall be resolved in accordance with the laws of the Federal Republic of Nigeria.

- Any arbitration specifically agreed to in any of the agreements concluded between the parties shall be conducted in accordance with international arbitration laws and proceedings

shall be held under the jurisdiction of the Federal Republic of Nigeria.

B.13 Assignment and subcontracting

205. Assignment/transfer clause.

This clause states the terms and conditions under which either party may or may not transfer or assign its rights or obligations under the Agreement. Thus, service contracts and/or their proceeds may or may not be assignable. It depends on what is agreed between both parties and stated in the Agreement. In general, oil majors are conscious of the fact that under their lease (OML) agreement, paragraphs 14-16 of the first schedule to the Petroleum Act states:

(i) Paragraph 14 prohibits the assignment of an oil mining lease or any interest, right or power therein or thereunder without the prior consent of the Minister of Petroleum Resources.

(ii) Paragraph 15 requires the payment of an application fee (₦500,000) before the assignment or sublet on consent may be given.

(iii) Paragraph 16 states that no assignment shall be given unless the Minister is satisfied that (a) the proposed assignee has a good reputation and (b) had or has access to sufficient technical experience and funding to continue the work programme of the oil mining lease.

Thus, the assignability of other interests such as a service contract are generally not accepted by oil majors for reasons governing their rights and obligations under their lease contract as stated above. However, the proceeds of such contracts are locally assigned.

B.14 Delegation/subcontracting

206. This part states also the terms and conditions under which either party may or may not delegate or subcontract any or all of its obligations under the Agreement.

C. Issues

207. The risks associated with services contracts for service providers/contractors often relate to their inability accurately to estimate performance levels as spelled out in the contract and more importantly to the inability of the customer to meet payment schedules. In the

Nigerian context, where the call-off system leads to pre-qualification of contractors on the basis of rates that apply for a four-year period, contractors complain of the inflexibility of such an arrangement in a rapidly changing and inflation-prone economy

208. The concept of *lowest bidder* in the bidding and tendering process has elicited serious criticism and controversy among local indigenous operators. It is a frequent complaint that a common practice among firms is to recruit outside consultants, who are in some cases foreign nationals working for oil multinationals and resident in the country, to prepare good technical proposals. Once the firms successfully pass this stage, all they have to do to win the contract is to submit the lowest bid even if the amount is unrealistic and falls below the internal estimates of the company advertising the bid.

209. The result in some cases is that firms lacking the requisite capacity to execute the job fail to perform; this sometimes leads to early contract termination with all its attendant consequences, long delays in completion time and or price revision before completion. Some local industry stakeholders have suggested that oil companies should adopt the concept of the “most cost-effective bid” as a better alternative to the current practice in the industry. But the most potent argument against adopting this practice revolves around the issues of transparency, fairness and subjectivity. The pre-qualification process based on written technical proposals should include an expert evaluation of the contractor’s competence and track record; once this is proven, it is hard not to award on the basis of the lowest-bidder concept.

CHAPTER EIGHT

OPPORTUNITIES FOR FOREIGN DIRECT INVESTMENT IN THE NIGERIAN OIL SERVICES SECTOR

INTRODUCTION

210. In the light of certain statistics, Nigeria does not appear to be a country offering a good environment for receiving foreign direct investments (FDI). In the world ranking for competitiveness Nigeria scores low: it is 11th out of 22 African countries ranked by the World Economic Forum (Africa Competitiveness Report 2005-2006), and 88th worldwide. According to the same source, the quality of its public institutions is even worse, with only Chad in Africa scoring lower. And according to the 2004 Transparency International Corruption Perceptions Index, Nigeria is the world's third most corrupt country (and Africa's most corrupt). Starting a business requires 10 procedures and 44 days (compared, for example, to two procedures and two days in Australia); registering properly requires 21 procedures and 274 days (compared to one procedure in Norway and two in Thailand); and, reflecting the poor state of the legal system, enforcing a contract takes 730 days (Bridgman, February 2005 – see also Box 5). But behind those numbers much successful business does get done in Nigeria. And conditions for success are improving; among other things, Nigeria's Government has volunteered to participate in the Extractive Industries Transparency Initiative (EITI), the African Peer Review Mechanism of the New Economic Partnership for Africa's Development (NEPAD) and the G8 Transparency Initiative.

211. A first major step in opening up Nigeria's economy came in 1995, when the Federal Government promulgated two decrees allowing 100 per cent ownership of Nigerian-registered business concerns and guaranteeing investors ability to repatriate or transfer profits and loans repayment or to remit capital in the event of divestment. This enabling legislation is regarded as a landmark initiative by the Government to open wide the doors to direct foreign investment.

212. Since taking office the Obasanjo-led administration has undertaken a further series of wide-ranging reforms, albeit sometimes with stiff opposition from labour and entrenched interest groups. Macro-economic stability, greater transparency, strengthening the rule of law and improved infrastructure have in recent years been priorities for the Federal Government, and not without success: inflation was down to less than 20 per cent in 2004 (the lowest in two decades) for example, and the exchange rate is stable. The rate of growth of

Box 5 Starting a business in Nigeria (2004)

The challenges of launching a business in Nigeria may be illustrated in four areas: procedures starting a business, the associated time, the cost, and the minimum capital requirement. Business firms can expect to go through 10 steps to launch a business, over 44 days on average, at a cost equal to 95.2% of gross national income (GNI) per capita. They must deposit at least 74.6% of GNI per capita in a bank to obtain a business-registration number, compared with a regional average of 278.5% of GNI and the OECD average of 47.6% of GNI. (Note: GNI per capita for Nigeria in 2002 was \$300)

Indicator	Nigeria	Regional average	OECD average
Number of procedures	10	11	6
Duration (days)	44	64	25
Cost (% GNI per capita)	95.2	224.2	8.1
Min. capital (%GNI per capita)	74.6	278.5	47.0

Source: International Finance Corporation (2003)

GDP per capita was 7.9 per cent in 2003 (the highest in about a decade) and remained positive thereafter.

213. The reforms include the privatisation of a large number of State-owned enterprises, with mixed success, and the deregulation of telecommunications, power and the downstream sectors of the oil economy. The deregulation of the telecommunications industry has been a huge success: whereas in 1999 fewer than 400,000 Nigerians out of a population of about 120 million had access to telephone lines, the figure was about eight million by December 2004, owing to the licensing of four mobile-telephone companies.

214. The new reforming environment, the macro-economic stabilization measures now being implemented by the Government and the innovative fiscal and legal regimes introduced in the petroleum industry, combined with new contractual arrangements such as the production sharing contract (PSC), have continued to attract and motivate the operating companies to undertake high-risk, high-return investments in the sector.

B. Characteristics of the market

B.1 Size of the market

215. Nigeria currently has more than 500 oil and gas fields, of which some 254 are producing. Over 55 per cent of these fields are onshore, while the remaining are in water depths of less than 500 metres. With the use of state-of-the art exploration techniques, the average exploration success rate has spectacularly increased from 11 per cent to currently over 60 per cent, among the best in the world. To date 5,284 wells have been drilled in Nigeria, of which 603 are discovery wells. The average product costs per barrel are \$3.50 and \$5.00 onshore and offshore respectively, which is about the lowest in the world.

216. Combined with the various forms of protection offered to foreign investors (Nigeria is a member of the Multilateral Investment Guarantee Agency, which protects investors against the risk of expropriation: and the hard currency earned through exports can be kept in

offshore escrow accounts to service debt obligations and import needs) this makes Nigeria one of the most attractive investment destinations for petroleum and gas business. Nigeria's proven reserves in 2003 stood at over 35 billion barrels of oil from its onshore, shallow-water, deep and ultra-deep offshore areas. Although there has not yet been any deliberate effort to exploit for gas in Nigeria, proven reserves at the end of 2003 stood at more than 187 trillion cubic feet, the seventh largest reserves in the world.

217. The Government plans to raise current daily oil-production levels from near 3 million barrels to 4 million by 2010 and the reserves from 35 billion barrels to 40 billion by 2010. To meet its ambitious production target for the sector, the Federal Government has embarked on a programme to evaluate all oil basins in the country, especially on the hitherto neglected blocks.

C. Trends in oil/gas sector exploration and production

218. The current drive by the Government to increase substantially the production and proven reserves has given rise to a significant increase in exploration (seismic and wildcat well) activities. Joint ventures (JVs), PSCs and local indigenous companies have stepped up their E & P activities.

219. Virtually all of Nigeria's oil is produced in joint ventures, in most of which NNPC has a 55 to 60 per cent share, operated by foreign oil majors (and one joint venture by a smaller US firm, Pan Ocean). The following major oil companies are active in the country:

- Shell, through various subsidiaries. A Shell-operated joint venture, Shell Petroleum Development Company (SPDC), is Nigeria's largest oil producer
- ChevronTexaco, through three subsidiaries
- Esso Exploration and Production Nigeria Limited (EEPNL) and Mobil Producing Nigeria Unlimited, both subsidiaries of ExxonMobil
- Total Nigeria Ltd.
- Nigeria Agip Exploration Limited.

Annex 1 gives an overview of the joint-venture structures of these main companies.

C.1 Deep water

220. In 1993, Government invited oil companies to bid for deep-water offshore frontier blocks located off the continental shelf of Nigeria. A total of 18 deep-water offshore frontier blocks in water depths greater than 200m but less than 1400m were awarded to 13 companies under PSC arrangements with NNPC as licence holder. While the major part of Nigeria's production is still in shallow water and onshore, the share of deepwater production is likely to increase fast. Annex 2 gives an overview of ongoing projects.

221. The PSC provides for 10 years of exploration activities and a production-licence period of 20 years. It involves an agreement to split "profit oil" between NNPC and its operating partners during production. Profit oil is available crude oil after allocation of royalty oil, tax oil and cost oil. Royalty oil and tax oil are crude oil allocated to NNPC that will generate proceeds equal to payment of royalty and petroleum profits tax respectively. Cost oil is crude oil allocated to operating companies that will generate sufficient revenue to cover costs. The operating company bears all the risk of operating costs and there is no matching government funding as in the JV arrangement. NNPC however audits and approves all operating costs.

C.2 Natural gas

222. At the end of 2003 Nigeria had an estimated 187 trillion cubic feet (tcf) of proven natural-gas reserves. The quantity of gas in Nigeria is said to be more than twice the quantity of crude oil in energy terms. Petroleum experts often describe Nigeria as a natural gas province with some oil in it, for the country's reserves/production ratio is about 125 years compared to about 30 years for crude oil, making it one of the top 10 nations in the world in terms of gas reserves. Forty per cent of the natural gas it produces is still flared, while 12 per cent is re-injected to enhance oil recovery. It is expected that still-to-be-proven reserves will be huge when gas exploration as distinct from

the accidental finding of gas in the course of oil exploration commences.

223. The Government has mandated all oil companies to end gas flaring by 2008. This objective will result in many investment opportunities for gas projects. To spur domestic gas investment, the Government introduced some fiscal incentives, including exemption from VAT and import duty on equipment and machinery intended for gas-project development, together with a tax holiday under pioneer status for a period of five years.

224. Gas can be used for power plants and for gas-to-liquids (GTL) projects (a first GTL plant, with a capacity of 33,000 bpd, is being developed as part of the Escravos Gas Project by ChevronTexaco, NNPC and Sasol, and it is expected to start producing in 2005). But for the time being the largest use will be for liquefied natural gas (LNG) projects, mostly for the US market. One company (Nigeria Liquefied Natural Gas Company Ltd.) is already active, and further projects are under preparation. Moreover, the West African Gas Pipeline is finally moving towards construction, and there are good prospects for the realization of the \$7 billion Trans-Saharan Gas Pipeline, linking Nigeria to the Algerian gas-pipeline network and thus to European markets.

225. In October 2003 Chevron-Texaco, NNPC, Connoco-Philips and Eni signed an agreement to conduct front-end engineering and design (FEED) work for a new LNG facility to be constructed at the existing Brass oil terminal in the Niger Delta. A newly created company, Brass LNG Ltd, is being set up to operate the \$3 billion project. The first LNG delivery is expected in 2009.

226. A third LNG project, the Olokola LNG project, is being planned by ChevronTexaco, Shell and NNPC. It is expected to be a 30 million tons per year plant (three times as large as Brass LNG) and to become operational in 2009. In yet another project, at the Nnwa/Doro gas field, Shell and Statoil are studying the feasibility of installing the world's first floating LNG facility.

227. Other proposed projects include Exxon Mobil's Eastern Gas Gathering System (EGGS) to extract natural gas liquids from the East Area and Qua Iboe Terminal (QIT) gas streams. Electricity-driven gas compressors for gas compression and high-pressure condensate pumps will form part of the extraction plant to be sited offshore. Phase 1 engineering commenced in the third quarter of 2001, with an EPC contract awarded in the third quarter of 2002.

D. Nigeria Liquefied Natural Gas Company Limited (NLNG)

228. The Nigeria Liquefied Natural Gas Company Ltd (NLNG) is owned by a consortium made up of Shell, with a 25.6 per cent shareholding, as technical adviser, and as partners NNPC (49%), TotalFinaElf (15%) and Agip (10.4%). The plant, which currently has three trains, is operational and located on Bonny Island. It was completed in September 1999 at a cost of \$3.8 billion. The facility processes 397 billion cubic feet of LNG annually, and gas is being supplied to it from dedicated natural-gas fields, but the Shell Petroleum Development Company (SPDC) is currently undertaking various gas-supply projects to meet the ongoing expansion of NLNG. These are associated gas-gathering projects at Gbarain, Ubie, Nun River, Akri/Oguta and Utapate, as well as offshore fields. When the planned enlargement is completed, Shell will be supplying 56 per cent of feed gas to NLNG, Agip 25 per cent and Total 19 per cent.

229. The fourth and fifth trains are under construction and are expected to commence exports by 2005. Shell has injected about \$7.5 billion for the establishment of infrastructure for these trains. Design and construction plans for the sixth train are under way. In March 2003 NLNG obtained a \$450 million loan to purchase an additional eight LNG vessels to add to its growing fleet. NLG has entered into sales and purchase agreements with five European buyers. Each contract is of twenty-two and a half years duration. The buyers are Gaz de France, Enel of Italy, Gas Natural SDGSA of Spain, Botas of Turkey and Transgas of Portugal.

E. West African Gas Pipeline (WAGP) Project

230. WAGP entails the construction of a 617km pipeline from Lagos to Takoradi (Ghana) that will carry 350 mmscf of gas to consumers in Ghana, Togo and Benin. The Final Investment Decision has been signed and construction work will commence soon. The project is sponsored by NNPC, GNPC, SOTOGAS and SOBEGAS, all oil companies of the participating West African countries, in technical partnership with Chevron and Shell.

F. Trans-Sahara Gas Pipeline

231. Nigeria and Algeria are discussing the possibility of constructing a 2,500 mile (4,000km) pipeline to carry gas from oilfields in Nigeria's Delta region via Niger to Algeria's Beni Saf export terminal on the Mediterranean. It is estimated to cost \$7 billion and would take six years to complete.

G. Domestic gas utilization

232. Planned and ongoing investment is being undertaken by Shell Nigeria Gas Limited (SNG) and the Nigeria Gas Company (NGC). It is projected that with the pace of development planned in this sector natural gas will overtake liquid fuel as the fuel of first choice for Nigerian industries by 2010. Over \$33 million has been committed to construction of a gas-distribution infrastructure by SNG and about 30 gas sales and purchase agreements have been signed with potential consumers in the eastern industrial hub of Aba and in Agbara/Ota in Western Nigeria. The company is also executing a \$720 million gas-supply project involving the construction of a gas-distribution pipeline project to be sited in Ikorodu near Lagos. The Nigeria Gas Company has an expanding network of gas pipelines running through various states in the country.

H. Opportunities

233. In the light of the foregoing overview, the main areas of business opportunities for foreign investment will come from projects associated with offshore oilfield and gasfield development and downstream gas-utilization projects. The

associated and non-associated gas-gathering projects as well as the NLNG expansion and new projects offer huge opportunities for foreign construction companies, with a clear advantage going to those that seek to forge alliances with reputable competent local companies.

234. From reliable industry sources the survey estimates the annual spend by the existing E & P companies for offshore oil and gas projects to be in the region of \$5 billion for the next five years. The project's scope includes:

- Laying pipelines from the gas stations to the NLNG plants
- Upgrading of Shell and other oil-major flowlines by burying them and installing remote flowline manifolds in order to improve environmental performance and reduce sabotage, as well as corrosion of line pipes
- Providing infrastructure facilities and procurement for NLNG Train 6 and the planned Brass LNG
- West African Gas Pipeline Project
- Marine transportation
- Technical expertise in refinery and process engineering

I. Entry procedure for foreign services companies

235. Apart from the normal company registration with the Corporate Affairs Commission (CAC), which all companies wishing to start a business in Nigeria are required to complete, services and supply companies wishing to do business with the joint-venture and PSC companies must first register with the Department of Petroleum Resources (address and contact in Annex 3). All bidding documents, tender lists and budgets pertaining to any project must be approved by NAPIMS.

J. Risks

236. There are however evident risks associated with petroleum investment in Nigeria. The major risks fall into are two main categories: (a) ethnic and community conflict in producing areas; and (b) government underfunding.

J.1 Ethnic conflict

237. Ethnic conflict and the associated vandalism of oil exploration and production facilities by communities playing host to the oil companies has for many years been the bane of the Nigerian petroleum industry. With the establishment of the Niger Delta Development Commission (NNDC) in 2000 the present democratic Government took a major step to redress the decades of neglect by both central and state governments in bringing development to this disadvantaged area. All the major oil companies and their major service providers have embarked on multimillion dollar sustainable development projects emphasising job creation, restoration of the vegetation degraded by oil pollution, and health and youth-empowerment projects, among others.

238. The Government has also adopted dialogue as a preferred means of conflict resolution in the area, an approach which seems to have quelled successfully the threat of a full-blown conflict between militia forces and government forces in October 2004. During that period, there was a worldwide scare of a major disruption to Nigerian crude supplies leading to a temporary surge in oil prices.

239. Oil majors have also taken a hard look at their corporate social responsibility policies in producing areas. In May 2005, for example, ChevronTexaco (Reuters, 4 May 2005) admitted that one major source of conflict in Nigeria was the longstanding policy of oil multinationals of designating the communities closest to oil facilities as 'host communities' to qualify them for special attention in development assistance. 'The system of designating some communities as host communities left those not so designated feeling alienated and underprivileged, inadvertently leading to or adding to the causes of conflicts among communities,' the company said.

240. During conflicts between rival ethnic groups and communities, projects built for beneficiary communities as such have become prime targets of attack and destruction. Also considered a failure by ChevronTexaco (and similarly noted by Shell in late 2004) is the

widespread practice among oil multinationals in Nigeria of paying local troublemakers in the Niger Delta to protect their operations against disruptions. 'Young, unemployed community men were being paid salaries as ghost workers for doing nothing at all, except that some are often found to be involved in threats, extortion and disruption of operations,' the company said.

241. To replace such practices the oil giant is looking at a new system of development assistance that will distinctly target clusters of communities, the company said. This will be managed through 'regional development councils' which will include government, company and community representatives. Instead of dealing with individuals and a few community leaders who control the benefits to the exclusion of the rest, as was the case in the past, ChevronTexaco will set up a system to 'guarantee that all members of communities know what the leaders are doing', as well as informing them about project costs and expenditure.

J.2 Government underfunding

242. A major problem facing the upstream oil sector is the inability of NNPC to meet its funding obligations as and when due under the joint-venture funding arrangements with the oil companies. There are two major funding arrangements for oil production in Nigeria the joint venture(JV) and the production sharing contract (PSC). Under the JV arrangement the Government and its partners contribute to these projects according to their equity holding. Under the PSC arrangement the oil majors bear the high risk associated with this part of the oil-production chain and they are better able to do so because of the strength of their financial position and their ability to obtain favourable financing deals to cover costs and exposure from their host country's financial system.

J.3 Border disputes

243. After a protracted litigation process which began in 1994, the International Court of Justice, in its ruling of October 2002, awarded the Bakassi peninsula to Cameroon. Both Nigeria and Cameroon had claimed the Bakassi

peninsula, a 1,000 square kilometre area located in the Gulf of Guinea that is believed to contain significant reserves of oil. Nigeria had also disputed Equatorial Guinea's claim to sole ownership of the Zafiro oilfield, from which Mobil began production in 1996. The matter was resolved in late September 2000, when the two countries signed an agreement delineating their maritime boundaries in which Nigeria formally recognized Equatorial Guinea's sovereignty over the Zafiro field.

244. The Nigerian Government and the Government of Sao Tome and Principe (STP) have entered into an agreement to exploit petroleum and other marine resources jointly in an offshore region that was once disputed between them. Under the agreement Nigeria will receive 60 per cent of revenues from the Joint Development Zone (JDZ), while STP will get the remaining 40 per cent. There are concerns among the oil companies that more disputes over boundaries between Nigerian and her two neighbouring small island nations may escalate as more oil discoveries are made in the offshore region.

PART THREE – FINANCING THE SECTOR

CHAPTER NINE

SOURCES OF FINANCING FOR OPERATORS IN THE SECTOR

A. Introduction

245. The upstream activities of the oil and gas sectors encompass a wide range of activities centred around exploration and drilling and production of crude oil and gas. The implementation of E & P activities and the service contracts that support them is complex and capital-intensive, requiring millions of dollars for a single transaction and billions of dollars for many mega-projects.

246. Financing needs can be met from a range of sources: the local financial system, foreign equity partners, international banks, multilateral financial institutions, regional development financing institutions, export-credit agencies, and the capital markets. Usually the first available source for small and medium operators in the industry would be the local financial institutions, principally local banks.

247. In any economy, banks exist as financial intermediaries, receiving funds from individuals and firms and using these funds to make loans. The role of banks in financing assets such as machinery, equipment, etc., though rapidly changing in the industrialized countries, is still fundamental and crucial to economic growth and development in any nation. The banking industry in Nigeria should therefore be a prime source of financing for the oil and gas industry. There is also a potential market for commercial paper issued by oil companies and oil services companies, but this is hardly developed (the only major securitization structured on the basis of commercial paper was done by the African Export-Import Bank to finance the operations of subsidiaries of oil majors while they were awaiting late cash-call payments from NNPC).

248. Nigeria, like many countries in sub-Saharan Africa, with a few exceptions, is seen by many financial markets as a country with an uncertain political and economic outlook, which makes it difficult for oil services companies to obtain

direct long-term financing in US dollars for their operations from international banks. The credit available to oil services companies in local financial markets is short term and very expensive, and local banks lack adequate term-finance resources in both naira and US dollars.

249. Under these conditions, it is difficult for indigenous oil services companies to acquire and finance equipment to compete with foreign services companies for high-value-added contracts (keeping in mind that payments are often made three to six months after the services are provided, or even longer when a joint-venture oil producer is waiting for NNPC to meet its cash-calls obligations). Large amounts of foreign-currency denominated capital are needed to finance projects in the supply chain of the upstream sector of the oil and gas industry. Reducing financing costs by even a small fraction will thus produce large returns in absolute terms (and make indigenous firms more competitive as compared to foreign suppliers, who tend to have access to low-cost funds). An overview of the financial system and current reforms in the sector presented in the following sections.

B. The financial system today

B.1 Banks

250. The Nigerian banking sector has witnessed remarkable changes since the late 1990s, in terms of the ownership structure and scale and dynamism of operations, driven largely by deregulation of the financial sector and the increasing impact of globalization in the financial market place. The Central Bank of Nigeria reports that as at end June 2004 there were 89 deposit money banks in the country, including institutions of various sizes and degrees of soundness. The 10 largest banks account for about 50 per cent of the industry's total assets and liabilities, and the largest bank has a capital base of about \$240 million

compared to \$526 million for the smallest bank in Malaysia. Most banks in Nigeria have a capitalization of less than \$10 million. In its latest assessment of all banks, 62 were classified as sound/satisfactory, 14 as marginal and 11 as unsound, while two had rendered no returns.

251. Unfortunately, the Nigerian banking system is still weak. The following are some of the major problems of many Nigerian banks:

- Late publication or non-publication of annual accounts, undermining the impact of market discipline in ensuring a bank's soundness
- Gross insider abuses, resulting in sizeable non-performing insider-related loans
- Insolvency, depicted by negative capital-adequacy ratios and the total erosion of shareholders funds by operating losses
- Weak capital base: for existing banks ₦1 billion or \$7.53 million; for new ones ₦2 billion or \$15.06 million

As a result, the banking system can at most provide only short-term funds. It was in recognition of this situation that the Central Bank embarked on radical new reforms affecting the whole banking system in Nigeria.

B.2 The current banking sector reforms

252. On the 6 July 2004 the Central Bank of Nigeria announced a 13-point reform programme for banks operating in Nigeria. The following are some of the salient features of the programme:

- i. Minimum capital requirement of 25 billion naira, which must be met on or before 31 December 2005;
- ii. Consolidation of banking institutions through mergers and acquisitions;
- iii. Zero-tolerance of weak corporate governance, misconduct and lack of transparency;
- iv. Accelerated completion of the electronic Financial Analysis and Surveillance System (e-FASS) to enhance the process of filing of returns by banks and other financial institutions to the supervisory authorities;
- v. The establishment of an Asset Management Company as an important vehicle for banking-system distress resolution.

The case for this radical reform agenda was predicated on the systemic distress which the banking system suffered periodically owing to a number of factors, principally the relatively weak capital base of many banks in the system. As a result, many banks continue to experience the distress which permeates the system, leading to regularly to bank insolvency and the consequent bank failures. Thus, even though the Nigerian financial system is one of the largest in sub-Saharan Africa, overall the financial system is relatively shallow and does not effectively support the real sector. It is dominated overwhelmingly by banks, with relatively little non-bank financial intermediation. The banking system is therefore not currently in a position to fulfill its potential as a propeller of economic growth and development. The Central Bank and the Government hope that the banks to emerge from the recapitalization exercise (12 large banks in some official estimates) would be better positioned to play a leading role in meeting the huge financing needs of a growing Nigerian economy in the years ahead.

B.3 Risks

253. Financing institutions face several kinds of risk in lending to the sector. The two main types are **performance risk** on the part of the contractor and **payment risk** on the part of a subsidiary of an oil major.

Performance risk for the contractor is when the contractor is unable to deliver on the contract 'milestones' or delivery deadlines and/or quality.

Payment risk for the oil majors relates to the inability of the company to meet its payment obligations to services companies as and when due. In Nigeria some of the oil majors are typically 60-120 days late in paying contractors, owing, they often claim, to cash-flow problems created by the inability of NNPC, the senior JV partner, to meet its cash-call obligations. The various ways in which local banks and their direct-lending products can mitigate these risks have already being pointed out. For the JV partners of NNPC, the Nigerian Government provided a major relief when in 2001 it announced that for upstream projects JVs may

obtain loans secured through the assignment of tax credits, cash-call and other payments due from the Government, with these payments to be collected in escrow accounts. They can use the expected revenue realizable from forward-sales agreements for oil from JV fields, though they are not allowed to assign the actual crude-oil assets owned by the Government to obtain loans. This measure has significantly eased the greatest constraint the multinational operators face in completing oil-and-gas-related projects. This in turn has had a positive impact on the business of local companies in the supply chain.

254. The other risks involved in lending to the sector include:

- a) Foreign-exchange risk: when the source of repayment is in a currency other than US dollars;
- b) Documentary risk: the risk of fraudulent invoices for sale of oil services which arises when banks purchase accepted invoices.
- c) Diversion risk: relating to the diversion of contract proceeds when a service provider assigns the contract to other parties. This problem is compounded by the fact that some oil majors refuse to provide written acknowledgement of assignments entered into by contractors and notified to them.
- d) Country risk: relating mainly to community disturbances in the area of operations of the O & G sector and to sudden and unexpected policy reversals by the Government and its regulatory agencies.

255. In addition to these sector-specific risks, banks in Nigeria face the following risks due to the general conditions in the country:

- Very large monetary shocks generated by fluctuating oil prices or uncontrolled fiscal expansion/contraction have adversely affected the quality of bank portfolios; Unexpected or erratic action by the Central Bank; for example, the large withdrawals of public sector funds (₦7 billion) from the banking system in mid-2004, has aggravated the effect on bank portfolios;
- Over-dependency on public sector deposits, ranging from two per cent of total deposit liabilities in some banks to over 50 per cent in others;

- Interest-rate regulation and weaknesses in the capital market severely limit the availability of instruments to hedge risks.

256. As a result of all these factors, the banking industry as it exists in Nigeria today is incapable of meeting the needs of the oil services sector for an adequate and relatively affordable pool of funds to finance operations. Only a few large oil services companies have access to loans at prime rates (rates based on the Nigerian inter-bank offered rate (NIBOR), which is quite volatile, varying between 13 and 16 per cent for three-month finance during the first three months of 2005, for example; prime rates for corporate clients are about three per cent higher, and in practice virtually all lending is for periods of less than a year (forcing companies to finance medium-term exposures with short-term loans).

C. Ongoing activities of banks in financing the oil and gas sector

257. Financing indigenous service companies in the petroleum industry present banks with a special set of problems related to the characteristics of service operators:

- i) Their low capitalization,
- ii) Limited experience,
- iii) Limited borrowing track record and consequently no credible banking relationship,
- iii) Their highly specialized assets with limited secondary market,
- iv) High documentary taxes in the form of registration fees, stamp duties, etc., which makes it difficult for banks properly to complete security documents.

258. The lack of adequate medium-term funding in the commercial banking system and the shallowness of the financial system compound the problem and constraining the capacity of indigenous operators to access finance at competitive rates relative to their in-country foreign competitors.

259. However, oil and gas sector activities are too attractive for many important Nigerian banks to ignore, for the multinational oil companies are estimated to place on average some \$800 million to \$1 billion worth of contracts with local

oilfield services providers. Some key banks have created important energy departments with specialized facilities to enhance the participation of indigenous operators in the supply chain of the petroleum industry. In order to obtain precise data on the size, term, collateral, security, repayment experience, loan appraisal/monitoring procedures, etc., of these facilities, the survey sent out a detailed questionnaire to a selected number of banks (16 in all) known to be engaged in energy financing.

260. Only five banks, including two of the country's major banks responded, and they provided scant general information. Most non-responding banks deemed the information sought too detailed and sensitive. However, the banks surveyed account for more than 50 per cent of banking assets in Nigeria, making the survey representative.

D. Financing structures in support of the sector: survey responses

261. Five banks responded to the survey questionnaire, outlining key features of structures supporting the oil services sector. Their approaches are discussed below.

D.1 United Bank for Africa plc (UBA)

This bank, one of the big four banks in the country, has a special facility (total size not given) that comprises term loans, short-term loans (average length not given), note issuance, bonds and guarantees. It requires collateral in

the form of mortgages, debentures on borrowers' assets and cash. Customers are debited for security perfection. Over the years, the record indicates that repayment is easier with multinational companies than the indigenous ones. Due diligence is practised on each loan application and credit analyses are made by bank staff before approval is granted.

262. UBA has encountered performance-risk problems with borrowers, in some cases occasioned by factors such as technical incompetence, ethnic conflict in the Niger Delta and industrial disharmony, and financial risks arising from the inability of borrowers to repay. For many indigenous companies which lack adequate capital, repayment problems have been caused by delays in receiving payment from their oil major customers. Procedures for payment by oil majors are slow and take an average of 65 days.

263. It is the opinion of UBA that the oil majors should be ready and willing to agree to irrevocable domiciliation of payments with their contractors' financiers, especially the competent and credible indigenous ones with good performance track records. In order to facilitate easier access to bank financing for indigenous contractors UBA is of the view that the Government through its regulatory agencies must insist on having the finances of indigenous oil services companies audited by competent audit firms with good track records and integrity. In addition, NNPC should be granted a sufficient degree of financial autonomy to enable it run the oil business efficiently and effectively. UBA has participated in structured financing deals involving substantial foreign-currency-denominated syndicated loan facilities to big players in the industry for the financing of multimillion dollar projects. Details were not provided.

264. UBA is of the view that the 'only way to ensure optimum performance of local operators and maximum return for them is that a robust regulatory framework not inhibitive to growth and

Table 13
Term and sources of financing available from banks

Tenor	Sources	Uses by operators
i. Short-term	Banker's acceptances, overdrafts, commercial papers, invoice discounting (factoring/forfeiting), letters of credit, etc.	To fund working capital and other operating expenditure
ii. Long-term	Owner's equity plus term loan (2-3 year maturities), capital market funds, leasing and project finance.	To fund acquisition of fixed assets and equipment

development must be put in place by the government targeted toward financial and accounting stewardship of indigenous oil services firms.’ This is because indigenous oil services firms find it difficult to access bank loans ‘because they are not reliable in terms of management competence, integrity, technical competence and unreliable financial reporting.’ Without a doubt, this corresponds to the findings of the survey, especially with regard to a significant number of the small registered local indigenous companies, some 80 per cent of the total number.

D.2 First Bank plc (FB)

265. FB has an oil and gas contract finance facility which is self-liquidating as it is tied to each particular individual contract. The facility finances 70 per cent of the contract value; the tenor depends on the duration of the contract but is usually 90 to 365 days. The facility is for companies servicing oil majors, and the security demanded is the domiciliation of contract proceeds with FB. Experience with operating the facility shows that most oil majors pay their contractors between 45 and 60 days after the contract has been executed and invoices submitted.

266. Loan appraisal commences when the customer submits an application accompanied by all the required documentation, including contract paper, company profile, audited accounts, evidence of domiciliation, etc. A relationship manager undertakes the due diligence and review procedures for the approval of the Group’s head in respect of requests for between ₦3 million and ₦5 million. Requests for between 5 million 10 million are forwarded to the line Executive Director while those above 10 million go to Credit Risk Management for review, and approval must be granted by all the directors.

267. The monitoring and review procedures conducted by the relationship manager (RM) include personal verification and attestation as to the genuineness and validity of the domiciliation of contract proceeds and contract documents. Invoices submitted must be confirmed by the relationship manager, and suppliers under the

contractor are paid directly by the Bank by means of bank cheques. Relationship managers and other designated bank staff make visits to the operations sites and offices of the operator. For imported machinery and equipment, the Bank opens a letter of credit, and insurance on the goods must be obtained through First Bank’s insurance brokers.

268. The Bank has adequate measures in place to mitigate the following risks:

. Performance:

- Proven track record/evidence of execution of similar contracts by customer
- Evidence of the specialized skills required for the job
- Close monitoring of the transaction by the relationship manager from inception to time of payment

. Contract:

- Verification of the existence of the contract with the oil company

. Payment:

- Proven financial strength of the company
- Obtaining letter of domiciliation from the customer and confirmation that the Bank is recorded in the oil company’s system as beneficiary of the contract proceeds

. Diversion risk:

- Disbursement may be by direct payment to suppliers by bank cheque
- Establishment of L/C through the Bank where imports are involved
- Relationship manager to ensure that funds are utilized for the purpose for which they have been disbursed

. Community Disturbance:

- This is considered outside the control of the Bank. No indication was given as to what measures it takes to protect its funds.

269. FB is of the view that the oil majors should be obliged to make advance payment to indigenous services providers; this will significantly alleviate their cash-flow problems. Such advance payments can be backed by bank guarantees. Other policy measures suggested include the prompt release of cash calls by the

Government. NAPIMS and NNPC should strengthen and make transparent their review of the contract-award system. The Government should also set up a fund for banks to disburse as loans to indigenous oil services companies at cheaper rates.

D.3 Gulf Bank plc

270. Gulf Bank currently has an oil and gas financing facility worth 8 billion naira (\$60 million at current exchange rates) which is dedicated solely to the financing of local contractors over a 180-day term. Borrowers are required to provide debentures over their assets, and legal and/or chattel mortgages. Cash flows from completed projects and other sources are listed as sources of repayment. As with the two previous banks, appraisal and monitoring procedures include the conduct by bank staff of site inspections, the preparation of status reports, and direct bank disbursements to suppliers.

271. The following risk-mitigation measures are in place:

- (i) Non-payment: ensure that a domiciliation agreement with the contractor is in effect;
- (ii) Performance: ensure that the project in question is viable and that the contractor has a proven track record in executing similar jobs;
- iii) Maintenance: ensure that there is adequate insurance cover;
- (iv) Diversion: ensure that the contract agreement contains provisions to protect the interests of financiers and the Bank.

The Bank has participated in a structured financing deal for a power-generation project, and is of the view that such structures are a superior vehicle for the financing of energy-related projects. It believes that the Government should formulate and impose sanctions on loan defaulters.

D.4 Diamond Bank

272. Diamond Bank did not provide the same kind of information as the other banks, as it deemed such information confidential. However information obtained from the International Finance Corporation (IFC) about an oil services

credit facility for local contractors sponsored by IFC, Shell Nigeria and Diamond Bank is provided below. Diamond Bank is the administrator of the facility.

273. This facility for local contractors was initiated by IFC in mid-2001. It is a credit line to provide financing for local oil services contractors. It involves the establishment of a \$30 million revolving credit facility by IFC, Shell and Diamond Bank. IFC investment in the facility is a revolving loan of up to \$15 million for its account. The loans for individual transactions would range from \$50,000 to \$1.5 million. The loan amount will be a proportion of the contract amount, ranging from 70 to 90 per cent.

274. The facility focuses on the oil services sector in Nigeria and provides competitively priced term funding to small- and medium-sized local contractors delivering services to the Shell Petroleum Development Company Joint Venture (SPDC JV), primarily in the Niger Delta. Diamond Bank, which has an existing credit line with IFC, is already familiar with the IFC requirements for financial intermediaries. These requirements include attending IFC sponsored or approved training courses, developing an environmental management system, and submitting an annual environmental performance report to IFC. As the administrator of the facility, Diamond Bank requires that all contracts are carried out and operated in compliance with the applicable environmental and health and safety procedures.

275. By playing a leading role in putting together the facility and financing half of the required funding facility, IFC hopes to play a catalytic role in mobilizing additional term-funding, which is not readily available to small oil services contractors operating in the Niger Delta. The facility would also enable targeted contractors to access less expensive US dollar financing and strengthen their financial positions by reducing their borrowing costs. In parallel, the SME department of IFC and the Africa Development Facility (APDF) have put together an estimated \$210,000 capacity-building programme to support contractors in developing their businesses.

276. One of the major developmental benefits of the project would be its positive effect on small businesses lacking access to long-term credit. The facility would help to support the growth of targeted local contractors and, as a result, make a small contribution to the relief of unemployment. Funding under the facility would also lead to technology transfers and increased skills training, which would provide longer-term development gains and movement up the value chain. This would also enable local contractors to compete more effectively with foreign companies for certain contracts which are not currently accessible to them. Ultimately the project would establish a strong base of local services companies, which would produce all-round benefits from oil production for the economy in general.

277. The financiers hope that if the project is successful it can potentially be expanded in size to include other operations in Nigeria and serve as a model for other countries. It should also strengthen the capacity and skills of the local financial sector. Other oil developers have already expressed an interest in learning more about this approach.

D.5 FSB International

278. FSB International operates a very active energy-financing facility dubbed ENSEC (Financial Solutions for the Energy Sector). Some of ENSEC's major undertakings show the volume of syndicated facilities it has participated in for various energy projects:

1. Shell Company: \$50 million syndicated financing arranged by Citibank with FSB as underwriter.
2. Nigeria LNG Limited: \$20 million Nigerian commercial facility which FSB participated in as Nigerian lead arranger.
3. ELF: \$25 million syndicated term-loan facility arranged by Citibank and GTB, with FSB underwriting.
4. Integrated Logistic Services (Intels): \$10 million contracts-financing facility arranged by Afreximbank, with FSB as guarantor.
5. Vitol: \$20 million notes-discounting facility arranged by Afreximbank with FSB as guarantor.

It lists the following critical success factors for financing local contractors:

- Prompt accounts-receivable payment by the oil majors
- Proper ring-fencing of accounts receivable to ensure repayment from oil majors
- Professional management and organizational structure
- Established performance track record

D.6 Other Nigerian banks

279. Other Nigerian banks are also involved in oil services finance. Afribank, for example, has its "Oil Services Contractors Advances Revolving Scheme" (OSCAR), used to provide working-capital finance, finance for the procurement of capital goods, and project finance.

E. Structured finance: use and availability

280. Structured finance is increasingly becoming a significant source of financing for the oil services sector in Nigeria. In effect, most of the facilities described above have some of the basic structures of structured finance. Structured finance is the art of transferring credit risks from parties less able to bear those risks to those more equipped to bear them in a manner that ensures automatic reimbursement of advances from underlying assets.

281. Figure 3 shows the simplest structure. The key features of this structure are as follows:

- The bank assumes the performance risk of company and the payment risk of the oil producer
- The transaction hinges on the demonstrated track record of company or a technical partnership arrangement with a reputable company
- As long as the contractor performs as planned under the contract, the bank is reimbursed

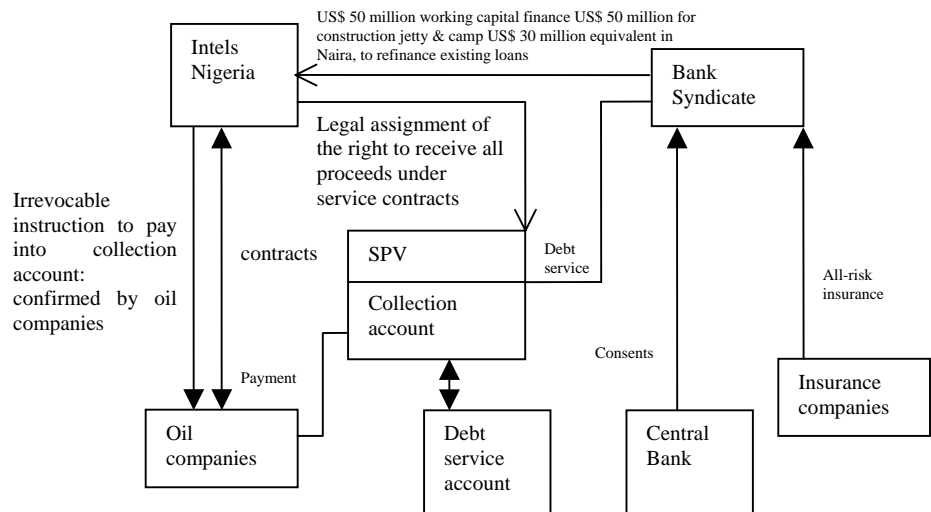
282. Such financing can be provided once the service contract has been signed and the services have been provided (as demonstrated by accepted invoices and certificates of work done issued by the oil producer) and pending actual payment of the bill. Where the lending bank is foreign, in many instances this bank would

further support the facility using local bank guarantees. The guarantee from the local bank to the lending bank, which may or may not be collateralized, may include the depositing of short-term treasury bills, partial cash collateral, etc., or may be per aval. After the guarantee has been issued, the contractor assigns the contract proceeds to the lending bank, enabling it to make disbursements of funds to the contractor. The contractor now proceeds to execute the project; on satisfactory completion, the producer repays the principal and interest to the lending bank.

283. In 2003, under such a scheme, one of Nigeria's largest oil services companies, Intels Nigeria Group received a \$130 million syndicated oil services contract financing facility. The basic structure of the transaction, which was arranged by the African Export Import Bank (Afreximbank) and Standard Chartered Bank, London, is summarized in figure 4.

284. The majority interest in Intels Nigeria is held by an international holding group, Orlean

Figure 4
Intels Nigeria syndicated loan, 2003

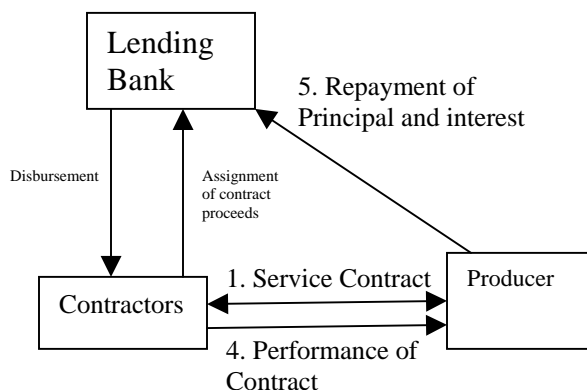


Invest, which is primarily active in Nigeria and Angola (but also in other West African countries). It is active in a wide range of oil services sectors, including stevedoring, engineering, terminal operations, civil construction, waste management, camp management, catering, and crew-boat and supply-vessel provision; several of these activities are undertaken in joint ventures with international firms such as Maersk, SAF Marine, and Murray & Roberts.

285. The three-year facility contains three tranches. The first is a \$50 million revolving facility, with a 24-month maturity date, extendable, at the request of the borrower, for a further 12 months. A second tranche of \$50 million is not revolving but destined for the construction of a jetty in the Onne Oil & Gas Free Zone and the construction of a commercial and residential camp at Port Harcourt. A third tranche of 5 billion naira, equivalent to \$30 million, was provided by local banks and served to refinance existing naira-denominated debts. The facility was priced at LIBOR plus 350 basis points, very much below the going interest rates for Nigerian companies.

286. Repayment is effected through payments by Intels' clients (oil majors and major international oil services companies) to a collection account belonging to a special purpose vehicle and controlled by a security agent (a local bank). The

Figure 3
Underlying mechanisms of structured financings in the oil services sector



arrangement covered each of the Intels Group’s subsidiary companies: Each of them had to instruct all clients to pay all amounts denominated in US dollars to the collection account, and these clients had to irrevocably confirm this. A debt-service account was used to reduce possible cash-flow risks.

287. The facility was subjected to the normal covenants, including ratios (e.g., the ratio of “guaranteed receivables” to quarterly payments due; guaranteed receivables are the invoices issued by Intels Group companies and accepted by its clients and due for payment in the current quarter), and agreements not to make any distributions to shareholders unless if after such payments, critical ratios such as debt to equity and debt-service coverage do not breach certain limits. Intels Group also gave the lenders legal charge over all their assets.

In the case of default (including a breach of any of the covenants), automatic accelerated repayments of all outstandings under the facility are to be made, through application of all funds in the collection account and full recourse to the borrower’s other assets.

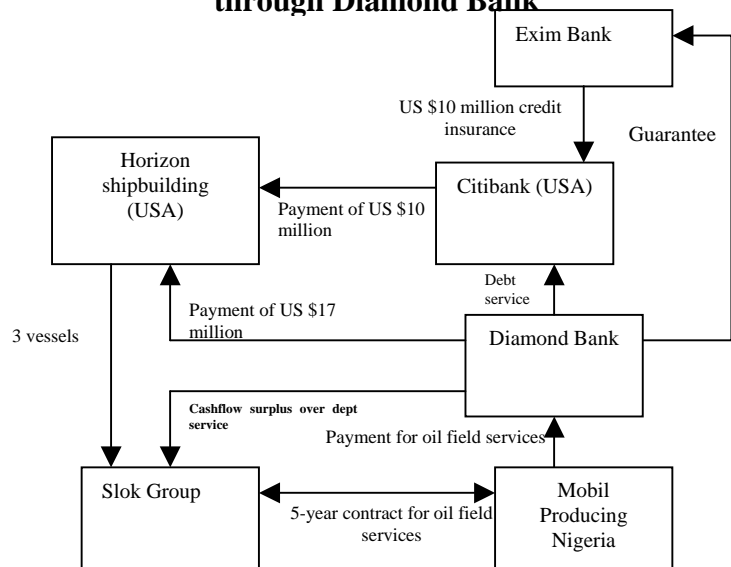
288. Another important structured deal was put together by Diamond Bank in 2001. It involved financing of the construction of three vessels for an indigenous oil field service company, the Slok Group (see Figure 5). The vessels were two crew/supply ships and one vessel to clean up eventual oil spills built by a US shipyard at a total cost of US 27 million. The financing was made possible through a five-year marine services contract entered into by, and between Slok Group and Mobil Producing Nigeria Unlimited (MPN). Diamond Bank arranged a structure under which MPN would make its contractual payments to the Slok Group through an escrow account managed by the Bank. Diamond Bank was then able to arrange a US \$10 million medium-term credit from Citibank for the vessels backed by a credit insurance policy provided by the Export-import Bank of the United States. In turn Diamond Bank had to provide US Exim with a bank guarantee. Under

the arrangement MPN will pay the Slok Group for use of the vessels in US dollars with which Diamond Bank can service the loan, and the remaining cash flow is made available to the Slok Group.

289. In practice a number of risk factors makes financing from international banks largely unavailable to service operators in Nigeria: Some of these are;

- (i) Small size of deals (usually US\$ 5-10 million) and therefore returns do not justify the efforts that have to be made to structure the transaction.
- (ii) required funding are of medium term nature meaning that international banks may provision for exposure under existing prudential guidelines
- (iii) Contract counterparties are usually reluctant to assist in putting structure in place; for example, many may refuse to acknowledge assignments of contract or simple letters of

Figure 5: Financing structure for the construction of oil vessels for the Slok Group through Diamond Bank



instruction.

290. Diamond Bank’s financing structure with IFC and SHELL targeting small-and medium-sized enterprises, discussed above, was one response to this. A Larger and more comprehensive facility was set up in 2005 by Afreximbank. Since 1997, Afreximbank has pioneered structure oil field services financing in Africa. From 1998 to 2003, total approvals to

the sector amounted to USD \$385 million. Afreximbank's support to Africa oil service companies is designed around a total approach, comprising the following instruments:

- Advisory services aimed at corporate re-organization and preparing borrowers to enter the loan market
- Structured finance to mitigate corporate finance risks
- Risks bearing support.

Apart from its structured finance, the bank has other regular facilities that are available to oil service companies such as:

- i) Line of Credit Facility (LOC)
- ii) Direct Financing (DFF)
- iii) Syndications Programme – Under this programme, the bank has used its knowledge and proven track record to arrange syndicated deals in support of the sector. As at December 2004, US \$180 million of such deals had been concluded, while US \$80 million were in the pipeline.

291. Afreximbank in 2005 introduced an innovative product called Guaranteed Afreximbank backed Oil Service Notes (GASON), which it structured together with Bank of Tokyo Mitsubishi and deployed for the first time in Nigeria with standard Chartered Bank as facility Agent. This three-year prefinancing/invoice/ receivable discounting facility is worth up to US \$75 million. The facility enables it to provide two kinds of finance:

- first and more conventionally, it purchases invoices issued by selected oil majors, including Total, ChevronTexaco, Shell, Agip, Staoil, BP Amoco, ExxonMobil, and oil service companies Halliburton, Schlumberger and Baker Hughes. Local banks guarantee payment of the invoices. The facility enables the banks to provide US dollar liquidity to the oil service companies which will reduce their cost of funds and match the currency of their assets

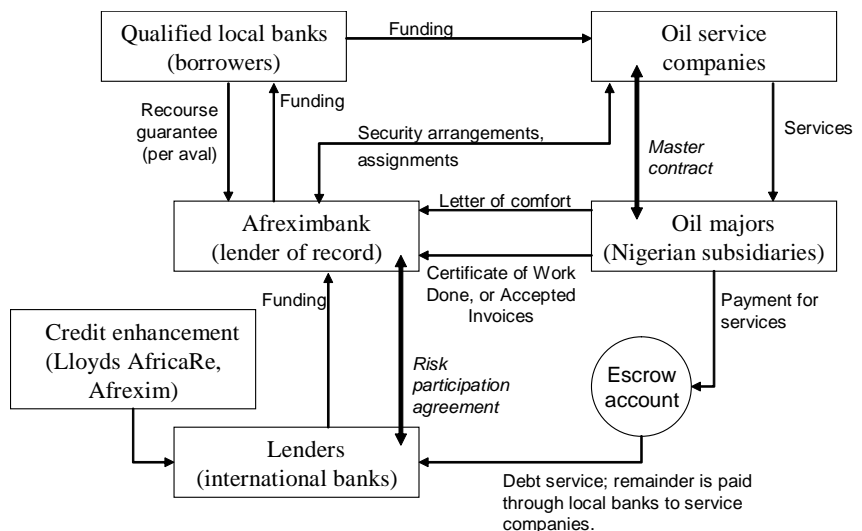
with the currency of their liabilities. The elements of this part of financing structure are depicted in figure 6. Advances are available for up to 90% of the receivables due.

- Second, prefinance can be provided for the purchase of products and services required by the oil services companies to perform the services foreseen under their contracts with the international firms. Letters of Credit or advances can be made available for up to 70% of the cost of the materials or services to delivered by the local oil services company.

292. The key advantages of GASON product are:

- Lenders benefit from Afreximbank's preferred creditor status
- Lenders benefit from Knowledge of domestic originator banks
- Lenders benefit from a second way out comprising a diversified pool of local banks with strong oil service financing capabilities
- Local banks are able to increase oil service lending by freeing their capital
- Contractors benefit from cheaper and matching currency funding
- Country (Nigeria) benefits from greater indigenous participation in the sector by operators and local banks.

Figure 6
Structure of the Afreximbank GASON oilfield services financing facility



293. The facility is open to pre-qualified local service companies (an Independent engineering firm reports on the capacity of the firms to perform under its contracts). Each company has a credit line determined by its local bank guarantees, with a maximum of US \$15 million.

294. Local banks provide a first level of guarantees. Furthermore, Afreximbank provides a first loss guarantee, up to one third of the aggregate amount of the loans outstanding. Other enhancement comes from an insurance cover, also for one third of the aggregate amount of the loans outstanding.

295. It is evident in Nigeria that Afreximbank's leadership and participation in structured finance through local banks is easing the bottleneck in financing to indigenous operators in oil and gas services sector. More importantly, it is assisting local banks in learning and improving their knowledge base in lending to indigenous entrepreneurs in the supply chain of the O & G sector. Thus the local banking sector in Nigeria is regarded as one of the few in Africa that is developing niche competencies in structured finance. In one interesting transaction, a local bank assisted a local oil service company in accessing international financing by offering a performance guarantee on behalf of the local company to the international lenders. The local bank, one of the top banks in the country, was in a better position to evaluate the performance risk of the local borrower than the international lenders who themselves on their part were better able to assess the financial risk of the local bank.

296. The whole process resulted in a win-win situation for all parties involved; - the local oil service company was able to obtain funds cheaper at a borrowing cost than it would have on the local market and in addition build international visibility and track record, the local bank was able to enhance its reputation with international lenders and international lenders were able to close a profitable deal in a risky uncertain environment.

F. Other International Financing Sources

297. Access to funding from the multilateral institutions like the international Finance Corporation of the World Bank (IFC), the European Investment Bank, the export credit agencies of the major OECD countries, the regional institutions like the Africa Development Bank, the ECOWAS Regional bank are all potential sources of financing for local contractors. There are indications that with the right client and structure, these institutions are increasingly favourable to providing financial support for projects involving local contractors.

298. For example, in 2003, the IFC arranged US \$50 million revolving credit line to Adamac Industries Limited, Nigeria's largest indigenous oilfield services company, a family firm established in 1982 and now with some 4,500 employees. This allowed Adamac to considerably reduce its funding costs (which stood at over 30%). This was Adamac's first entry into the Euro syndications market. The company had earlier obtained financing in support of some of its operations from Afreximbank.

299. Half of the credit line was for IFC's own account, half was a syndicated US\$25 million B Loan (funds coming from commercial banks, but with IFC as lender of Record thereby transferring its special creditor privileges to those lenders. The revolving line of credit was to be extended to DSNL Offshore Limited, an Adamac subsidiary that delivers oil field services (engineering, design, construction and installation) for offshore facilities. The facility would be used to refinance a working capital loan and for financing working capital requirements for new contracts. The existing working capital loan was undertaken for the company's participation in the Offshore Gas Gathering System (OGGS) contract. This contract involves the development of an offshore and onshore network of pipelines consisting of over 360 kilometers of pipes to collect associated and non-associated gas for delivery to a local LNG (Liquefied Natural Gas) facility. The credit facility provided Adamac access to longer term financing and thereby greater flexibility in developing and funding its

investment programme and contracting strategy. The facility strengthened Adamac's financial situation by reducing its heavy borrowing costs and thereby increasing its competitiveness vis-à-vis foreign contractors.

300. The United States Export Import Bank has under its Master Guarantee programme developed relationship programmes with some Nigerian banks whereby it provides assistance to United States exporters by guaranteeing term financing to creditworthy international buyers, both in the private and public sectors for purchases of US goods and services. With this facility, indigenous oil service companies seeking to purchase equipment and oil/gas related machinery are able to obtain term financing ranging from one to two years that are not available on the local market. The transaction however must receive the prior approval of US Eximbank. This credit insurance guarantee facilitated financing for the construction of oil vessels mentioned. Other Nigerian oil services companies have also had access to US Exim Bank financing –e.g., Weltek Ltd. received in 2002 a US\$732,000 financing for capital equipment for an engineering centre.

301. Recently, the US Exim bank, with growing confidence about the capability and strength of some top institutions in the Nigerian banking industry and the prospects for the national economy, has widened the scope and depth of its intervention by extending its Credit Guarantee Facility (CGF) to a few Nigerian banks. Notable for mention is the US \$30 million granted to a local bank, Standard Trust Bank plc late May 2004 for on lending to its customers. Under this arrangement STB is the borrower. This is a significant boost for term financing in the Nigerian banking sector. Under the CGF, US Exim transfers complete trust to the local bank. STB approves the transactions, has control over the money and the disbursement of funds. Under the CGF facility, Ex-Im Banks standard guarantee coverage of 100% of principal and interest (either floating or fixed rates) of up to 85 percent of the USD export value is available to buyers who must make a 15 percent cash payment to the exporter outside of the CGF.

302. Another landmark deal between a local bank and a foreign financing institution is the one signed late November 2004 between Guaranty Trust Bank (GTB) plc and the Netherlands Development Finance Company (FMO) in which a US \$25 million credit facility was granted to the bank. It comprises a US \$20 million term loan facility and a US \$5 million trade finance line. The funds will enable GTB to extend medium and long term dollar financing and also strengthen its capacity to open letters of credit (LOCS) for its customers. GTB had previously been granted a US \$10 million facility from the FMO which it had fully repaid. In his remarks during the signing of the agreement, the Managing Director of FMO noted that the development of GTB has been astonishing ... its current balance sheet total is more than one billion dollars ... the bank is a role model in terms of ethics, development of new banking products, corporate governance and dedication to service and efficiency. It will be noted that GTB led a consortium of local and international banks to arrange a \$200 million medium term loan to GSM network operator MTN Nigeria Communication Ltd, the leading mobile network provider in Nigeria with about 3 million subscribers. GTB and other such banks who are excelling above the field in the local banking industry are thus increasingly in a position to narrow the gap in the key major financing constraint facing small and medium (sme) oil service companies in Nigeria – availability of term foreign currency finance to import machinery, equipment, spares, etc.

303. An important source of business advisory services, enterprise support services, capacity building and linkage programmes for oil service entrepreneurs is the Africa Project Development Facility (APDF). The Africa Project Development Facility is an agency of the IFC funded by 15 donor countries and the African Development Bank primarily to provide project preparation support to African private entrepreneurs. It is already participating in providing some of such services in conjunction with some oil majors, banks as mentioned earlier above.

304. Contractual savings institutions such as insurance companies are a source of long-term funds. There is evidence that some top insurance

companies in the country like IGI (Industrial and General Insurance), the soon to be privatized National Insurance Corporation of Nigeria (NICON) are already getting into the act by participating in the insurance segment of the financing process. Their role is bound to get much bigger as the level of local participation in the industry increases as government's announced local content policy is implemented.

G. The Nigerian Capital Market

305. As at 2002, the oil and gas sector accounted for 13.2 percent of Nigeria's \$48.97 billion GDP, while the sector's share of the Nigerian stock exchange market capitalization is merely 13.1 percent compared to 30.6 percent, 13.7 percent and 23.8 percent respectively for the breweries, food/beverages and banking sub-sectors of the market. Currently, none of the oil producing companies is quoted on the stock exchange nor the service companies. The potential for raising financing from the capital market is therefore limited in the short to medium term. A few initiatives are worthy of note. In 1998 a ₦2.3 billion Nigerian Energy Sector Fund (managed by NAL Bank) was launched to mobilize investible funds from individual and corporate investors, local and foreign, for investment in the oil and gas exploration and production, marketing and service companies. In 2001, IMB international Bank plc. launched the ₦1 billion Energy Master Fund for investment in oil and gas projects. However, data on the operation of these funds were not available to gauge their performance.

H. Issues

306. Lack of access to financing is a major constraint to the ability of local contractors to compete with foreign contractors in the oil and gas sector in Nigeria. Where the foreign contractors have access to offshore capital and the support of export-credit agencies in their home countries, the local contractors can only obtain short-term credit from few institutions after a lengthy process at interest rates over 25% or more. It may well be this realization that informed the Nigerian Government to announce through the Central Bank a major policy for

recapitalization of banks through mergers and acquisitions private placements and initial public offerings. It is hoped that when completed by end 2005, it will see the emergence of fewer banks in the country with enough financial muscle to support the real sector and capability to source external funds for development projects especially in the oil and gas sector which is the single most important engine of growth in Nigeria.

CHAPTER TEN

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Introduction

This survey, the first of its kind in Nigeria, is intended to focus on developments in the indigenous segment of the supply chain of the oil and gas services sector in Nigeria. Oil and Gas, the mainstay of the Nigerian economy since the middle 1970s, will continue to dominate the economy even more as major discoveries made in deepwater Nigeria in recent years will significantly boost production to an estimated 4 million barrels per day by 2010. In addition, other big offshore discoveries in Equatorial Guinea, Angola, and onshore in Chad and prospective new ones in Sao Tome has put the world searchlight on the West African region as a possible alternative source of supplies to the world away from the strife-torn Middle East.

Nigerian indigenous oil service providers from small beginnings in the late 1980's have grown in size in the number of firms operating principally in the Port Harcourt/Onne zone. They are characterized by the presence of a large number of small firms, essentially one-man outfits coexisting in tandem with several medium-size indigenous firms that are growing rapidly in size and the nature and value of contracts implemented, together with some well known multinational oil services firms. They are located in an embryonic but rapidly growing cluster. For large projects, in oil and gas exploration and development entails to have a strong development impact, they need to be closely linked to the local economy. Experience in some oil producing nations show that one effective way to accomplish this is through a cluster approach. This approach will greatly be enhanced if the level of participation of local companies is significantly increased.

Summary Of Findings

a) The oil and gas services sector in Nigeria can be categorized into three operating segments; a) a top tier of world class multinational firms such as Schlumberger,

Halliburton, Baker Hughes etc. b) a middle level of both medium-sized foreign and the large local companies such as Adamac Industries Ltd., Dorman Long, Nigerdock plc Ltd., Drillog, Petrodynamics etc. and c) a large number of companies at the bottom end of the scale in general supplies, and acting as local agents of foreign companies.

- ii) These companies are located within a geographic concentration exhibiting some of the positive characteristics of cluster driven industrial development, though embryonic in nature. The geographic concentration is in the Onne/Port Harcourt area.
- iii) The drive towards indigenous/ participation especially in the services sector of the oil and gas industry is the underpinning policy priority of the Nigerian Government. These are varying estimates about the level of local content in the industry. According to NAPIMS, the level has increased from 5% in 1999 to 14% in 2003 and close to 20% in 2004. The percentage is much lower for natural gas than it is for crude oil.
- iv) Local content in Nigeria is defined as the "quantum of composite value added to, created in the Nigerian economy through a deliberate utilization of Nigerian human and materials resources and services in the petroleum industry in order to stimulate the development of indigenous capabilities without compromising acceptable quality, health, safety and environmental standards. Government has announced a target of 45% attainment by 2007 and 70% by 2010.
- v) In furtherance of its LCD objective, the Government has since 2003 made specific pronouncements in terms of activities to be executed locally;
 - All seismic jobs in the range of 0-800 square kilometers are to be done by local companies,

- All Front-End Engineering and Design (FEED) jobs for some key projects are to be handled by local firms
 - Oil prospecting firms must carry out locally all fabrication jobs except for high technical projects with particular reference to deep offshore projects
 - All geological and geophysical studies are to be carried out in the country.
- vi) In April 2005, the Government in addition issued the following guidelines;
- All fixed platforms (offshore and onshore), piles, anchors, buoys, jackets, bridges, flare booms and similar structures and storage tanks are to be fabricated in-country to maximize utilization of local fabrication yards
 - FEED and Detailed Engineering for all projects, as well as seismic data processing projects and all reservoir management studies, are to be domesticated effective end 2005.
 - All FPSO (Floating Production Storage and Offloading) topsides integration to be done within the country starting from mid – 2006.
 - In procurement operations, oil companies need to apply international codes and standards, which will support utilization of locally manufactured products such as paints and cables.
- vii) There is concrete evidence that all major oil producing companies have put in place sustainable development programmes to enhance the participation of local contractors in the operations. In its execution of the giant Bong Offshore field development project, SNEPCO has set the benchmark example now being emulated by all companies.
- viii) Lack of access to appropriate financing has been a major obstacle preventing local companies from participating effectively in the Oil & Gas services sector, as they are unable to offer payment conditions similar

to those offered by foreign companies. Even though the Nigerian financial system is one of the largest in sub-Saharan Africa, overall the financial system is relatively shallow and is dominated by banks with non-bank intermediation relatively insignificant. Due to deficiencies in the system, many local companies have recourse only to short-term funds in order to finance the procurement of capital assets and they face interest rates of over 30%. Moreover, foreign currency needed to finance are in limited supply in the banking system and international banks find it difficult to finance local contractors. However, despite these constraints, oil and gas sector activities are too attractive for many important Nigerian banks to ignore and some key banks have established active energy departments that are beginning to ease the problems. In addition, some key regional institutions (like Afreximbank) are taking the lead in providing finance through the use of modern financing techniques such as structured finance. A radical reform of the Nigerian banking industry has been underway since July 2004 involving the directive by the Central Bank of Nigeria (CBN) that all banks should recapitalize to the tune of ₦25 billion. It is hoped that when this is completed by end 2005, fewer banks will emerge with adequate financial capability to support the real sector and to source external funds for development projects especially in the oil and gas sector.

- ix) Community relations and environmental issues have been the bane of the Nigerian petroleum industry. Ever since the discovery of oil in the late 1950s, the country, especially the Niger Delta region, has suffered widespread degradation of the environment, through oil spills, gas flaring and deforestation. In 2003, almost a third of the country's oil production capacity was shut down because of "communal violence". Protest actions are a regular occurrence, with local youths seizing oil platforms, taking hostages and the resultant effect is the shutdown of well and flow stations, the withdrawal of staff and the stoppage of production by the oil companies. Since mid 2002, the federal Government and the oil

companies have begun to take serious action to address these problems. All the major oil companies and some of the major service providers have instituted programmes and projects in environment and safety and others to enhance business-community relations.

Recommendations

i) There is need to redefine the term local content in order to remove any ambiguities and obviate confusion and controversy in implementation.

ii) There is need to develop a web directory of oil service companies as well as a website where contracts available can be posted.

iii) The role of NNPC in dynamising the sector for the benefit of the country and its citizens cannot be overemphasized. The recent management charges taking in the corporation should be a first step in a full restructuring leading to financial and operational autonomy to bring it in line with similar national oil companies in oil producing states as Malaysia, Brazil, Mexico, Norway and Venezuela. A first step in this direction is for the Federal Government to sell all or part of its equity shares in the JV operations and use the funds so realized to recapitalize the corporation into a world-class petroleum company, while still vesting all rights to ownership, exploration and production in the corporation.

iv) The regulatory agencies, the DPR and NAPIMS need to be strengthened and given full autonomy to perform their regulatory duties without which local content development will not meet its planned targets. In recent discussions of the Nigeria National Stakeholders Working Group (Neff, 2005), it was proposed to create a new agency, independent from NNPC, DPR and NAPIMS, to monitor and enforce local content policies; this agency should then “have the power to intervene in advance of licensing rounds to penalize, even eliminate, companies for failing to comply with local content commitments.” Creating new agencies just because one is unhappy with the performance of existing ones is however only rarely a solution.

v) The foreign JV partners of the state oil company NNPC should link up with local firms not only through the implementation of sustainable activities that lead to transfer of knowledge and skill acquisition. Foreign investors should be encouraged to participate with local firms by developing enduring technology-transferring partnerships.

vi) The educational sector especially university level education and the availability of strong research and technology institutes are the vital missing link in the chain of sustainable and effective local content development. An urgent well-financed programme to redress the situation should be embarked upon.

vii) Community relations issues are a significant obstacle to the implementation of a speedy, strife-free local content development in the oil industry in Nigeria. The crucial question continues to be; how does policy at the level of the producing and service companies and the national government seek to redress the immediate needs of the host communities for jobs, contracts etc on the one hand and also offer a level playing field for the participation of the best, in terms of entrepreneurial, managerial, technical and financial competence that is available country-wide, on the other hand? The petroleum industry demands very high quality technical capabilities and only a deliberate, open, transparent, equal-opportunity incentives set of policies by both the oil firms and the national government will encourage the rapid growth and development of a vibrant and competent Nigerian local content participation in the petroleum industry. Is it possible to design a policy framework that provides the best possible balance among these competing principles? One possible way to mitigate the perennial problem of the host communities is for the Federal government to substantially increase the share of revenue from oil going to the producing states and stipulate that a greater part of these revenues be allocated directly to local communities, with tough guidelines on revenue management. In Brazil, and Alaska for instance, oil and gas revenues are mandated by law to be shared with local communities. In Campos, Brazil, for example, revenues received by the city are used to construct hospitals and clinics, roads are

paved, modern sewer systems are built and children removed from the streets and a life of child labour and placed in schools. If the same policies and measures can be replicated in the oil cities of Warri and Port Harcourt, the demonstrable effect will go a long way to alleviating the problem.

Thus until a lasting solution can be found to address these problems which include pacifying the ethnic inhabitants of the Niger Delta, community relations will continue to pose imponderable hazards to both the oil production and service sectors of petroleum production in Nigeria.

Conclusion

The oil and gas sector is of crucial importance to Nigeria, for export revenues, government revenues, for investments and for country-wide growth and development. Thus, a small increase in the oil prices coupled with increases in export volumes can have a very large impact on the Nigerian economy as oil and natural gas account for more than 90-95 percent of its export revenues, over 90 percent of foreign exchange earnings and 80 percent of government revenues.

Oil field services is estimated to account for 90% of the total cost of producing one barrel of oil and for the African producing countries, this translates into a total market size of some US \$30 billion/year. The market size in Nigeria, Africa's largest producer is estimated to range from 8-10 billion US \$/year and services worth about US \$800 million to US \$1 billion are contracted out year to local companies with the remainder going to the big foreign multinational oil services companies. The federal government of Nigeria is determined that a significant portion of these revenues be retained in the country and that the industry create jobs and economic activity for suppliers, contractors and local communities and transfer technology through appropriate training and skills development. Nigeria has sufficient manpower at home and overseas to make the current drive towards greater participation by indigenous services firms succeed. How the local content policy evolves as a piece of legislation and how

it is implemented in the near to medium term will determine whether the industry can be fully integrated into the national economy to have a positive impact on economic growth and development in Nigeria.

Further Research Tasks

Our field interviews in Port Harcourt and Lagos were constrained by the unwillingness of companies to provide data that would have enabled us to undertake a more detailed and rigorous treatment of sector specific issues like identifying the quantum and quality of manpower available within the sector, determining possible training needs and elaborating on existing linkages between the sector and the larger economy among others. The security situation in the Niger Delta requires that official support and sponsorship by the NNPC/DPR and the State governments is absolutely important to ensure the effectiveness of further research which should include the following tasks;

1. *Cluster study*:- a benchmarking study of the sector using the cluster approach is absolutely necessary at this time to provide adequate basis for the evaluation of indigenous services companies' performance, and designing effective policies for the rapid development of the cluster
2. *Types of foreign collaboration*;- We need to know the relative advantages of different types of foreign collaboration for building up world class infrastructure for fabrication, construction and ship repair. In particular, we must investigate more of the success stories involving other oil producers that had unfavourable initial conditions.
3. *Measures to stimulate skill formation and transfer*. Research must be able to analyse the skill formation and transfer process and feasible policy measures to accelerate such a process.

The paucity of data in some places notwithstanding, we believe the survey has provided the essential sector level information

that should prove useful for an understanding of the Nigeria oil and gas services sector, long neglected in national economic discourse and planning. It will also improve the knowledge base on issues germane to the formulation of an enduring effective national local content policy to empower indigenous operators in a sector so vital to Nigeria's social and economic well –

being. It also provides the basis for Nigeria to develop policy that will enable it create the local capacity for supporting oil and gas investment activities in the Joint Development Zone, Equatorial Guinea and possibly up to offshore Mauritania.

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Annex 1 Oil-production joint ventures in Nigeria, April 2003

Operator (% interest)	Other Partners (% interest)	NNPC (% interest)	Major Producing Fields	Production Barrels per Day
Shell (30%)	Total (10%) Agip (5%)	55%	Bonny or Eastern Division - Nembe, Cawthorn Channel, Ekulama, Imo River, Kolo Creek, Adibawa and Etelebou Forcados or Western Division - Forcados Yorke, Jones Creek, Olomoro, Otumara, Sapele, Egwa and Odidi	50,000 (2003 Est.)
ExxonMobil (40%)	None	60%	Edop, Ubit, Oso, Unam and Asasa	500,000 (2003 Est.)
ChevronTexaco (40%)	None	60%	Meren, Okan, Benin River, Delta/Delta South, Inda, Meji and Robertkiri Funiwa, Middleton, North Apoi, Pennington and Sengana	485,000 (2003 Est.)
Agip (20%)	Phillips (20%)	60%	Obama, Obiafu, M'Bede, Abgara and Oshi	150,000 (2003 Est.)
Total (40%)	None	60%	Obagi, Aghigo, Okpoko, Upomami, Afia and Obodo- Jatumi	150,000 (2003 Est.)
Pan Ocean (40%)	None	60%	Ologbo, Ogharefe	

Source: Mostly based on US Energy Information Administration

Annex 2 Summary of deep-water offshore fields

The following are the major operators in deep and ultra-deep offshore waters (their main projects are summarized in a table at the end):

Shell Nigeria Exploration and Production Company (SNEPCO) was established in 1993 to manage Shell exploration and development interests in Nigeria's deep-water offshore acreage. The company discovered the first oilfield in Nigerian deep water in 1995. The Bonga field, located in Oil Mining Licence (OML) 118 with a water depth of 960 to 1150 metres, holds an estimated 750 million barrels of crude oil. The company made a second major discovery with a similar reserves potential in Bonga SW in 2001. The Bonga FPSO has been completed after some initial delay. The topside was fabricated by AMEC, while Daewoo of South Korea constructed the modules. The single-point mooring (SPM) was constructed by Nigerdock, a Nigerian company, in Nigeria. It was a significant milestone for an indigenous company in the oil and gas services sector. The FPSO is capable of processing 225,000 barrels of oil a day and has an export capacity of 150 MMscf/d of associated gas.

In one of Shell's other new operations in Nigeria, production commenced in 2003 in the EA field, located in shallow water (25km) off the coast of Nigeria, through SPDC joint venture's new FPSO facility, the Sea Eagle, which stores an average of 100,000 barrels of oil per day, which it processes and discharges to ocean-going tankers. In deep water Shell has also identified a further giant field, Bonga Southwest, which is partly in ChevronTexaco's Aparo OPL 213 block. These projects are beneficiaries of Shell's \$8.5 billion medium-term investment in Nigeria.

ChevronTexaco operates in the upstream sector of the Nigerian industry through three subsidiaries: Chevron Nigeria Limited (CNL), Texaco Overseas (Nigeria) Petroleum Company Unlimited (TOPCON), and Star Deep Water Petroleum Limited. Star Deep is the operator of the Agbami deep-water block, in which it holds a 32 per cent share (50% is held by NNPC, 8% by Brazil's Petrobras, and 10% by Famfa Oil Limited, an indigenous company). The development of the field is being undertaken at an estimated cost of \$2 billion. Pre-qualification of interested contractors for EPCI contracts for the FPSO and facilities commenced in August 2003. The FPSO will have a length of 300 metres and be capable of processing 250,000 barrels of crude oil and 450 MMSC of gas with a gas re-injection pressure of 7,000 psi. ChevronTexaco has several other deep-water developments, including Usan (where the first oil is expected to flow in 2009) and Nsiko (a 2003 discovery in water 1,700 metres deep, which is expected to be brought into production before Usan).

EEPNL, a subsidiary of Exxon Mobil, is undertaking the Erha development project located 160 kilometres south-east of Lagos in water 1,036 metres deep. Under the kind of diverse ownership structure typical of Nigerian oil fields, EEPNL and NNPC (under a production sharing contract) jointly hold 56.25 per cent of the Erha field, and SNEPCO the remaining 43.75 per cent. Recoverable reserves are estimated at 525 million barrels of oil (and 600 billion cubic feet of natural gas), while the production rate is expected to peak at about 210,000 barrels of oil and 340 million cubic feet of gas per day. The contract covers engineering, procurement, construction, towing and commissioning of the FPSO as well as the supply of anchor chains; it is scheduled to be completed in mid-2005. The development of the Erha field is estimated to cost \$1.1 billion.

Total Nigeria Limited took delivery in late 2002 of FSO Unity, its floating storage and offloading vessel (FSO) constructed in South Korea by Hyundai Heavy Industries. The FSO has a storage capacity of 2.2 billion barrels of oil with a settling tank of 0.2 million barrels. It is designed to last at least 25 years without any dry-dock inspection visits and it can accommodate 130 workers at a time. Production from the Amenam Kpono offshore field which the FSO serves

commenced in mid-2003. The field has an oil reserves potential of 500 million barrels with no need for gas flaring. The project cost is about \$1.2 billion.

Nigeria Agip Exploration Limited has commenced oil production from its offshore Abo Central field in water ranging between 500 and 800 metres in depth. Construction of the FPSO for the production, treatment, storage and offloading of crude oil from the field was completed in November 2002. It is the first producing Nigerian deep-water oil field. Agip Energy and Natural Resources Limited (AENR) is executing two service contracts with NNPC on OML 116 located in shallow waters off the Niger Delta and another contract (with NNPC subsidiary NPDC) to finance and jointly work on the development of the Okono and Okpoho fields in OML 199 (OPL 91). Drilling activity has increased the field's proven reserves from the original 56 million barrels to 240 million barrels. The first oil from the field was produced in December 2001 through an FPSO with a processing capacity of 20,000 bbl/d, a gas-processing capacity of 35-40 MMscf/d and an oil-storage capacity of 200,000 barrels.

Other multinational oil companies have also planned large new investment outlays for the development of new deep-water acreages. They include ConocoPhillips (through three subsidiaries, Conoco Energy Nigeria Limited (CENL), Conoco Exploration and Production Nigeria Limited (CEPNL), and Phillips Exploration Nigeria Limited (PENL), and Statoil (the Nnwa/Doro field, in water 1,200 metres deep).

In May 2005 the Joint Development Zone Authority announced the award of five oil blocks to different consortia. It is expected that investments in these blocks will commence in 2005/2006.

SUMMARY OF DEEP-WATER OFFSHORE FIELDS

FIELD	BONGA	AGBAMI/ EKOLI	ERHA	ABO	TOTAL
COMPANY	Shell	Famfa/Texaco/ Statoil	Esso	Agip	
Block	OPL 212	OPL 216/217	OPL 209	OPL 216	
Reserve Million bbls	689	751	500	81	2021
Oil Production Mb/d	225	200	150	40	615
Gas Production MMsc f/d	150	300	360	52	670
FIRST OIL	July 2005	2Q. 2005	3Q. 2005	April 2003	
Estimated field Life	20 years	20 years	25 years	8-10 years	
Development Budget	US \$2.4 billion	US \$3.8-4.2 billion	US \$2.1 billion	US \$750 million	US \$9.45 billion

PETROLEUM POLICY ROUNDTABLE 2003

SOURCE:

Annex 3 A short history of world oil politics: rise of OPEC to creation of NNPC

Introduction

The period between the two great wars was significant for oil production and consumption in the world. Oil was a source of power and wealth much more for the oil companies which exploited and produced it than for the oil-producing countries themselves. It was during this period that clashes between the oil companies and their host countries began to emerge. The major European countries and the United States were in full support of their oil companies, for oil had become a “strategic” commodity. Rivalries between the major powers for a stake in petroleum concessions in countries such as Mexico and Venezuela and the Arabian States intensified just as these countries were seeking to gain increased control of their natural resource. The Mexican revolution which began in 1911 was motivated by the desire of the revolutionaries to restore the principle of national ownership of oil properties. At the time of the revolution about 90 per cent of oil operations were controlled by foreign companies. Article 27 of the Constitution of 1917 declared that underground resources - the subsoil - belonged not to those who owned the property above but to the Mexican State. This was perhaps the first such nationalization in the history of world.

Similar events were taking place in Persia, which then became known as Iran, where the Shah, who had established a monarchy in a 1925 revolution, intent on curbing the power of the British Government and its Anglo-Persian oil interest, cancelled Anglo-Persian’s concession in 1932. In a new agreement between the company and the Shah the concession area was reduced by three-quarters and the royalty was fixed at 20 per cent of Anglo-Persia’s worldwide profits.

Venezuela was another country to witness a phenomenal rise in oil production by the late 1930s. By 1939 it was second only to the United States in total output. Soon conflicts between the State and oil companies over the distribution of profits intensified and Venezuela, as a result of its experience, was singularly important in the movement by the oil-producing countries to form OPEC. When the Middle East gained prominence in world oil, for its proven reserves surpassed immensely those of the countries of the Western hemisphere (Venezuela, Mexico), world attention shifted to the region as the big Powers began a scramble to map out spheres of control and influence in countries such as Iran, Iraq, Saudi Arabia, Kuwait, Bahrain and Qatar. In Saudi Arabia, five American oil companies - Standard Oil, Texaco, Socal and Socony-Vacuum (later Mobil Oil) - controlled oil production through the Arabian American Oil Company (Aramco). In Bahrain, two American companies controlled oil production. In Kuwait it was Gulf, and in Iran the British Anglo-Iran company. In Iraq it was British (Anglo-Iran), American (Standard Oil and Socony-Vacuum) and French companies (Compagnie Francaise des Pétroles) which controlled the Iraq Petroleum Company (IPC).

The ensuing tussle between these companies and their host Governments led to the emergence of a new principle in relations between the “landlord” and the “tenant”. The “fifty-fifty” principle entailed a lump sum of royalty paid to producers plus a fifty-fifty split of the profits (i.e., selling price minus production cost). Venezuela was the first country to obtain this deal, in 1949, followed by Saudi Arabia.

From 1950 to 1960 the oil-producing countries were increasingly agitating for greater control of their oil resources at the expense of the multinational oil companies, which were referred to at the time as the ‘seven sisters’. Arab countries, especially the Gulf countries, were in the forefront of the struggle and when in 1960 five countries (Iran, Iraq, Kuwait, Saudi Arabia and Venezuela) met in Baghdad to form the Organization of Petroleum Exporting Countries (OPEC), the final process of divesting the seven sisters of control of world oil was begun. This singular event changed the structure and pattern of world petroleum economics, politics, trade and finance.

The rise of OPEC

The Organization of Petroleum Exporting Countries (OPEC) was created at the Baghdad Conference held from 10 to 14 September 1960 as a permanent intergovernmental organization by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela, the five founding members. They were later joined by eight other members: Qatar (1961); Indonesia (1962); the Socialist Peoples Libyan Arab Jamahiriya (1969); the United Arab Emirates (1967); Algeria (1969); Nigeria (1971); Ecuador (1973-1992) and Gabon (1975-1994). The purpose of OPEC is to coordinate and unify petroleum policies among its member countries in order to secure fair and stable prices for petroleum producers, an efficient, economic and regular supply of petroleum to consumer nations, and a fair return on capital to those investing in the industry.

OPEC rose to prominence during the 1970s as its member countries took control of their domestic production industries and acquired a major say in the pricing of crude oil in world markets. The Arab oil embargo in 1973 and the outbreak of the Iranian revolution in 1979 triggered two oil-price crises that catapulted OPEC into world prominence.

The effect of the OPEC revolution was to end permanently the use of the concession grant for oil exploration and development in the major producing countries. States asserted themselves by taking up equity control of the foreign oil companies operating in their territories.

The Nigerian National Petroleum Corporation (NNPC)

NNPC resulted from this political movement. When Nigeria opted to join OPEC in 1971 it had to adhere to the Organization's principles and policy pronouncements, chiefly article 90 of OPEC resolution XVI of 1968, which enjoined the member States to "seek participation in the equity of existing concessions." This was the motivation for the formation in 1971 of Nigeria's first State oil company, the Nigerian National Oil Corporation, with a mandate "to engage in prospecting for, mining and marketing oil and all other activities with the petroleum oil Ministry." NNOC was an offshoot of the Ministry of Mines and Power, and when the Ministry of Petroleum Resources was created in 1976 NNOC operated alongside the Ministry. The Ministry limited its powers to regulatory functions, and jurisdictional problems soon arose between the two bodies. It was for this reason that the Nigeria National Petroleum Corporation was established in 1997 by Decree No.38. The commercial functions of NNOC and the regulatory functions of the Ministry were combined in the new Corporation. The regulatory functions were exercised by the Petroleum Inspectorate established under Part 11 of the Act as an integral part of the Corporation.

Duties

NNPC's duties include participation in all stages of the upstream and downstream energy sector, carrying out research in connection with petroleum, and participating on the Federal Government's behalf in petroleum activities to enhance the petroleum industry and to give full effect to the provisions of the Act.

Functions

- a) Exploring and prospecting for, working, winning or otherwise acquiring, possessing and disposing of petroleum;
- b) Refining, treating, processing and generating, engaging in the handling of petroleum for the manufacture and production of petroleum products and derivatives;
- c) Purchasing and marketing petroleum, its products and by-products;

- d) Providing and operating pipelines, tank ships for conveyance of crude oil, natural gas and their products and derivatives, water and any other liquids or other commodities related to the Corporation's operations;
- e) Constructing, equipping and maintaining tank farms and other facilities for the handling and treatment of petroleum and its products and derivatives;
- f) Carrying out research in connection with petroleum or anything derived from it and promoting activities for the purpose of turning to account the results of such research;
- g) Doing anything necessary to give effect to agreements entered into by the Federal Government with a view to securing participation by the Government or the Corporation in activities connected with petroleum;
- h) Generally engaging in activities that would enhance the petroleum industry in the overall interest of Nigeria, and
- i) Undertaking such other activities as may be necessary or expedient for giving full effect to the provisions of the Act.

While the Act remains essentially unchanged, NNPC has undergone three main reorganisations.

First reorganisation

Following the Irikefe Commission of Inquiry set up to look into the allegation of a misappropriation of funds totalling \$2.8 billion from the NNPC account, it was decided that the Corporation had become too large to function efficiently, and a supervisory Ministry of Petroleum and Energy was established, this time entitled Petroleum and Energy.

Some subsidiaries were created as well. These subsidiaries were intended to be independent and self-accountable and included the three existing refineries, at Port Harcourt, Kaduna and Warri. This reorganisation took place during the first half of the 1980s.

Second reorganisation

This took place in 1988 and led to the separation of the Petroleum Inspectorate from NNPC and its merger with the Ministry of Petroleum as the Department of Petroleum Resources. NNPC was declared commercialised, with the following subsidiaries:

1. Eleme Petrochemicals Co. Ltd.
2. Warri Refining and Petrochemicals Co.
3. Kaduna Refining and Petrochemical Co.
4. Port Harcourt Refining and Petrochemical Co.
5. Nigerian Petroleum Development Co. Ltd.
6. Integrated Data Services Ltd.
7. Pipelines and Products Marketing Co. Ltd (PPMC)
8. Nigerian Gas Company Ltd.
9. National Engineering and Technical Co. Ltd (NETCO)
10. Hyson Nigeria Ltd.

During this period six divisions were created: Commercial, National Petroleum Investment Management Services (NAPIMS) Services Upstream, Gas Development, Downstream, and Finance and Accounts. By notice in the Federal Government Gazette the Ministry of Petroleum Resources was given the following responsibilities:

1. The overall supervision of the Nigerian petroleum industry, including NNPC and its subsidiaries, to ensure compliance with the applicable statutes.
2. The issuance of permits, licences and leases and the authorisations and approvals prescribed by statute for a whole range of petroleum activities, from seismic surveys to drilling,

- construction of production facilities, operation of processing plants such as refineries and petrochemicals and LNG plants, and the marketing of petroleum products.
3. Policy matters relating to the granting of petroleum rights and the marketing of crude oil and natural gas and their derivatives.
 4. Monitoring and control of environmental pollution associated with oil and gas operations and the administration and enforcement of environmental protection statutes and other statutory provisions affecting such operations.
 5. Fixing of production allowables and prices for crude oil, natural gas, petroleum products and their derivatives.
 6. Enforcement of oil and gas conservation laws and practices and monitoring of petroleum activities to ensure proper conservation of oil and gas.
 7. Rendering such assistance to the petroleum industry as will enhance the industry in the overall interest of Nigeria.
 8. Performance of duties relating to the following bodies:
 - a) NNPC
 - b) OPEC
 - c) Petroleum Equalisation Fund
 - d) Petroleum Technology Development Fund
 - e) Petroleum Training Institute
 - f) African Petroleum Producers Association

This combination of conflicting and overlapping functions and duties created a less-than-ideal situation within which conflicts could occur.

Third reorganisation

NNPC underwent another major reorganisation in 1995 when it was restructured into six directorates, each headed by an executive director:

1. Exploration and Production Directorate, consisting of six divisions:
 - (a) NAPIMS
 - (b) NPDC Ltd
 - (c) Integrated Data Services Ltd.
 - (d) Nigeria Gas Co. Ltd.
 - (e) Crude Oil Sales Development
 - (f) Direct Exploration Services
2. Refining and Petrochemicals Directorate, consisting of:
 - (a) Port Harcourt Refining Co. Ltd
 - (b) Warri Refinery and Petrochemicals Co. Ltd
 - (c) Kaduna Refinery and Petrochemicals Co. Ltd
 - (d) Eleme Petrochemicals Co. Ltd
 - (e) Petroleum Products Marketing Co. (PPMC)
3. Engineering and Technical Directorate, consisting of:
 - (a) Pipeline and Tank Construction Division, with pipeline responsibility transferred from PPMC
 - (b) Research and Development Division
 - (c) Engineering and Technical Co. Ltd
 - (d) National Engineering and Technical Co. Ltd
 - (e) Materials Management Department, headed by a General Manager

4. Commercial Investment Directorate, consisting of:

- (a) Hyson/Calson Ltd
- (b) A Division dealing with various downstream investments
- (c) A Division dealing with upstream service companies
- (d) Property Investments Department

5. Finance and Accounts Directorate, with three main Divisions: Finance, Accounts and Investments.

6. Corporate Services Directorate, consisting of Administration, Medical and Legal Divisions, Central Purchasing, the Corporation's London Office, and an Insurance Unit.

The Public Affairs Division and the Corporate Planning and Development Division, together with the Corporate Secretariat and Corporate Audit Department, report to the Office of the Group Managing Director.

In July 2004 the Group Managing Director of NNPC announced that a two-year programme was under way with Accenture and Shell Global Solution to re-engineer the company and position it to compete in the global petroleum market place.

The current structure of NNPC

The NNPC Group today has 10 wholly owned subsidiaries, two partly owned subsidiaries, and 16 associated companies. Two important entities within the NNPC Group deserve mention for their strategic role and responsibility in the development of the Nigerian oil and gas industry.

The Department of Petroleum Resources

The Department of Petroleum Resources (DPR) was formerly the Petroleum Division of the Federal Ministry of Mines and Power, which was later to become DPR in 1988. It has the following functions:

- i) Supervising all petroleum industry operations carried out under licences and leases in the country in order to ensure compliance with the applicable laws and regulations;
- ii) Maintaining a database on petroleum industry operations, particularly on matters relating to petroleum reserves, production, exports and licences, and reporting regularly to the Government. It oversees all the activities of all the companies licensed to engage in any petroleum activity in the country in order to ensure compliance with the terms and regulations relating to the conditions of the licence;
- iii) Enforcing safety and environmental regulations and ensuring that operations conform to national and international country practices and standards;
- iv) Advising the Government and relevant agencies on technical matters and public policies which may have an impact on the administration and control of petroleum;
- v) Processing all applications for licences to ensure compliance with the established guidelines before making recommendations to the Government;
- vi) Ensuring timely payment of all rents and royalties, reviewing and monitoring crude oil and its products, facilities, projects and maintenance programmes to ensure compliance with the statutory requirements and the maintenance of consumer integrity;
- vii) Providing reviews of existing regulations to ensure compatibility with modern technology and practice;
- viii) Undertaking economic analyses of global developments as they affect the petroleum industry;

- ix) Making economic evaluations of domestic production, transportation and manufacturing activities;
- x) Monitoring and reviewing the short-term and long-term requirements profile for the country and strategies for meeting such requirements.

It is evident that the role and functions of DPR in petroleum matters is all-encompassing and requires the availability in-house of highly trained and qualified personnel.

Contact Address:
7 Kofo Abayomi Street
Victoria Island
Lagos.

National Petroleum Investment Management Services (NAPIMS)

NAPIMS, part of the Exploration and Production (E & P) Directorate, is the upstream arm of NNPC that oversees the Federation's investments in joint venture companies (JVCs), production sharing companies (PSCs) and service contract companies (SCs). Its major strategic roles include:

- i) To maximize petroleum profits tax (PPT) and guarantee a higher margin (rate of return) on investments through an efficient cost-monitoring mechanism;
- ii) To ensure that a reserves base is maintained and reserves-addition targets (set at 30 billion barrels by 2002 and 40 billion by 2010) are attained;
- iii) To ensure increased production capacity from the current 2.5 million bbl/d to 4 million bbl/d in 2010;
- iv) To encourage gas utilization and marketing;
- v) To promote local-content input in engineering and construction and the utilization of supplies and materials through in-country technological capability;
- vi) To enhance Nigerianization in the industry and facilitate technology transfers;
- vii) To promote maximum cooperation in communities in oil and gas producing areas, as well as ensuring that environmental protection standards are strictly maintained;
- viii) Stimulating the (exploration) interest of indigenous and foreign companies in frontier areas;
- ix) Conducting operations in compliance with the established environmental and safety standards in all JV/PSC/SC upstream operations.

NNPC's wholly owned subsidiary companies

These include:

1. Duke Oil Limited
2. Eleme Petrochemicals Company Ltd (EPCL)
3. Integrated Data Services Limited (IDSL)

Incorporated in 1988, IDSL was set up to offer services in the upstream sector of the oil and gas industry. These services include:

- a. Seismic Data Acquisition
- b. Seismic Data Processing
- c. Reservoir Engineering Services
- d. Data Storage and Maintenance Services

IDSL has working relationships with two companies in the area of seismic data acquisition:

1. Acquisition of data on land and swamps. Joint venture with United Geophysical Company (Nigeria) Ltd (UGNL).
2. IDSL recently acquired Sercel SN 309 for its operation on the AGIP JOB CREW 166.
3. IDSL is in the process of acquiring 4D Seismic Data Acquisition Equipment Sercel SN 408 for an SPDC job for crew 165.

4. Acquisition of Data Offshore (Marine) in a joint venture with Petroleum Geo Services ASA (PGS).

The IDSL/PGS joint venture has a vessel offshore acquiring data in the open acreage in deep offshore waters. For seismic data processing IDSL has a joint-operation agreement with Compagnie General de Geophysique (CGG) of France. The agreement with CGG is jointly to provide seismic data processing services in Nigeria and run the IDSL processing centre in Port Harcourt.

IDSL and Geoquest (a subsidiary of Schlumberger) recently signed a memorandum of understanding to offer joint reservoir engineering services in Nigeria.

Address:

Integrated Data Services Limited
36 Ogba Road, PMB 1003
Oko village, Benin City,
Nigeria
Tel: 052-253114, 256591
Fax: 052-253325

IDSL Data Processing Center
No 7 Woji Road
off Old Aba Road
Port Harcourt
Tel: 084-612890-3

Abuja Liaison Office
(6th floor) Abuja A
NNPC Towers, Abuja
Tel: 09-234800-19, 2343115, 5239151

5. Kaduna Refining and Petrochemical Company Limited (KRPC)
6. National Engineering and Technical Company Limited (NETCO)

NETCO is Nigeria's first national engineering company and it is a wholly owned subsidiary of NNPC. It was established in 1989 to provide an effective and reliable engineering base for the NNPC Group and the entire oil and gas industry. Its services comprise feasibility studies, conceptual design, procurement, construction supervision and project management.

Further enquires about NETCO's capabilities and future business goals can be directed to its Head Office:

NETCO
Stallion House, (11th & 12th floors)
2 Ajose Adeogun Street
P.O.Box 74173
Victoria Island Annex
Lagos, Nigeria.
Tel: 234-1-26112322, 2647301
Fax: 234-1-2611230
Email: info@netco.com.ng
Website: <http://www.netco.com.ng>

7. Nigeria Gas Company Limited (NGL)

The Nigeria Gas Company Limited was established in 1988 as one of the 11 subsidiaries of the Nigerian National Petroleum Corporation (NNPC). It is charged with the development of an efficient gas industry to serve fully Nigeria's energy and industrial feedstock needs through an

integrated gas pipeline network and also to export natural gas and its derivatives to the West African subregion. It currently operates eight supply systems.

Contact:
The Managing Director
Nigeria Gas Company Limited
Odin Road, Ekpan
PMB 1288
Warri, Delta State
Nigeria
Tel: 234-53-254262
254259, 252328

OR
The Head, Commercial Office
Nigeria Gas Company
13B Oju Olobun Street
off Adeola Odeku Street
Victoria Island
Lagos, Nigeria
Tel: 01-2610637 – 9

8. Nigeria Petroleum Development Company Limited (NPDC)

NPDC was set up in 1988 to engage in the exploration and production business nationally and internationally. Currently NPDC has five producing oilfields in the Niger Delta with a production capacity of about 50,000 barrels per day.

For further Inquiries, contact:
The Managing Director
Nigeria Petroleum Development Company Ltd.
62/64 Sapele Road, P. M. B 1262
Benin City, Edo State, Nigeria
Tel: 234-52-251907
Fax: 234-52-259514

9. Pipeline & Products Marketing Company Limited (PPMC)
10. Port Harcourt Refining Company Limited (PHRN)
11. Warri Refining and Petrochemicals Company Limited (WRPC)

Partly owned subsidiary companies:

1. Calson (Bermuda) Limited
2. Hydro-Carbon Services Nigeria Limited (HYSON)

Associated companies:

The following 16 companies are associated with the NNPC Group through NNPC's shareholding in them:

- | | |
|---|--|
| 1. ACM Nigeria Limited | 2. Baker Nigeria Limited |
| 3. Baroid Drilling Chemical Products Ltd. | 4. Baroid Nigeria Limited |
| 5. Dowell Schlumberger Nigeria Limited | 6. Dresser Nigeria Limited |
| 7. FBS International Bank | 8. Flopetrol Nigeria Limited |
| 9. Keydrill (Nigeria) Limited | 10. National Fertiliser Company of Nig. Limited |
| 11. Nigeria LNG Limited | 12. Nigermid Petroleum S.A |
| 13. Schlumberger Limited | 14. Sedco Forex of Nigeria Limited |
| 15. Solus Schall Nigeria Limited | 16. Stallion Properties Development Company Ltd. |

Annex 4
Contractors' monthly project report form: value matrix

	(A) Goods/ materials/ equipment payment affecting GDP	(B) Payment to Nigerians for services	(C) Labour payment to Nigerian staff	(D) Taxes/fees & duty payments	ABCD Total payment that will remain in Nigeria	(E) Total contract payment	LC %
1) Total contract value commitment							
2) Total amount previously invoiced							
3) Total amount included in this invoice							
4) = 1-(2+3) Total ontract value remaining							
5) Original contract LC % committed to project							
Total lab. Hrs. by Nig.							
Total lab. Hrs by all staff							
			% of lab. Hrs. by Nigerians				

Source: Report of the National Committee on Local Content, 19 January 2002.

Annex 5 Existing legislation and regulations regarding oil and gas operations in Nigeria

Major relevant acts

1. Petroleum Profits Tax Act, 1959
2. The Mineral Oils (Safety) Regulations 1963 and 1977 amendments
3. Oil Pipelines Act 1965
4. Hydrocarbon Oil Refineries Regulations 1965
5. Petroleum Regulations 1967
6. Oil in Navigable Waters Regulations 1968
7. Oil Terminal Dues Act 1969
8. Petroleum Act 1969
9. Petroleum (Drilling & Production) Regulations 1969
10. Petroleum (Refining) Regulations 1974
11. Petroleum Production & Distribution (Anti-sabotage) Act 1974
12. Nigerian National Petroleum Corporation Act 1977
13. Associated Gas Re-injection Act 1979
14. Crude Oil (Transportation & Shipment) Regulations 1984
15. Federal Environmental Protection Agency Act 1988
16. Offshore Oil Revenues (Registration of Grants) Act, cap. 336
17. Nigerian LNG (Fiscal Incentives Guarantees and Assurances) Act 1990
18. National Environmental Protection (Effluent Limitation) Regulations 1991
19. National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations 1991
20. Oil Minerals Producing Areas Development Commission Act 1992
21. Oil and Gas Pipelines Regulations 1995
22. Petroleum (Drilling & Production) Amendment Regulations 1995 and 1996
23. Pre-shipment Inspection of Exports Act 1996
24. Petroleum (Amendment) Decree 1998
25. Special Tribunal (Miscellaneous Offences) Act, cap 410
26. Deep Offshore and Inland Basin Production Sharing Contract Act 1999.

Annex 6 Directory of members of Petroleum Technology Association of Nigeria

COMPANY NAME	CATEGORY OF SERVICE	CONTACT PERSON	CONTACT ADDRESS	TEL/FAX/E-MAIL
Ana Industries Limited	- Mud Supply & Engineering - Drilling Fluid Services; - Solid Mineral Processing Services	Mr. Alex Ajuebon	Reclamation Road, P.O. Box 7884, Port Harcourt.	Tel: (234)-84-230159, 331811 Fax: (234)-84-230159, (234)-82-440136 Ana@phca.linkserve.com
Ariboil Company Limited	- Fluids Filtration & Drilling Mud Solids Control; - Drilling Waste Management; - Cuttings Boxes Rentals; - Drilling & Petr, Eng. Consultancy.	Mr. Stephen O. Aribeara	Plot 219, Trans Amadi Industrial Layout, P.M.B057 Port Harcourt.	Tel:(234)-84-238568,238628 (234)-803-402-1977 Fax: (234)-84-238568 Ariboil@ariboil.com.ng AriboilUS@aol.com
B.G. Technical Limited	- Corrosion Monitoring and Control Services - CP Installation and Monitoring - Pigging Supplies and Services - Pipeline Surveys	Mr Chinedu Maduakoh	8, 29 TH Street, DDPA (Bendel Estate) Ugborilolo, Effurun, P.O.Box 1920, Warri	Tel: (234)-84-236774 Tel/Fax: (234)-53-254492 Bgt@warri.rel.nig.com
Ciscon Nigeria Limited	- Casting & Tubing Services & Tools; - Fishing & Tool Rentals; - Eng. & Maintenance Services Compressors, Pumps, etc); - Well Completion Services.	Mr. Shawley Coker	Km 14, Aba/Port Harcourt Expressway, Port Harcourt.	Tel: (234)-84-612081, 612082, 612083, 612023, 612273 (234)-53-253784 Fax: (234)-84-613024, 612080 Cisconphc@cisconservices.com
Drillog Petriodynamics Ltd.	- Directional Drillings & Borehole Surveys: - Measurement While Drilling (MWD).	Ugo) O.R. Ekezie	Plot C, Trans Amadi Industrial Layout, P.M.B. 047 Port Harcourt.	Tel: (234)-84-233719, 239668, 237190, 237237 Fax: (234)-84-232350 Drillpet@ph.rel.nig.com
Dubi Nigeria Co. Ltd.	- Fluids Filtration & Drilling Mud Solids Control; - Drilling Waste Management;	Mr. Ifeanyi Ogbechie	KM 16 Aba/PH Expressway, P.O.Box 8195 Port Harcourt.	Tel: (234)-84-612525,612594 (234) 53-253268, (234)-1-497-3171 Fax: (234)-84-612525, 612594 Ify@phca.linkserve.com
Emval/Kanuco Nigeria Ltd	- Cementing & High Pressure Pumping; - Mechanical Wireline/Completions; - Drilling & Petro, Eng. Consultancy	Mr. Uche Obidi	5 Waico Road, P.O.Box 852, Warri.	Tel: (234)-53-250367 (234)-53-254193 Ext. 52224 Fax: (234)-53-251042 Emvalwarri@yahoo.com
Kasolute Nigeria Limited.	- Directional Drilling & Borehole Surveys - Measurement While Drilling (MWD)	Mr. Telle Quadry	Block B, Plot A-1, Trans Amadi Industrial Layout, Port Harcourt.	Tel: (234)-84-239605, 230166 (234)-53-250869 Fax: (234)-84-230167 Kasolute@phca.linkserve.com
Lonestar Nigerian Limited	- Drilling/Workover - Drilling & Petro. Eng. Consultancy	Chief H. Idisi	37, Chechester Road, P.M.B 4104, Sapele	Tel: (234)-53-254193 Ext. 50248, (234)-84-238708 (234)-90-501170, (234)-1-2617483
Oildata Wireline Services Limited	- Cased Hole Electric-line logging; - Petrophysical & Reservoir Data Services; - Tubing Conveyed Perforating (TCP) Services; - Production Logging Services - Horizontal Logging Services.	Mr. Emeka Ene	Plot 282, Trans Amadi Industrial Layout, Port Harcourt.	Tel: (234)-84-236673, 239398, 231077 Fax: (234)-84-236673, (234)-1-262072 Emekae@aol.com Oildata@phca.linkserve.com
Oilscan Limited	- Cased Hole Electric-line Logging; - Tubing Conveyed Performing (TCP) Services.	Mr. Joe Egwele	Mile 9, Airport Rd. Rumuodomanya, P.O.Box 5325, Port Harcourt.	Tel: (234)-84-237024 Fax: (234)-84-237024 Oilscan@ph.rcl.ng.com

Oilserv Limited	- Pipeline Construction/Repair - Mechanical Fabrication; Flowline station works; Electrical/Instrument work; Process pipework & facilities; - Flowline Construction/Repair; Associated civil/structural services.	Mr. Emeka Okwuosa	42 Nembe Road, Rumuibekwe Estate, Port Harcourt.	Tel: (234)-84-610739, 571773 Fax: (234)-1-261-0396 Oilserv3@intracom.net.ng
Oil Services Limited.	- Laboratory Services; - Mechanical Wireline/Completions - Production Logging Services, - PVT Services; - Surface & Bottom Hole Sampling; - Well Analysis; - Well Prod. Testing.	Dr. Trevor Ajai	Plot 182, Trans Amadi Industrial Layout, P.M.B. 5135, Port Harcourt.	Tel: (234)-84-239230, 230931, 331135 Fax: (234)-84-236942, 239230 Tel: (234)-53-250385 Fax: (234)-53-254673 Oiltestng@hyperia.com
Petrolog	- Drilling Services - Mud Logging - Engineering Services - Consultancy	Mr. Vincent Ebuh	2 nd Floor, Suite 6/7, Plot 1225, Ahmadu Bello Way, Victoria Island, Lagos.	Tel: (234)-1-261-4030, 613808 (2340-84-610967-9 Fax: (234)-1-613807, 615309 Voe@petrologgroup.com
Reservoir Fluids Laboratory Inc. (Sart Nigeria Limited)	- Laboratory Services; - PVT Services.	Mr. Bert Douglas	Reclamation Road, P.O.Box 4347, Port Harcourt	Tel: (234)-84-236645, 230709 Fax: (234)-84-236645, 230708 Rfl@phca.linkserve.com
Sego Oilfield Services	- Wireline (Slickline) - Wellhead Maintenance - Oilfield Manpower supply	Mr. Godwin Ogbolu	East-West Road, (Rumukwurushi Junction) P.M.B. 052, Port Harcourt	Tel: (234)-84-610905, 330983 (234)-84-234789, 234798 (234)-53-250726, 250769 hikaunion@yahoo.com
SOWSCO Well Services Limited	- Cementing & High Pressure Pumping; - Wellhead Maintenance Services, - Brines Filtration - Pipeline Pumping Services	Mr. Sam Adegboyega	Plot 212, Trans Amadi Industrial P.O.Box 6726 Port Harcourt	Tel: (234)-84-238581, 236774 Fax: (234)-84-238581 Swsnl@sowesco.com Adegboyega@yahoo.com
Specialty Drilling Fluids Limited	- Drill cutting Re-Injection - Drilling waste management services - Petr. Machine Shop Services	Mr. Tony Eze	Plot 184C Trans Amadi Industrial Layout, P.O.Box 3807 Port Harcourt	Tel: (234)-84-235915, 231325 (234)-1-261-4001, 261-9722 Fax: (234)-84-238786 (234)-1-261-2383 specialtynigeria@aol.com
Tecon Oil Services Limited	- Oilwell Fishing - Completion Tools and Services - Engineering Maintenance	Mr. Casmir Maduafokwa	47 Yeshayahu Lasode Cr. P.O.Box 74258, Victoria Island, Lagos.	Tel: (234)-1-261-8371, (234)-53-255831, 255832 (234)-84-236846, 233488 Fax: (234)-236846 Ccm.teconoil@micro.com.ng
Weafri Well Services Company Limited	- Cementing & High Pressure Pumping - Pipeline Pumping Services	Mr. Cletus Onyekwere	58, Airport Road, P.O.Box 58, Warri.	Tel: (234)-53-257644, 321247 (234)-84-611481, 612050 Fax: (234)-53-257644 (234)-82-440240 western@weafri.com
Weltek Limited	- Manufacture of WellHead/Flow Station/Compressor Fail-Safe Control Panels; - Production Maintenance Services, - Engineering Design and Project Management. - Construction, Installation, Commissioning and Maintenance. - Electrical and Instrumentation	Mr. Pedro Egbe	Plot 35, Trans Amadi Industrial Layout, P.O.Box 6585, Port Harcourt.	Tel: (234)-84-237902, 237903, 237904, 231435 Fax: (234)-84-237904 Pegbe@weheking.com

	- PLC and SCADA Systems Integration - Platform and Wellhead Control Panels manufacturing - LV, MV and HV electrical works.			
Wog Allied Services Nigeria Limited	- Directional Drilling Services - Oilwell Surveys - Instrument and Tool Rentals	Chief Gabriel S. Ofom	4B Airport Road, P.M.B. 1049, Effurun, Warri.	Tel: (234)-53-252630, 250478, 252892, (234)-1-493-7136, (234)-84-330347 Fax: (234)-53-252630 Wog@warri.rcl.nig.com
Zukus Industries Ltd.	High Pressure Pumping Services; Portable Multiphase Well-testing Services; Marine Services Environmental Services Corrosion Services	Chief Azuka Uzor	EVOC Yard, off Enerhen Road, P.O.Box 1192, Warri,	Tel: (234)-53-250880, Fax: (234)-53-252392, 253354 Zukub@linkserve.com

Other technical oilfield services companies

Name of Service Company	Category of Services	Contact Address
Bj Services Company Nigeria Ltd	- Cementing	Plot 470 Trans Amadi Industrial Layout, P.M.B. 11, Port Harcourt. Tel: (234)-84-335428, 331537
Baker Nigerian Limited	- Well Test - Drilling	Plot 268 Trans Amadi Industrial layout, P.M.B 5241, Port Harcourt. Tel: (234)-84-335428, 331537, 264-7182,263-1103, Fax: (234)-1-264-7178
Baroid of Nigeria Limited	- Drilling Mud	Plot 18/19 PH/Aba Expresswy, P.O.Box 404, Port Harcourt. Tel: (234)-84-235712, 234152, Fax: (234)-84-238329
Camcon Limited, Nigeria	- Drill Bits - Completions	18A, Thompson Avenue, Ikoyi, P.O.Box 5009, Lagos
Cooper Camerounn Corporation	- Wellhead Supply/Maintenance	18B Thompson Avenue, Ikoyi, Lagos. Tel/Fax: (234)-1-269-2267, 269-4003, 269-6231; (234)-84-231264, 231605, Fax: (234)-84-239112
Deutag Drilling Nigeria Limited	- Drilling	Km, 15 Ph/Aba Expressway, P.O.Box 3604, Port-Harcourt. Tel: (234)-84-237210 Ext. 21547
Ecodrill Nigeria Limited	- Well Test	1A, Elemenwo Road, Rumukwursi, P.O.Box 3604, Port Harcourt
Global Marine Nigeria Limited	- Drilling Rigs	Km 14 PH/Aba Expressway, Port Harcourt
Halliburton Energy Services Nig. Ltd	- Mud Supply - Cementing - Well test	Plot 158 Trans Amadi Industrial Layout, Port Harcourt Tel: (234)-84-236342, 239223, 239224, 231147, 232838, 335619, 239228
Intel Service Limited	- Integrated Logistic Services	Plot 474 Trans Amadi Industrial Layout, P.M.B 6034, Port Harcourt. Tel: (234)-84-230019, Ext. 3007, 230921 Fax: (234)-84-234214
Mallard Bay Drilling Nigeria Limited	-Drilling rigs	Plot 72/74 Nkpogu Road, Port Harcourt. Tel/Fax: (234)-84-237307, Tel/Fax: (234)-53-252680, Tel/Fax: (234)-1-269-4292
NRB Drilling Services Limited	-Drilling rigs	Plot 97 Rumuogba Estare, P.O.Box 8233, Port Harcourt Tel: (234)-84-237762
Nexus Drilling /services Limited	- Downhole Dehydration - Technology - Secondary Recovery - Technology - Production Optimization Techniques	298B Corporation Drive, Dolphine Estate, Osborne Road, Ikoyi, Lagos. Tel: (234)-1-269-3507, 269-3760 Fax: (234)-1-269-3505 E-mail: celis.watts@linkserve.com
Noble Drilling Nigeria Limited	- Drilling rigs	Km.14 PH/Aba Expressway, P.M.B. 5218, Port Harcourt Tel: (234)-84-331238, Tel/Fax: (234)-1-269-3504

Skkor Services Limited	<ul style="list-style-type: none"> - Print Production - Public Relations 	172, Oworoshoki Expressway, Gbagada Phase 1 Lagos. Tel: (234)-1-4704701, 4714701
Remm Oil Services Limited	<ul style="list-style-type: none"> - Coring - Machine Shop Services - Drilling Bits 	Plot 52 Trans Amadi Industrial Layout, Port Harcourt Tel: (234)-84-239703, 332774 Fax: (234)-84-239703
Schlumberger Oilfield Services	<ul style="list-style-type: none"> - Reservoir Evaluation-Seismic - Drilling and Measurement - Reservoir Evaluation-Wireline - Cementing and Stimulation - Well Completions & Productivity 	17/19, Idowu Taylor Street, Victoria Island, P.O.Box 1625, Lagos. Tel: (234)-1-2619200, 2615275, 2626241 Fax: (234)-1-2617869
Global Petroleum Resources Ltd.	<ul style="list-style-type: none"> - Engineering Project Mgt - Global Technical Manpower Support Services - Quality Management Services - Fiber Optic and V-Sat provider 	299B Jide Oki Street, Nigeria Tel: 7747982 10777 Westheimer Suite 1100, Houston Texas 77042 USA Tel: 713-260-9640, Fax: 713-260-9639 E-mail: engrtamoo@onlh.com engrtamoogprine@yahoo.com

Annex 7 List of oil and gas services companies

Engineering, EPCI

Abb Lummus Global Nigeria Ltd
Brown & Root Energy Services Nigeria
Chiyoda (Nigeria) Ltd
Comerint (Nigeria) Ltd
Daewoo Nigeria Ltd
Delattre Bezons (Nigeria) Ltd
Dickson Nigeria Ltd
Eiffel Nigeria Ltd
Etco (Nigeria) Ltd
Foster Wheeler (Nigeria) Ltd
Global Pipelines Plus Nigeria Ltd
Globestar Engineering Co. Nigeria Ltd
Horizon Offshore Nigeria Ltd
Hyundai Nigeria Ltd
Ipco (Nigeria) Ltd
Jgc Nigeria Ltd
J. Ray Mcdermott (Nigeria) Ltd
M.F. Kent West Africa Ltd
Nacap Nigeria Ltd
Nexant
Nissco Ltd
Penspen Nigeria Ltd
Ponticelli Nigeria Ltd
Saibos Services
Saipem Contracting Nigeria Ltd
Sdem Erectors Nigeria Ltd
Smit Nigeria Ltd
Snig Nigeria Ltd
Technip Offshore Nigeria Ltd
Transcoastal Ltd
T.S.K.J. Nigeria Ltd
Vetco Gray Nigeria Ltd
Weco Engineering & Contracting Co.
West African Oilfield Services Ltd
Willbros (Nigeria) Ltd

Equipment supplies, local companies

Abnl Ltd
Anatrade Ltd
B.G. Technical Ltd
Bizfactors (Nigeria) Ltd
Bussdor & Co. Ltd
Debyl Ltd
Dupre' International (Nigeria) Ltd
Earthro Petroleum Services Ltd
Future Concerns Nigeria Ltd
Global Energy Co. Ltd
I.F.L. Ventures Ltd

Interglobal Services Ltd
Specialty Drilling Fluids Ltd
International Trading & Logistics Co.
(Intralog)
Jkpeez Impex Co. Ltd
Lyndon Ltd
Matrix Petro-Chem Ltd
Mazin Engineering Ltd
Pan African International Group
Petrocom Services (Nigeria) Ltd
Tricontinental Oil Services Ltd
Triple Ace Energy Services Ltd
Typha Cenia Nigeria Ltd
Ubini Industrial (Nigeria) Ltd
Vigeo Ltd

Diving, underwater engineering

Hydrodive Nigeria Ltd
Seaweld Engineering (Nigeria) Ltd
Solus Schall Nigeria Ltd
Stolt Comex Seaway Nigeria Ltd
Underwater Engineering Co. Nigeria

FPSO and buoy builders, operators

Bluewater Offshore Production Syst.
Fred. Olsen Production (Nigeria) Ltd
Millfield Projects Ltd
Niger Offshore Services Ltd. (Sbm)
Sbm Marine (Nigeria) Ltd
Sbm Services Nigeria Ltd

Aviation services

Aero Contractors Co. Of Nigeria Ltd
Bristow Helicopters (Nigeria) Ltd
Stillwater Airlines Ltd

Dredging services

Ballast Ham Nigeria Ltd
Dredging International Services (Nig.)
Nigerian Westminster Dredging & Marine

Marine base logistics

African Resources & Development Ltd
Intel Services Ltd
Neptune Nigeria Ltd

Geophysics, seismics, data processing

Compagnie Generale De Geophysique
Integrated Data Services Ltd
Landmark Graphics Ltd
Mabon Geophysical Co. Nigeria Ltd
N.D.C.C. Ltd
Petroleum Geo Services Nigeria (PGS)
Schlumberger Geoquest
Schlumberger Westerngeco
United Geophysical (Nigeria) Ltd
Veritas Geophysical (Nigeria) Ltd

Engineering, local companies

Adamac Engineering Company Ltd
Adamac Epic Centre
Adamac Industries Ltd
Adamac Marine Services Ltd
Aluku Oil & Gas Ltd
Arco Petrochemical Engineering Co. Ltd
Bozmag Investment Nigeria Ltd
Cakasa (Nigeria) Co. Ltd
Chrome Oil Services Ltd
Crystalview Petroleum Consulting Ltd
De Coon Services Ltd
Dubi Nigeria Co. Ltd
Deltatek Engineering Ltd
Fung Tai Engineering Co. Ltd
Galba Ltd
Gibraltar Construction (Nigeria) Ltd
Gora Nigeria Ltd
Jagal Ventures Ltd
Kemtech Engineering Services Ltd
Makon Engineering & Tech. Services
Morpol Industrial Corp. Ltd
Mosunmolu Ltd
National Engineering & Technical Co.
Rebold International Ltd
Rotary Engineering Nigeria Ltd
Sirpi-Alusteel Construction Ltd
Stantech Ltd
Weltek Ltd
Wesco Engineering Ltd

Supply vessels, crew boats, naval yards

Diesel Power (Nigeria) Ltd
Dolphin Offshore Ltd
Interoil Services Ltd
Niger-Benue Transport Co. Ltd. (NBTC)
Nigerdock Nigeria Plc
Q. Boats (Nigeria) Ltd
Seabulk Offshore, Operators Nigeria Ltd
Sea Trucks (Nigeria) Ltd
Shoreline Liftboats Nigeria Ltd
Steelways Nigeria Ltd

Stoke Oil Services Co. Ltd
Tidex Nigeria Ltd
Walvis Nigeria Ltd
West African Drydocks Ltd
West Africa Offshore Ltd
Workshop Ltd

Survey

Fugro Survey Nigeria Ltd
Thales Geosolutions (Nigeria) Ltd
Zenith Nigergroup Co. Ltd

Drilling contractors

Deutag (Nigeria) Ltd
Forasol Drilling (West Africa) Ltd
Global Offshore Drilling Ltd
Lonestar Drilling Nigeria Ltd
Noble Drilling (Nigeria) Ltd
Parker Drilling (Nigeria) Ltd
Saipem (Nigeria) Ltd
Sedco Forex Of Nigeria Ltd

Drilling fluids

Baroid Of Nigeria Ltd
M-I Nigeria Ltd
Schlumberger Dowell
Star-Ap Drilling Fluids Ltd

Drilling services

Adadrill Ltd
Baker Nigeria Ltd
Bj Services Co. Nigeria Ltd
Ciscon Nigeria Ltd
Ecodrill (Nigeria) Ltd
Geoservices (Nigeria) Ltd
Hydril Africa / Tdps
Oildata Wireline Services Ltd
Schlumberger Anadrill (Nigeria) Ltd
Schlumberger Wireline & Testing
Specialty Drilling Fluids Ltd
Tecon Oil Services Ltd
(Western Africa) Weafri Well Services

Electrical engineering, instrumentation

Aes Nigeria Barge Ltd
Asea Brown Boveri Ltd
Clemessy Nigeria Ltd
Gtmh Nigeria Ltd
Marius Ltd
Oil & Gas Support Systems Ltd
Philips Project Centre Ltd
Proserve Technology Ltd

Schneider Electric Nigeria Ltd
Siemens Nigeria Ltd
Sudelettra Nigeria Ltd
Trindel Nigeria Ltd
Weco Engineering & Contracting Co.
Weltek Ltd

Construction, civil engineering, painting

Amber Resources Nigeria Ltd
Bouygues Nigeria Ltd
Bredero Price (Nigeria) Ltd
C & C Construction Co. Ltd
Cappa & D'alberto Plc
Dumez (Nigeria) Plc
Earth Moving International (Nigeria)
Fougerolle Nigeria Ltd
G. Cappa Plc
Grinaker-Lta Construction (Nigeria)
Julius Berger Nigeria Plc
Spie Batignolles Nigeria Ltd
Techint Cimimontubi Nigeria Ltd
Trevi Foundations Nigeria Ltd
Zakhem Construction Nigeria Ltd

Shipping services

Morlap Shipping Company Ltd
Sdv Nigeria Ltd

Catering services

Courdeau Nigeria Ltd
Nigerian Caterers & Supermarkets Ltd
Sodexho Nigeria Ltd
Whassan Eurest (Nigeria) Ltd

Inspection services

Bureau Veritas Nigeria Ltd
Cotecna Inspection Ltd
Marine Technical Services International
Saybolt Nigeria Ltd
Sgs Inspection Services Nigeria Ltd

Field services, pipe inspection, coating

Atlantic Mediterranean Oilfield Services Co. Ltd
Camco Nigeria Ltd
Chify (Nigeria) Ltd
Corelab Nigeria Ltd
C.S.A. Nigeria Ltd
Devin Associates Ltd
Dietsmann (Nigeria) Ltd

Drillog Petro-Dynamics Ltd
Halliburton Energy Services (Nigeria)
International Oilfield Services Ltd
Ipedex-Nexus Alliance
Jason Oilfield Ventures Ltd
Joy Drilling Ltd
Juva-Oil Services (Nigeria) Ltd
Kasolute Nigeria Ltd
Massoil Field Services Ltd
Oil & Industrial Services Ltd
Oilscan Ltd
Oiltest Services Ltd
Petrolog Ltd
Quad Mud Logging (Nigeria) Ltd
Schlumberger Oilfield Services
Sowsco Well Services (Nigeria) Ltd
Tecon Oil Services Ltd
Willich Nigeria Ltd
Wiss Engineering Ltd
Zukus Industries Ltd

Environmental services

Alba Nigeria Ltd
Arts In Science Ltd
Atlantic Waste Management Ltd
Augias Environmental & Consulting Services Ltd
Cks Environmental Ltd
Geo-Group Nigeria Ltd
Global Environmental Technology
Massoil Field Services Ltd
Prodec-Fugro Ltd
Reid Crowther Nigeria Ltd
Specialty Drilling Fluids Ltd
Triple 'E' Systems Associates Ltd
Zenith Nigergroup Co. Ltd
Zitadel Ltd

Agents, consultants, local companies

35 Oil & Gas
Alolis Geo-Sciences Nigeria Ltd
Amlyn Co. Ltd
Anchor Oil & Gas Services Ltd
Aries Nigeria Ltd
Crystalview Petroleum Consulting Ltd
Dacom International Ltd
Deep Offshore Systems (West Africa)
Dextron Ltd
Enads (Nigeria) Ltd
Int'l Maintenance & Logistic Services
Joscan (Nigeria) Ltd
Link Resources Ltd

Linkso (Nigeria) Ltd
Millfield Projects Ltd
Multinational Expertise Ltd
Negris Ltd
Nexus Alliance Ltd
Osuno Petroleum Consultancy Ltd
Prime Energy Resources Ltd
Sealand Oilfield Services Ltd
International Energy Services Ltd
Temec Nigeria Ltd
Universal Services (Nigeria) Ltd
Vrmt International (Nigeria) Ltd

**Equipment and tools supplies,
workshops; multinationals**

3t Worldwide Qri (Nigeria) Ltd
Africa Oilfield Services Ltd

Cooper Cameron Corp. Nigeria Ltd
Dresser-Rand (Nigeria) Ltd
Dril-Quip (Nigeria) Ltd
Fmc International Nigeria Ltd
Fmc Technologies Ltd
Genp Nigeria Ltd
International Tool & Supply Nigeria
Remm Oil Services Ltd
Scoa Petroleum Services Ltd
Sofitam Nigeria Ltd. (CFAO)
Solar Turbines Services Nigeria Ltd
Tenarisnetwork Nigeria Ltd
Vetco Gray Nigeria Ltd
Wasco Oil Services Co. Nigeria Ltd
Weatherford Nigeria Ltd
Wayne (West Africa) Ltd

Annex 8 Questionnaire

Q. A. GENERAL INFORMATION

1. Please give name and current mailing address of your company and brief company profile

Q. 2. What is your position in the company.....and how long have you worked for the company.

Q. 3. What is the ownership structure of the company?

- Sole proprietorship
- Partnership
- Limited liability company
- Joint venture

- Give details of JV Partner; -foreign, Nigerian

Q. 4. Is your company structure

- Wholly indigenous
- Wholly expatriate
- Indigenous % Expatriate %

Q. 5. Indicate the kind of services offered by your company

- Design and Engineering
- Fabrication and construction
- Exploration / Drilling services
- Supplies and Catering Services
- Geophysics, Seismic, Data Processing
- Logistics
- Supply vessels, Crew boats, Naval yards,
- Other

Q. 6. No of Employees

-expatriate

-Nigerian

B. OPERATIONAL INFORMATION

Q. 7. How does your company source for contracts (jobs) from the oil companies?

- Through responding to adverts in the newspapers?
- Through networking, contacts etc.?

- Can you briefly describe a typical process adopted by your company in responding to a job advertisement by an oil major

Q. 8. Would you describe the contracting announcement process and the subsequent bidding process up to award of contract as?

- Transparent, open and competitive ()
- Too complex, rigorous and inflexible especially for local companies ()

Q. 9. Give the number and project costs (N/\$) of contracts executed by your company in a typical year. Give three-year figures if possible.

Q. 10. Please give project details of (Q. 9.) preferably in tabular form as follows

- Name of Client
- Type of contract
- Number of staff/man hours employed (expatriate & local)
- Duration of contract
- Status of contract (on-going, completed)
- Source of funding for the contract
 - ❖ Own equity
 - ❖ Bank loan (describe)
 - ❖ Other form of financing (describe)

Q. 11. What are some of the problems your company has encountered during contract execution and how have they been resolved?

- ❖ Early contract termination
- ❖ Force majeure and disruption of work due to community disturbances
- ❖ Performance and/or payment problems with client

Q. 12. Your company recently scored a huge success in the drive for local content participation in the O & G sector when it successfully completed the Buoy for Bonga Deep Offshore field.

How were you able to pull this off?

1. Who, if any were your local/foreign partners in the venture; technical and supply chain

2. How was funding secured for the contract?

-through your main contractor

-other,

Please give details

3. The main contract was awarded to SBM Ltd, an Overseas Company. What structures have you put in place to enable you handle such contracts directly as a main contractor, in the future?

Q. 13. What do you understand by the term “Local content”

- Nigerian content ()
- Local capacity development ()
- Local contracts ()
- Naira content ()
- Local contractors, etc. etc ()

Q. 14. The Federal Government has set specific targets for Local content value as minimum 40% by 2005; 50 percent by 2010 for supplier, Materials and Engineering and construction contracts –

1. Are these targets realizable (Yes/No)

2. If not, why?

3. What action can be taken to realize these objectives

Q. 15. Does your company have a responsible person or focal point on local content?

Yes

No

Q. 16. If yes, what is the position of the focal point in your company?

- Executive level – CEO level

- Manager
- Junior Managerial

Q. 17. Does your company have a policy statement or set of targets on LCD?

If yes briefly describe any action taken by your company

Q. 18. List two ways the major operating companies can help ensure that local content is built and sustained in their operations

1.

2.

Q. 19. Do current contractual requirements from major operating companies have in – built clauses in favour of local capacity building?

Yes

No

Q. 20. Shell and some of the majors are said to have recently introduced on- line bidding in its contract award system. Have you participated in on - line bidding and what is your assessment of the practice

Q.21. What are some of the threats constraints to local content implementation?

- Poor state of national infrastructure development.
- Competition amongst local contractors and resistance to form alliances and pool resources
- Access to cheap funds to support contractors; prohibitive bank lending rates
- Lack of equipment and global competitiveness
- Restrictive Custom clearance procedures and import / duty taxes
- Community Disturbances
- Bribery and Corruption

Please give a brief written explanation of the threat you consider to be strongest.

C. FINANCES

Q. 22. How does your company finance its operation?

- Term loan from a local bank
- Credit line from a local bank
- Funds from a foreign parent company
- Internally generated resources
- Funds from an international financing institution
- Leasing
- A mix of the above sources
- Other – describe

Q. 23. What is your company structure

-equity (₦ (); \$ (), % ()

-Debt (₦ (); \$ (), % ()

Q. 24. Have you had occasion to assign a contract and/or its proceeds to a third party (e.g. other contractor/bank)?

Q. 25. Has funding been a major constraint to local participation in the oil and gas sector?

Yes

No

- Explain

Annex 9 Indigenous oil prospecting and mining licence holders

By the end of 2001 the following Nigerian companies held oil prospecting and/or mining licences:

S/N	NAME OF COMPANY	LICENCE/BLOCK	AWARD DATE
1.	Dubri Oil	OML 96	August 1987
2.	Cavendish Petroleum	OML 103 OML 110 (mothballed)	Nov. 1990
3.	Express Petroleum Oil & Gas	OML 108	Nov. 1990
4.	Summit Oil Int'l	OPLs 205 & 206	Nov. 1990
5.	Solgas Nig. Ltd	OPL 226	Feb. 1991
6.	Atlas International Petroleum	OML 109	Feb. 1991
7.	Yinka Folawiyo Petroleum	OML113	May/June 1991
8.	Alfred James Petroleum Co.	OPL302	May/June 1991
9.	Allied Energy Resources	OPL 210	June 1992
10.	Nor East Petroleum	OPL 215	June 1992
11.	Amni Petroleum Industries	OMLs 112 & 117	1993
12.	Peak Petroleum	OML 122	1993
13.	Optimum Petroleum	OPL 310	1993
14.	Famfa Oil Ltd	OPL 216	1993
15.	Moni Pulo Ltd	OML 114, OPL 230	1993
16.	South Atlantic Petroleum Ltd	OPL 201, OPL 246	1993
17.	ConOil Producing	OPL 458, OML 59 & 103	1996
18	Emerald Petroleum	OPL 229	2001

Source: NAIPEC Secretariat.

Several of these companies had moved into production by the late 1990s, including Amni, Atlas, Cavendish, Conoil, Dubril, Express, Moni Pulo and Peak Petroleum. Some of them built up sufficient experience to become regional players. For example, South Atlantic Petroleum acquired a field in Benin in late 2004. Atlas Petroleum is active in Côte d'Ivoire, Equatorial Guinea, Liberia and Sierra Leone and has shown interest in exploration in Cameroon (a description of how Atlas organized and financed its initial oil activities in Nigeria is given later in this Annex.

ConOil is the largest indigenous oil producer, with an output of more than 40,000 bbl/d; the company is also active in the distribution of oil products (it is the country's leading distributor of aviation fuel). ConOil is one of the more innovative oil companies in Nigeria in terms of financing, having benefited, among other things, from an African Development Bank loan in the amount of \$10 million and more recently from a \$200 million reserve-based financing arranged by BNP Paribas.

Another success story is that of AMNI Petroleum, which started drilling and other operations under two OPLs (granted in 1993 and 1994) in 1995. Production started in 1996, and both OPLs were converted to OMLs, in 1998 and 1999. Difficulties in obtaining financing hindered its expansion. In 2003 it obtained a \$19.1 million loan facility from Shell Capital Ltd and Baker Hughes (EHO) Ltd to redevelop and increase production in the Ima Field under OML 117, in shallow waters off the Nigerian coastline. This project made it possible to increase field production by 6,000 to 8,000 barrels of condensate a day – double the previous output. A condensate sale and purchase agreement was concluded with Shell Trading International Ltd, and Baker Hughes carried out the subsurface field-development work. AMNI also has a working

interest of 45 per cent in OPL 229 (Emerald Petroleum has the remaining 55% and operator rights), a field in which Chinese investors, as of 2004, are showing considerable interest.

In 2003 the Government invited bids for marginal oilfields; 142 firms responded. Thirty-one of these, none of them from among those on the list above, were allocated the rights to a total of 24 marginal fields. The following table shows the companies and fields involved and their estimated crude-oil reserves (in millions of barrels).

<u>Company</u>	<u>Field</u>	<u>Estimated reserves (m/bbls)</u>
Prime Energy	Operator and holder of 51% interest in the Assaramatoru field	7.1
Suffolk Petroleum	Holder of 49% interest in the Assaramatoru field	
Walter Smith	Operator and holder of 70% interest in the Ibigwe field	17.2
Morris Petroleum	Holder of 30% interest in the Ibigwe field	
Associated Oil & Gas	Operator of the Tom Shot Bank field	8.6
Geo Energy	Equity holder in the Tom Shot Bank field	
Sahara Energy	Operator and holder of 51% interest in the Tsekelewu field	2.2
African Oil & Gas	Holder of 49% interest in the Tsekelewu field	
Guarantee Petroleum	Operator of the Ororo field	5.7
Owena Oil & Gas	Equity holder in the Ororo field	
Energia Company	Operator of the Obodugwa/Obodeti field	4.3
Unipetrol Development	Equity holder in the Obodugwa/Obodeti field	
Mid Western Oil and Gas	Operator and holder of 70% interest in the Umusadege field	49.3
Suntrust	Holder of 30% interest in the Umusadege field	
Millennium Oil & Gas	Oza field	7.3
Platform Petroleum	Asuokpu/Umututu field	16.0
Bayelsa Oil Company	Atala field	2.4
Excel Energy and Petroleum	Eremor field	3.9
Independent Energy	Ofa field	5.2
Network Energy & Petroleum	Qua Ibo field	13.1
Universal Energy	Stubb Creek field	18.4
Frontier Oil	Uquo field	14.2
Brittanie-U Nigeria	Ajapa field	4.6
Sogenal	Akepo field	3.9
EurAfric	Dawes Island field	1.4
Movido Energy & Petroleum	Ekeh field	3.0
Del-Sigma	KE field	N.A.
Bicta	Ogedeh field	7.4
Golang Petroleum	Oriri field	4.0
Chorus Energy	Amoji/Matsogo/Igbolo field	6.9
Pillar Oil	Umusati/Igbuku field	6.7

As these companies generally lack finance and are sometimes weak in technical skills, they often look for foreign partners. For example, Excel Energy and Petroleum, Mid Western Oil & Gas, Network Energy and Petroleum and EurAfric have all signed deals with Canadian-registered Mart Resources, under which the latter will provide financial and technical support. Mart Resources also has an interest in OPL 310, operated by an older Nigerian oil firm, Optimum Oil.

In 2005 there was another bidding round, in which many local companies participated. When 30 fields were awarded in August 2005, several such companies were among the winners. With a bid of \$100 million as signature bonus, Conoil was the winner of a deep-water block, Block 257. Another deep-water block, Block 252 (earmarked solely for bidders willing to finance the

development of a refinery as well) was awarded to a consortium of Energulf Resources of Canada and an indigenous firm, Derock Nigeria Ltd. Nigerian companies were the winners of most of the shallow-water and onshore blocks. Several other Nigerian companies (including Zenon Jovis Petroleum Development Company, Chrome Oil, and Obat Oil Petroleum) obtained 10 per cent shares in blocks as local-content vehicles.

An example of the operational and financial arrangements of an indigenous oil company: the case of Atlas Petroleum's OML 109

Oil mining licence 109 is located approximately 15 kilometres off the coast of Nigeria in water depths of between 15 and 70 metres. It is held by a private Nigerian company, Atlas Petroleum International Limited (Atlas), which acts as operator, and Summit Oil & Gas Worldwide Ltd. (SOGW), a wholly owned subsidiary of the small Canadian firm TransAtlantic Petroleum Corporation, which serves as technical advisor.

OML 109 has been divided into two operational areas: the Ejulebe Area consisting of 60 square kilometres and containing the Ejulebe field (hereinafter 'Ejulebe Area') and the Joint Exploration Development or JED Area, consisting of 810 square kilometres. TransAtlantic holds a six per cent participating interest in the Ejulebe Area and is responsible for obtaining 100 per cent of the total financing required for further exploration and development of the Area (but will recover its capital and pre-production operating expenses prior to any sharing of 'profits' from crude sales). In the JED Area it has a 30 per cent share and is to cover only 30 per cent of exploration and development costs.

This concession, located in the north-western part of the Niger Delta, was originally granted as an oil prospecting licence (OPL 75) to Atlas in 1991 for a five-year term. The concession was converted to OML 109 in 1996. The oil mining licence was granted for an initial term of 20 years, commencing on 27 May 1996, and may be extended on proof of additional commercial economic reserves. There are no Government-prescribed requirements on the work programme for the concession; however, Atlas and SOGW must submit annual work programmes and demonstrate continued activity in exploration and development of the block.

TransAtlantic, operating in Nigeria as SOGW, drilled the discovery and first-appraisal wells in the Ejulebe field. TransAtlantic then sought project financing on behalf of itself and Atlas to develop the field and install production facilities. Negotiations commenced in 1995 with Nexen (then Canadian Occidental), which was interested in initiating exploration activities in Nigeria.

Nexen did not wish to take an equity position. Accordingly, in 1996 TransAtlantic and Atlas entered into a risk-service contract with Nexen. Nexen commenced full-scale services in mid-1996. Under the risk-service contract Nexen provided 100 per cent of the capital required (over \$100 million) to drill and complete the Ejulebe wells, install the facilities and connect them to the terminal. It then arranged to manage the facilities and field operations. It was to be repaid out of the block's production.

In 1996 and 1997 Nexen drilled two successful oil wells in the Ejulebe field and two unsuccessful exploratory wells nearby. A production platform was built and a 23-kilometre pipeline was laid to connect the platform to a floating storage and offloading facility operated by Conoco, which served as the export terminal. A further successful well was drilled (with costs again fully covered by Nexen) in 2001. The Ejulebe field went into production in September 1998 and at year-end 2003 had recovered about 11 million barrels, representing approximately 50 per cent of the estimated 22 million barrels in place.

The reason why Nexen preferred a risk-service contract is connected with Nigeria's fiscal regime. The major oil companies operating in Nigeria have negotiated supplemental agreements with the Government which guarantee them a minimum profit per barrel. The recently awarded deep-water Nigerian concessions are structured as production sharing contracts and the applicable petroleum profits tax (PPT) rate for these contracts is 50 per cent.

With respect to OML 109, a royalty or cost-free share of production is first paid directly to the Government. Royalty rates in Nigeria vary depending on whether the concession is onshore or offshore and, if offshore, on the water depth. The royalty rate applicable to OML 109 is 18.5 per cent.

Atlas and TransAtlantic, as producers of the crude oil, are subject to Nigerian petroleum profits tax. Petroleum profits tax is assessed on 'profits' in each year for any company engaged in "petroleum operations". "Petroleum operations" means the extraction (the "winning") of petroleum by a company for its own account. A drilling company or services company providing services to the operations is not subject to PPT because it is not extracting the petroleum its own account (i.e., it does not own any of the oil produced and does not hold any equity interest in the licence). Services companies are subject to Nigerian corporations tax at a rate of 30 per cent.

PPT is similar to an income tax: deduct royalties and costs, amortize capital expenditures, and multiply the tax rate by the chargeable amount; then apply any resulting tax credits to the amount of tax due (the chargeable tax). The PPT tax rate for the first five years of production is 65.75 per cent. After five years the tax rate increases to 85 per cent. This rate is applicable to the entire concession. PPT is assessed on a company-by-company basis. In the case of OML 109, Atlas and TransAtlantic started filing PPT returns in 1998, the first fiscal year in which oil was sold. Accordingly, for 2003 and thereafter the PPT rate applicable to OML 109 is 85 per cent. Early in 2003 TransAtlantic and Atlas started actively seeking one or more partners to provide the requisite financial and technical support to develop OML 109. A well in the Ejulebe Area costs between \$7 million and \$9 million to drill and complete, plus the additional cost of offshore production facilities and pipelines. Accordingly, they were looking to have one or more new participants come in and provide the required capital to explore and develop first the 15,000 acre area and then the JED Area. In view of the current fiscal terms applicable to OML 109, this participation was proposed to be in the form of a service contract.

² Source: mostly taken from information provided by TransAtlantic Petroleum Corporation.
[Http://www.tapcor.com/portfolio.htm](http://www.tapcor.com/portfolio.htm)

Annex 10 A history of banking in Nigeria

Pre-independence period

The first bank in Nigeria, the Bank of British West Africa, was established in 1894 by colonial trading companies. The present First Bank traces its roots to that institution. Several foreign banks soon followed, and in 1928 the first truly indigenous bank was established, followed by 24 others in the years to 1952.

During the 1950s, however, the colonial Government became more concerned about the soundness of many of the banks and it enacted a new Banking Ordinance, which introduced a system of licensing, minimum capital requirements, reserve and liquidity requirements, and banking supervision. As a result, 21 of the indigenous banks collapsed. At independence in 1960 only 13 commercial banks were operating in the country.

Independence and national control

With the approach of independence in 1960, the country took measures to effect national control over the currency and foreign-exchange market. The Central Bank of Nigeria was established in 1958, and in 1961 the Lagos Stock Exchange Act created the framework for capital-market development. In 1962 the Exchange Control Act provided the Government with control over capital movements in and out of Nigeria.

During the 1960s, as one of the Government's measures to strengthen further its control of the banking system, the 1968 Companies Decree obliged foreign banks to incorporate under Nigerian law. Development-finance companies were also created to supply medium- and long-term funds to industry and agriculture. Many of the new states created at this time also established their own banks.

Indigenization in the 1970s

With the Indigenization Decree of 1973 the Government embarked on a major policy initiative to indigenize economic development. It acquired 40 per cent of the shares of the three largest foreign-owned banks, Barclays, Standard and the United Bank for Africa. In a second wave of indigenization, in 1977, the holdings of foreign banks were further reduced to 40 per cent or less of the shares in all banks.

Merchant banking was introduced at this time, with five such banks established between 1973 and 1975. Thereafter and up to 1986 the banking system grew at a slow but steady rate, with on average one new bank per year. By 1986 the number of commercial banks had grown to 29 and merchant banks to 12.

The banking explosion of the late 1980s

By 1987 the Government was pursuing a liberal bank-licensing policy, with the result that by the end of 1990 there were 106 licensed banks. Most of the new banks were privately owned, with a few belonging to state governments. The main spur for the rapid entry of new banks at this time, when the economy was faltering, was the access to profits from the foreign-exchange distribution system available to owners of banks. In late 1986 the licensing system for imports was abolished, and a new foreign-exchange allocation system was introduced in the form of a weekly auction. Under the new system banks could make a risk-free gross return on equity of over 300 per cent.

The bank failures of the 1990s

In early 1991 the financial system comprised 122 commercial and merchant banks with a total of over 2,000 branches. About 80 per cent of the assets of the commercial banks and 45 per cent of the assets of the merchant banks were majority-owned or controlled by governmental agencies.

In this period the banking sector began to exhibit signs of weakness. The Central Bank of Nigeria (CBN) determined that nine banks were technically insolvent as of November 1990 - probably an under-estimate. There was a steady decline in portfolio quality, owing in part to the harsh economic environment in which the banks were operating, including high interest rates, as well as to the poor management of many banks characterized by fraud and insider abuse. Many banks resorted to reporting "fictitious profits" in their annual accounts.

When CBN issued its "prudential guidelines for licensed banks" in November 1990, setting mandatory and quantitative requirements for provision for bad debts on non-performing loans, many banks were in severe crisis. On average, between 40 to 50 per cent of their loan portfolios had non-performing status. As a result, 34 banks were forced to close their doors between 1994 and 2000 when the Central Bank refused to renew their licenses. One further bank, Savannah Bank (one of the country's 10 largest), had its licence revoked in 2002, and another, Peak Merchant Bank, in 2003. Before its dissolution in 1999 the Failed Banks Tribunal, which was established by the Federal Government to try cases of bank malpractice, had a total of 2,464 cases pending. The Failed Banks Act under which the Tribunal had been set up, though still in force, has had its unresolved cases, both civil and criminal, transferred to the jurisdiction of the Federal High Court. Even though the problem of non-performing loans continues to cause intermittent distress in the system, the actions of the Failed Banks Tribunal went a long way to sanitize the system. There has been a remarkable improvement in bank compliance with the prudential guidelines.

The financial system today

The Nigerian banking sector has witnessed remarkable changes since the late 1990s in terms of its ownership structure and scale and the dynamism of operations, driven largely by the deregulation of the financial sector and the increasing impact of globalization in the financial market place. CBN reports that as at end June 2004 there were 89 deposit-money banks in the country, comprising institutions of various sizes and degrees of soundness. The 10 largest banks account for about 50 per cent of the industry's total assets and liabilities, and the largest bank has a capital base of about \$240 million, compared to \$526 million for the smallest bank in Malaysia. Most banks in Nigeria have a capitalization of less than \$10 million. In the latest CBN assessment of all banks 62 were classified as sound/satisfactory, 14 as marginal, and 11 as unsound, while two had rendered no returns.

The current banking-sector reforms

On 6 July 2004 the Central Bank announced a 13-point reform programme for banks operating in Nigeria. The following are some of the salient features of this programme:

- vi. Minimum capital requirement of 25 billion naira which must be met on or before 31 December 2005. Foreign-owned banks have not been exempted from this Central Bank measure;
- vii. Consolidation of banking institutions through mergers and acquisitions;
- viii. Zero-tolerance for weak corporate governance, misconduct and lack of transparency;

- ix. Accelerated completion of the electronic Financial Analysis and Surveillance System (e-FASS) to enhance the process of rendering returns by banks and other financial institutions to the supervisory authorities. And the establishment of an Asset Management Company as an important vehicle for resolution of distress in the banking system.

The case for this radical reform agenda was predicated on the systemic distress to which the banking system was periodically subject, which was due to a number of factors, principally the relatively weak capital base of many banks in the system. Many banks continue to suffer the distress permeating the system, which leads periodically to insolvency and the consequent periodic bank failures. Thus, even though the Nigerian financial system is one of the largest in sub-Saharan Africa, overall the financial system is relatively shallow and does not support the real sector effectively. It is dominated overwhelmingly by banks, and there is relatively little non-bank financial intermediation. The banking system is therefore not currently in a position to fulfill its potential as a propeller of economic growth and development.

The Central Bank and the Government hope that the banks to emerge from the recapitalization exercise (12 large banks in some official estimates) will be better positioned to play a leading role in meeting the huge financing needs of a growing Nigerian economy in the years ahead. When the measure to increase the required shareholder capital was announced, out of the 89 banks in the country only two already met this target (First Bank and Union Bank), while four others (Union Bank of Africa (UBA), Guaranty Trust Bank, Standard Trust Bank, and Zenith Bank) came close (and Zenith Bank and Guaranty Trust Bank have since increased their capital base to reach the new minimum, as have Access Bank and Oceanic Bank).

Mergers and closures (or conversions from banks into non-banking financial advisors) were intended, and have indeed happened. For example, the country's third largest bank, UBA, merged with the fifth largest, Standard Trust Bank. Intercontinental Bank, Equity Bank of Nigeria, Gateway Bank and Global Bank merged into one new bank named Intercontinental Group. Allstates Trust Bank, Universal Trust Bank, Lion Bank of Nigeria and Hallmark Bank merged under the name of First Amalgated Bank. First Atlantic Bank, Assurance Bank, Manny Bank and Guardian Express Bank have formed Astrabank. Prudent Bank, Magnum Trust Bank, Eko International Bank, NBM Bank and Trust Bank of Africa are merging into Sterling Bank. Guaranty Trust Bank will take over a smaller enterprise, Inland Bank. Union Bank acquired Gulf Bank, Broad Bank, Universal Trust Bank and Union Merchant Bank. And several more mergers will occur.

Banking supervision in Nigeria

The Central Bank of Nigeria is the chief bank regulatory and supervisory authority in Nigeria. Nigerian banks operate under banking regulations issued by CBN. In 1989 the Nigeria Deposit Insurance Corporation (NDIC) was established to protect depositors from problems arising from bank failures. The Banks and Other Financial Institutions Decree of 1991 (replacing the Banking Decree of 1969), the Central Bank of Nigeria Decree of 1991 (replacing the Central Bank of Nigeria Act of 1958) and the Nigeria Deposit Insurance Corporation Decree of 1988 provide Nigerian bank regulators with wide-ranging discretionary powers. The Nigeria Deposit Insurance Corporation (NDIC) provides deposit insurance and related services for deposit-taking institutions in order to promote confidence in the banking system. In conjunction with the Central Bank NDIC carries out routine as well as special examination of banks, though it appears that there is no clearly delineated division of responsibility between the two institutions in the performance of these functions.

The 1991 Banks and Other Financial Institutions Act (BOFIA), as amended, brought the activities of the large number of financial institutions (deposit-money banks, finance companies, discount houses, mortgage institutions, bureaux de change, community banks, and the specialized non-deposit-taking banks, known as development-finance institutions) into the regulatory and supervisory purview of CBN. The law accords CBN the power to determine capital requirements, issue banking licences and revoke the licence of any bank, and to remove errant directors and principal officers from any bank.

Annex 11 Community relations and environmental issues

Community-relations issues have been the Achilles heel of the Nigerian petroleum industry. Ever since the discovery of oil in the late 1950s the country, especially the Niger Delta region, has suffered widespread degradation of the environment through oil spills, gas flaring and deforestation. In 2003 almost a third of the country's oil-production capacity was shut down because of 'communal violence'. Heavily armed gangsters steal an estimated 100,000 barrels a day.

The environmental blight of the oil areas is the main cause of the constant clashes between ethnic groups and the security forces, which lead to periodic disruption of oil production. Protest actions are a regular occurrence, with local youths seizing oil platforms and taking hostages, with the consequent shutdown of wells and flow stations, the withdrawal of staff and the stoppage of production by the oil companies.

A. Impact of oil operations on the environment

1. Marine and air pollution

NNPC official estimates report that approximately 2,300 cubic metres of oil are spilled in 300 separate incidents annually in Nigeria. These estimates were based on reports received from the operating companies, but industry experts calculate the number to be much higher. They estimate that more than 4,000 oil spills averaging some 700 barrels each have been recorded in the Niger Delta since 1960. Nigeria's largest spill was an offshore well blowout in January 1980, when at least 400,000 barrels (DPR estimate) were spilled from a Texaco facility and destroyed 340 hectares of mangrove. The loss of mangrove trees, once a source of fuel wood for local communities and a habitat for the area's biodiversity, constitutes perhaps an irrecoverable loss with lasting effects. The spills have contaminated marine life, giving rise to the rapid dislocation of fishing as a major occupation in the area and to health hazards associated with the consumption of contaminated seafood by local people.

Gas flares, burning 24 hours a day; some for more than two decades, have given rise to serious air pollution resulting in acid rain, contamination of water supplies, and respiratory problems in the surrounding communities. Gas flaring is the main cause of carbon emissions in Nigeria, accounting for 12.5 metric tons (53.3%) of the total of 23.5 million metric tons (2001 figures), while oil emissions account for 11 million metric tons (46.6%) and coal the remaining 0.04 million (0.1%). It is worth noting, however, that, despite the gas flaring in the Niger Delta, Nigeria's per capita carbon emissions, at 0.20 metric tons of carbon equivalent, is the lowest among OPEC members. By way of comparison, Saudi Arabia's per capita carbon emissions in 2001 were 4.02, Venezuela's 1.57, and Indonesia's 0.41 metric tons of carbon equivalent.

It was the continuing indifference of Shell and the Nigerian Government at the time to the worsening environmental problems in the Niger Delta that gave rise to the protest movement of the Ogoni people led by the author, Ken Saro-Wiwa. The struggle between the Ogoni and the Federal security forces during the early 1990s resulted in the execution of Ken Saro-Wiwa in November 1995, an action which attracted worldwide condemnation and focused attention on the operations of Shell and the plight of the people of the Niger Delta.

After a long period of perceived indifference to the environment in the Niger Delta on the part of both the Federal Government and the oil companies, in July 2002 the Government ordered the oil companies operating in the country to comply with the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN) issued by the Department of Petroleum

Resources (DPR) in 2002. The specific standards set by EGASPIN are comparable to those in force in Europe and the United States. The Environmental Impact Assessment Act (Decree No. 86 of 1992) requires an environmental impact assessment (EIA) to be carried out “where the extent, nature or location of a proposed project or activity is such that it is likely to significantly affect the environment.” An EIA is specifically compulsory for oil and gas field development and the construction of oil refineries, some pipelines, and processing and storage facilities. The Federal Environmental Protection Agency (FEPA) and the environmental protection agencies of the states are responsible for policing EIAs.

All the major oil companies and some of their major services providers have instituted programmes and projects on the environment and safety, as well as taking other measures to enhance the relations between business and the community.

B. Environmental initiatives and programmes.

1. Shell companies

Shell companies account for more than 50 per cent of Nigeria’s crude production, and Shell was at the centre of the controversy about the negative environmental impact of its operations in Nigeria in the 1990s. As a result, in 1997 the company began voluntary certification to international standards through the ISO 14001 process. It reports (Annual Report, 2003) that all its facilities are now independently certified. In addition, in order to comply with EGASPIN requirements, the company presented a consolidated plan to DPR which will form the basis of its monitoring and reporting. For example, during 2003 DPR determined that waste water should be disposed of in water 200 feet deep and at least 12 nautical miles from the shoreline. This requirement rendered the Bonny and Forcados terminals and the FPSO “Sea Eagle” non-compliant. Without any available short-term technical options to tackle the problem, Shell reached an understanding with DPR to continue the current method of waste disposal in the interim. By the end of 2003 the company had reached 72 per cent compliance status with EGASPIN and hopes to have increased that level substantially by the end of 2004. The table below shows the environment-related spend by Shell companies in Nigeria in millions of dollars.

Spending Profile, Environment, Shell

ITEM NO	CATEGORY	AMOUNT (US \$ MILLION)
1.	Environmental Affairs	41.0
2.	Spill Response Equipment, Waste Management, Pollution	10.9
3.	Associated Gas Gathering (AGG)	515.6
4.	Drilling, Environmental Protection	0.3
5.	Flow station Upgrade/Bund wall	31.8
6.	Remediation	11.2
7.	Jetty, Shoreline/Drainage	5.6
8.	Pipelines	66.6
9.	Terminal Upgrades	166.5
	Total	US \$849.5 million

1.1 Eliminating flaring

Shell is committed to eliminating all routine flaring by 2008 in line with the Government’s directives. In 2003 the volume of associated gas (AG) flared was 700 million scf/d, more than the amount flared in 2002 (570 million scf/d), owing partly to increased production and delays in commissioning the Offshore Gas Gathering System (OGGS)

1.2 Emissions

Oil production increased by 27 per cent in 2003 compared with 2002, resulting in an overall increase in flared-gas volumes as well as total hydrocarbons and related emissions during the year. Implementation of the Associated Gas Gathering (AGG) projects will lead to a reduction in emissions, as will the measures for improved performance with regard to well-testing, the

Source: Shell 2003, Annual Report.

application of stringent gas/oil ratio controls, and the mitigation of “fugitive” emissions from Shell terminals.

1.3 Oil spills: prevention and clean-up

Shell reports that there were 221 oil spill incidents in 2003, in which a total of some 9,000 barrels of oil were spilled. Some 80 of these incidents were controllable (they were due to equipment failure, corrosion, human error and engineering faults) and accounted for 32 per cent of total spills. The remaining 141 were caused by damage to facilities (sabotage) and accounted for 68 per cent of total spills. These incidents are reportedly caused by theft or motivated by the prospect of compensation payments and/or employment opportunities in the resulting clean-up.

1.4 Biodiversity

In 2003 SPDC and the other Shell companies in Nigeria adopted a biodiversity policy to ensure that biodiversity considerations are adequately integrated into their business operations. The company also produced a map showing protected areas in the Niger Delta which is installed in Shell’s Geographical Information Systems (GIS) database and serves as an-early warning tool for field-development planning and operations.

1.5 Land use compensation

Shell’s policy in this respect is to use the minimum amount of land for their facilities and operations. In 2003, 156 hectares of land were acquired, of which more than 70 per cent was for AGG projects. About 400 million naira(\$3.2 million) was paid as compensation to third parties.

2. ChevronTexaco

ChevronTexaco reported in June 2003 that it had spent \$400 million over the course of the last decade in measures designed to protect the environment in the Niger Delta. A major part of this investment was for the upgrading of production facilities, including the reduction of discharges and the risk of oil spills. In 1999 the company embarked on the regeneration of the mangrove vegetation in its areas of operation. The pilot programme included the planting of mangrove seedlings in a 73-hectare area..

C. Business -community relations (BCR) initiatives and programmes

1. Chevron Texaco

Since 1994 the company and its partners have invested about \$117 million in sustainable-development projects. The Western Niger Delta Development Program established in 1999 with the late Rev. Leon H. Sullivan’s International Foundation for Education and Self Help (IFESH) is a \$1 million-per-year programme with emphasis on training for skills acquisition, micro-credits for the establishment of small businesses, basic education, teacher training, and health education. More than \$2 million in micro-credits and business development are planned for 2004. The company launched a Riverboat Ambulance Service in 2001 to serve the health needs of communities in the Escravos and Benin rivers in the Western Niger Delta. This waterborne health service has a full complement of medical staff, medicines and other health supplies provided at no cost to local communities. The floating clinic sees an average of about 800 patients a week. Funding for the project, including construction of the ambulances, was provided by Chevron. The Government of Delta State provides the medical staff. Also with regard to health services, the

company formed a partnership with the World Health Organization and the Federal Ministry of Health in an effort to provide HIV/AIDS education in local primary and secondary schools.

2. Shell Petroleum Development Company of Nigeria Ltd (SPDC)

SPDC has evolved a sustainable community-development programme (SCD) which involves full participation and ownership of community-development programmes and projects. A total of \$30 million, according to Shell's 2003 Annual Report, has been invested in agriculture, health, education, water, micro-credits and business development and infrastructure. Among some of its most valuable contributions to national development are its investments in the development of education nation-wide. The core programme involves a scholarship scheme providing access for Nigerian students to secondary and tertiary institutions. In 2002 the company awarded 2,600 secondary and 836 university scholarships. Some 13,000 secondary students and 2,350 university students receive support under this programme. The company has since donated 120,000 textbooks covering a wide range of subjects to 70 secondary schools in the Niger Delta region.

As part of its youth empowerment programme SPDC operates a youth training scheme known as the Shell Intensive Training Programme (SITP), under which Nigerian graduates and technicians undergo a vigorous re-training programme to prepare them for gainful employment in the oil industry. Over 1,000 trainees have graduated from the scheme since its inception in 1998; about 60 per cent of them have been employed by SPDC. Other companies in the industry have availed themselves of this pool of highly trained young professionals.

SPDC operates other programmes in health care, agriculture, and women's development, as well as a micro-credit scheme.

3. Exxon Mobil

Exxon Mobil Corporation has three major subsidiaries in Nigeria - Esso Exploration and Production Nigeria Limited (EEPNL), Mobil Oil Nigeria plc (MON), and Mobil Producing Nigeria Unlimited (MPN).

EEPNL and MPN operate in the upstream sector and MON in the downstream sector. The two upstream companies have put in place active community programmes over the years. In partnership with NNPC they have made substantial contributions in health, education, the arts and culture, water supply, and sports development. Since 1990 the Mobil Track and Field Championships has been a major event in the country's sporting calendar. It has also embarked on economic empowerment programmes such as various skill-acquisition training schemes and the disbursement of micro-loans valued at about ₦12 million to over 200 beneficiaries (mainly women and young people). The company has established a major rice-development project with the capacity to employ 500 people and train about 1,600 in modern farming techniques in Akwa Ibom State.

4. Schlumberger Oilfield Services

Among the more innovative business-community relations (BCR) programmes are the ones developed by Schlumberger Oilfield Services, the largest oil services provider in Nigeria, with over 50 years' presence in the Nigerian petroleum industry. The company's community activities in Nigeria sponsor educational initiatives to advance science and technology as an instrument for promoting growth and development through two important initiatives:

- **The Schlumberger Excellence in Educational Development (SEED) project.** SEED is a learning programme providing educational-excellence services for children and young people aged eight to 18 through the SEED educational website. The project, which is based in Port Harcourt in Rivers State, was commissioned in 2001 in partnership with a local Nigerian NGO, the ANPEZ Centre for Environment and Development (ACFED). It delivers computer literacy by providing internet access to young people in schools in the Niger Delta communities. Schlumberger provided two-year Internet connection to the Centre at a cost of \$8,000 and has equipped it with 12 pcs, two printers, furniture, air conditioners, a generator and other learning equipment at an estimated cost of ₦20 million. Under this programme ACFED offers free computer and Internet access to schools, students and local young people on organized visits. It connects them to Science World, a website that promotes the study of science among children.
- **The University of Ibadan (UI) – Schlumberger Learning Centre.** Schlumberger maintains close ties with universities around the world through its Schlumberger University Ambassador Programme. A group of 40 universities worldwide, including the University of Ibadan, Nigeria (the only one in Africa), has been selected to be the subject of an intensive effort in terms both of recruitment and of joint research and development. The goals of the programme include:
 - To improve Schlumberger's visibility and image on campus
 - To increase technical collaboration with Schlumberger R & D groups
 - To increase the percentage of recent graduates hired from the selected universities
 - To increase the use of Schlumberger products in academic programmes

It is a capacity-building initiative aimed at expanding the use of local manpower in the oil industry.

In association with the Faculty of Technology of the University of Ibadan, the Learning Centre is furnished with learning equipment and other logistical support facilities representing a total investment of \$8 million by Schlumberger. The Centre was commissioned in late 2001; its main purpose is to advance technology education and nurture a corps of highly trained local manpower for employment in the oil and gas and information technology sectors of the national economy. Its curriculum is designed to make extensive use of the Schlumberger GeoFrame system software for data management in oil exploration and production. After providing logistical and funding support to the Centre since its inception, Schlumberger successfully transferred ownership to the University.

5. Niger Delta Development Commission

In 2000 the Federal Government established the Niger Delta Development Commission in order to address the huge environmental and developmental problems caused by oil exploration and production activities. This Commission has a mandate to undertake social and economic development projects in the Niger Delta. Its funding comes from the federal and state governments and the oil-producing companies. Since its inception four years ago, the Commission has received ₦100 billion, equivalent to \$756 million, from these sources. The Commission has spent ₦36 billion (\$272 million) on 64 projects covering road construction, classroom renovation, rural electrification, and water and health. It recently unveiled a 15-year Master Plan as part of the effort to check the spate of unrest in the oil-producing Niger Delta region. This Plan aims create 200,000 jobs in different sectors within the next few years.

An oil-project conflict-resolution meeting

In order to understand better the issues involved in the burning question of community relations, the survey was privileged to be invited to attend what was billed as the first stakeholders' meeting of the MacArthur Foundation/NNDC-funded partnering project in Gbarain/Ekpetima local government area of Bayelsa State. A giant multi-million-dollar independent power plant is planned for construction utilizing gas associated with oil production in the area. Construction was scheduled to commence in late 2004 and end in 2007 at an estimated cost of \$790 million. The plant is to serve the sixth train of the liquefied natural gas project of NLNG.

Oil production in the area had generated a great deal of animosity and violence between the two neighbouring communities in a struggle to share benefits from the oil companies. To forestall any potential violence that might ensue from land expropriation and despoliation associated with the project, an NGO-led initiative of the Nigeria-based Academic Associates PeaceWorks (AAPW), the MacArthur Foundation of the United States, and the Niger Delta Development Commission resulted in a meeting in late May 2004 with the 17 communities in the local government area, the site of the project. The objective was to broker the peaceful development of the project between the two communities on the one hand and the project's sponsors on the other. Representatives of Shell (SPDC), NLNG, Berger, etc., the project's sponsors, were invited but did not attend, probably for security reasons. At the beginning of the meeting the NGO representatives cited the following factors as contributing to unrest in the Niger Delta:

- Lack of trust and unity among the various communities.
- Poverty and Ignorance.
- Actions of the oil operating/services companies which divide the communities.
- Property rights: the lack of clear rights to title lead to land disputes and violence.
- Absence of an institutional framework for delivering benefits to the communities.
- Chronic unemployment.
- Lack of infrastructure development.

The 17 communities were then asked to discuss the matter among themselves and produce a list of demands. After an hour of noisy deliberation, their leaders were then asked to present their demands. They amounted to a shopping list of myriad demands ranging from the mundane to the surreal:

- Build a university where all the youth will have free admission without the need for testing.
 - Provide jobs exclusively for indigenous residents of the area: "no strangers" should be offered jobs.
- Reward all the male indigenous residents of the area with permanent monthly cash gifts.
- Provide safe drinking water.
- Provide electricity and housing, etc., etc.

At the end of the meeting all the participants were rewarded with a cash payment. The NGO representatives were unable to determine whether the outcome presaged a useful process for ameliorating the protracted oil company-versus-community problems of the Niger Delta.

Shell's Annual Report for 2003 reveals that 13.8 million barrels of oil were held back owing to the shutdown of flow stations as result of community disturbances during the year.

In his statement on the 2003 Report, the Company Chairman said that “the availability of arms, theft of crude oil, intercommunal conflicts, social disintegration and other factors have contributed to the level of insecurity in the area as it does not present a safe environment for Shell staff and contractors to operate in”.

Chevron Texaco, the nation’s third largest producer with a total output of about 520,000 barrels in normal times was forced to evacuate some of its wells and flow stations when ethnic violence erupted in March 2003; this led to a production loss of 140,000 barrels a day for an extended period while repairs were being made to damaged facilities. The Department of Petroleum Resources has reportedly claimed that the country is losing 1.06 million barrels of crude a week owing to the closure of 14 flow stations in the Niger Delta as a result of community-related problems and vandalism. Companies involved in the shutdown include Elf and Shell Petroleum Development Company of Nigeria. Part of the country’s daily output is also lost to theft by organized gangs which hack into pipelines to siphon oil into ships. The Government estimates that about 70,000 barrels per day are lost in this way. A multinational oil services company, Parker Drilling, the operator of Rig 75 for Shell, has its operations disrupted by the actions of violent youths.

These disturbances have a heavy impact on activities, not only those of the oil majors and their service providers.

Annex 12 Profiles of oil majors operating in Nigeria

1. Shell Development Company Of Nigeria Limited (Spoc)

The Shell Development Company of Nigeria Ltd was incorporated in 1937. It was the pioneer hydrocarbons exploration and production company in Nigeria and is currently the country's largest private-sector oil and gas company. It is the operator of a joint venture (JV) with the Nigerian National Petroleum Corporation (NNPC) (holding 55%), Shell (30%), TotalFinaElf (10%) and Agip (5%). The company's operations are concentrated in the Niger Delta and the adjoining shallow-water offshore areas, with an oil mining lease area of about 31,000 square kilometres. It has in operation over 6,000 kilometres of pipelines and flow lines, about 90 oilfields, 87 flow stations, eight gas plants, and over 1,000 producing wells. In 2004 this JV accounted for about 50 per cent of Nigeria's oil production and about 55 per cent of the country's crude-oil reserves base. The SPDC integrated production capacity is about 1.3 million bbls/d.

Apart from oil, SPDC is engaged in the production of gas and its distribution to the Nigeria Liquefied Natural Gas Company (NLNG) and domestic gas consumers. The company has embarked on a portfolio of gas-supply projects to meet the ever increasing needs of the expansion projects of NLNG. These include associated gas gathering (AGG) projects in Gbarain, Ubie, Num River, Otumara, Oguta, H-block, Kalaekule and Utapate fields, as well as the Eastern Gas Gathering System (EGGS). Beyond Nigeria, SPDC is striving to meet the gas needs of the West African subregion by means of the West African Gas Pipeline (WAPG).

Shell has three important subsidiary companies operating in the country: Shell Nigeria Exploration and Production Company Limited (SNEPCO), Shell Nigeria Gas Limited (SNG) and Shell Nigeria Oil Products Limited. SNEPCO was established in 1993 to manage Shell exploration and development interests in Nigeria's deep-water offshore acreage. It entered into a PSC agreement with NNPC to operate two deep-water and three onshore licences in late 1993. SNEPCO made the first major deep-water discovery (Bonga in 1995) and another (Bonga SW) 2001. The Bonga FPSO is capable of producing 225,000 barrels of oil per day.

Shell Nigeria Gas Ltd (SNG) was incorporated in March 1998 to promote gas utilization as a cheaper, cleaner and more reliable source of fuel and feedstock for industry. SNG is driven by the vision that natural gas will overtake liquid fuel as the fuel of first choice for Nigerian industries by 2010. Over \$33 million has so far been committed to building a gas-distribution infrastructure. SNG has signed 30 gas sales and purchase agreements with potential industrial customers in Aba in the east and Agbara/Ota in western Nigeria.

Shell Nigeria Oil Products (SNOP) was incorporated during the last quarter of 2000, with a mission to become the largest supplier of refined petroleum products in the country and to develop and market Shell's branded products and services in Nigeria.

2. Exxon Mobil

Exxon Mobil Corporation has three major subsidiary companies in Nigeria: Esso Exploration and Production Nigeria Limited (EEPNL); Mobil Oil Nigeria Plc (MON); and Mobil Producing Nigeria Unlimited (MPN)

EEPNL and MPN operate in the upstream sector and MON in the downstream sector. MPN (40%) is the operator of a joint venture with NNPC (60%). EEPNL is in a production sharing contracts with NNPC. Mobil Producing Nigeria Unlimited was incorporated in 1969 to take over the business of MENL. Production of crude oil commenced in 1970 from the Idoho field located

off the coast of Akwa Ibom State. Mobil Producing is currently among the lowest-cost and highest-net liquids producers in Nigeria. All the MPN production is offshore.

Esso Exploration and Production Nigeria Limited (EEPNL) was established in 1993 as an affiliate of Exxon Corporation. EEPNL is the operator of blocks 209 and 214 and holds the second-largest deep-water-acreage position in Nigeria's offshore waters. In December 1999 EEPNL announced the discovery of a major deep-water oil and gas field named Erha. Recoverable reserves are estimated at between 0.7 and 1.1 billion barrels of oil.

Mobil Producing Nigeria has maintained steady production growth since commencement of production in 1970. In May 1995 MPN achieved two billion barrels of cumulative production. Currently, MPN has a production capability of over 700,000 barrels of crude, condensate and natural gas liquids per day. MPN has made significant progress in the development of the Yoho field using an FPSO, and full field development is nearing completion.

MPN is undertaking an aggressive programme of effective gas utilization which includes injection, compression, electricity generation and production of natural gas liquids. The company's existing gas utilization projects include the Asabo gas injection project completed in 1977 and the Oso gas injection project commissioned in 1993, as well as the Edop/Epe gas compression platform (GCP) and the Oso natural gas liquid (NGL) plant.

3. ChevronTexaco

ChevronTexaco operates in the upstream sector of the Nigerian oil industry through its three major companies: Chevron Nigeria Limited (CNL); Texaco Overseas (Nigeria) Petroleum Company Unlimited (TOPCON) and Star Deep Water Petroleum Company limited (Star). Through these companies ChevronTexaco has a current production of about 520,000 barrels per day and about 285 million cubic feet of processed gas a day. Its prospects include deep-water blocks estimated to hold billions of barrels of recoverable crude oil, swamp and near-onshore concessions spanning over three million acres and an integrated gas project that would significantly increase the current level of processed gas production.

ChevronTexaco recorded the first offshore discoveries in Nigeria in 1963 - the Kolumma and Okan fields. In 1999 it discovered the Agbani field, with potential recoverable reserves of 1 billion barrels oil equivalent. The company started the nation's first major project to gather and process natural gas - Escravos Gas Project 1 - in 1997 and completed the front-end engineering on the proposed Escravos gas-to-liquids plant, designed to produce clean fuels and process 300 million cubic feet of natural gas per day (33,000 barrels per day), which would otherwise be flared. Chevron is playing the role of managing sponsor in a consortium of six companies involved in the West African Gas Pipeline (WAPG).

Its downstream presence comprises more than 300 Texaco-branded service stations, blending and manufacturing facilities, and marketing activities. The company provides more than 2,000 jobs, with over 90 per cent of them held by Nigerians.

4. Eni-Agip

Eni-Agip E&P Division commenced activities in Nigeria in 1962 through a wholly owned subsidiary - Nigeria Agip Oil Company Limited. Activities have grown rapidly over the years, and other companies have been established. These are Agip Energy and Natural Resources (Nigeria) Limited, which operates in shallow waters offshore, and Nigeria Agip Exploration Limited, which concentrates on the nation's deep-water frontier region.

Nigeria Agip Oil Company Limited (NAOC)

NAOC operates in the land and swamp areas of the Niger Delta with concessions lying within Bayelsa, Delta, Imo and Rivers states. These concessions, covering a total area of 5, 313 square kilometres comprising four blocks - OML 60, 61, 62 and 63 - operated under a joint-venture arrangement with NNPC (60%), NAOC (20%) and Phillips Oil (20%). Production currently is about 200,000 bbl/d.

Agip Energy and Natural Resources Limited (AENR)

AENR is executing a services contract with NNPC on OML 116 located in shallow waters off the Niger Delta. In 1981 AENR discovered the Agbara field. AENR signed another services contract with NPDC (an NNPC subsidiary) in December 2000 to finance and jointly work on the development of the Okono and Okpoho fields in OML 119 (OPL 91). The company has since drilled additional wells in Okono, thus increasing its reserves from the original 56 million bbl to 240 million bbl. The first oil was produced in December 2001, and currently the field is being serviced by an FPSO – Janestown - which has an oil-processing capacity of 20,000 bpd, a water-processing capacity of 7,000 bbl/d, a gas-processing capacity of 35-40 mmscf/d, and an oil-storage capacity of 200,000 bbl.

Nigerian Agip Exploration Ltd. (NAE)

NAE was incorporated in 1996 to focus mainly on deep-water offshore opportunities. It operates a production sharing contract with NNPC in deep-water offshore blocks OPL 211 and 316, with SNEPCO as its partner. NAE also manages all the other Agip participating interests in deep offshore waters , including the Bonga field under OML 118. As operator NAE has drilled three wells in OPL 316, resulting in the Abo discovery and a field-development programme. Construction of the FPSO for the production, treatment, storage and offloading of crude oil from the field was completed in November 2002 and the FPSO arrived in Nigeria in January 2003. The first oil was produced from it in February 2003.

Gas utilization

NAOC pioneered the conservation and development of the nation's gas resources when it built the first recycling plant at Akri-Oguta (in a joint venture with Shell). NAOC later invested in large-scale gas injection in 1985 with the construction of the Obiafu-Obrikom and Kwale-Okpai Gas Plants and is working with other shareholders on the realization of trains four and five and beyond. Further expanding its activities, NAOC has begun a feasibility study of an LNG project to be sited off Brass River. The proposed plant, to produce five million tons a year, is expected to start production in 2008.

5. ELF Petroleum Nigeria Limited (a subsidiary of Total)

The Total Group was formed by the merger of the former TOTAL, PETROFINA and ELF Aquitaine Groups, which was completed in 2000. In Nigeria the Group's upstream activities are carried out by two subsidiaries – Elf Petroleum Nigeria Limited (EPNL) and Total Upstream Nigeria Limited (TUPNI).

Elf Petroleum Nigeria Limited (EPNL) was incorporated in 1962 as Safrap, wholly owned by the Elf Aquitaine Group. The first exploration well discovered one of Nigeria's major fields - Obagi (OML 58) - in the 1960s. Over 41 years the Group's activities in Nigeria have grown rapidly.

From a single joint-venture partnership with NNPC, the company now has several partnerships and associations. EPNL is operator with 40 per cent JV ownership of three blocks (OML 56 to 58) and four offshore blocks (OML 99 to 102). It is also the operator with 20 per cent PSC ownership with Chevron (30%), Exxon (30%) and Nesen (20%) in a deep-water offshore block (OPL 222). With two acquisitions, in 1989 and 1993, EPNL holds 10 per cent of the equity of the NNPC/Shell/Elf/Agip joint venture, which has a production capacity of more than 900,000 bbl/d. Since 1994 it has held a 12.5 per cent interest in Bonga (OML 118) and OPL 219 operated by Shell.

TUPNI is technical advisor for the deep-water offshore block OPL 246, where it is in partnership with South Atlantic Petroleum and Braspetro. The significant Akpo field is located in this block. The Amenam/Kpono project is currently being expanded into an-oil and gas export project with an investment of about \$2 billion.

From its four major concessions – OML 57, 58, 107 and 102 – EPNL is capable of daily average production of about 189,000 bbl. The Group's gas subsidiary, TotalFinaElf LNG Nigeria Ltd., owns 15 per cent of the equity of NLNG, while through OBITE Gas Project (OGP) the Group supplies gas to the NLNG plant at Bonny and has invested in the fourth and fifth trains of the NLNG project.

6. Pan Ocean Oil Corporation

Pan Ocean Oil Corporation (Nigeria) is an exploration and production company in a joint-venture partnership with NNPC, which has a 60 per cent working interest in OML 98 against Pan Ocean's 40 per cent. The company operates OML 98 in Delta and Edo States in the Niger Delta in an area of 523 square kilometres.

In 1970 the oil prospecting licence (OPL 70/71) granted to Delta Oil Company was farmed out to Pan Ocean Oil Corporation Inc. of New York. On 1 December 1975 OPL -70/71 was converted into OML 98. Pan Ocean commenced crude-oil production in the Ogharefe field under OML 98 in August 1976.

In April 1976 Pan Ocean Oil Corporation (Nigeria) was acquired by Marathon Oil Company of the United States, which remained the owner until 1983, when its Nigerian interest was acquired by Impex Limited, also of the United States.

7. Conoco Energy Nigeria Limited

Conoco Energy Nigeria Limited (CENL) and Conoco Exploration and Production (CEPNL) were established in 1991. Both companies are subsidiaries of Conoco Inc. of Houston, Texas, a major integrated energy company with operations in more than 40 countries.

CENC farmed in to the operation of four indigenous E & P companies as technical advisor (OPL 204, 224, 453 and 74). It has since relinquished its interest in OPL 204, 224 and 453 and concentrated its efforts on the development of the Ukpokiti field discovered in OPL 74. As technical advisor to Express Oil and Gas Company, Conoco developed Ukpokiti using a floating production storage and offtake vessel, the Independence. The project achieved its first oil 14 months after the start of detailed engineering. The block was converted to OML 108, and Conoco became the first multinational technical advisor to bring an indigenous company into production. The field began production in June 1999 and is now producing about 20,000 bbl/d. In 1993 Conoco's CEPNL affiliate signed a production sharing contract (PSC) with NNPC to serve as operator of deep-water block OPL 220.

8. Phillips Oil Company (Nigeria) Limited

Phillips Petroleum Company's involvement in oil production in Nigeria began in 1995, when its subsidiary company, Phillips Oil Company (Nigeria) Limited (POC (N) L) joined Nigeria Agip Oil Company (NAOC) as a partner in oil prospecting licence (OPL) 34. This concession, which has been converted to OML 60-63, still forms the cornerstone of the Conoco Phillips involvement in Nigeria. Conoco Phillips is working to become involved in LNG production in Nigeria and is actively engaged in deep-water exploration in Nigeria.

NNPC, Conoco Phillips through its wholly owned subsidiary Phillips Oil Company (Nigeria) Limited, and Nigerian Agip Oil Company (NAOC), an affiliate of ENI, which are partners in the NAOC joint venture, are studying a plan to extend their oil and gas operations in Nigeria through the construction of a world-class LNG plant to be commissioned in 2008. This LNG facility will utilize the Phillips optimized cascade LNG process and be designed to process five million metric tons per year. The plant is to be positioned either onshore in the existing area of the Brass River crude terminal operated by NAOC or offshore on a gravity-based concrete structure.

Phillips Exploration Nigeria Limited (PENL), a wholly owned subsidiary of Conoco Phillips, signed a production sharing contract (PSC) for OPL 318 with NNPC in June 2002. PENL is the operator of the licence, holding a 50 per cent interest; the other parties to the contract are Chevron (30%) and NPDC (20%).

Sources for profiles: Enhancing Capacity Building, Nigerian Oil and Gas Industry. OTC, 2003.

Annex 13 Profile of some oil services companies

1. **Survicom Services Nigeria Limited:** Survicom is a Nigerian-owned private company, incorporated in 1994. The company specializes in providing top-quality services in surveying, engineering and environmental management, mapping services, remote-sensing and GIS services, bathymetric surveys, etc.

It has successfully furnished its services to Shell Petroleum Development Company (SPDC) Nigeria Limited; Nigerian Agip Oil Company (NAOC) Limited; Saipem Nigeria Limited; etc., and since 2000 to Elf Nigeria Ltd, Nigerian LNG Company, Stolt Comex Seaway and Asea Brown Boveri Ltd.

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Customer support: support@survicom.com

2. **Weltek Limited:** Incorporated in 1986 to provide advanced engineering and construction services to the oil, gas and manufacturing industries. Provides engineering design, project management, systems integration, and fabrication and installation services.

It has executed several projects for Exxon Mobil, Chevron Texaco, Shell, Elf, Nigerian Petroleum Development Company (NPDC), NNPC refineries, and petrochemical companies.

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|--|---|

3. **Cakasa (Nigeria) Company Limited:** Cakasa is a wholly Nigerian-owned engineering, procurement, installation, construction, operation and maintenance company, established in 1974, with its head office located in Lagos and six branch offices in other parts of the country. The company is very active in the downstream sector, especially in the areas of engineering, procurement and construction services, maintenance and certification and commissioning services, manpower development and training, and information technology services; it has annual revenues of \$20 million (2002) and employs 70 engineers. The company is in partnership with a number of world class companies and has the ISO 9001

It provides its services to Shell, Exxon Mobil, Elf, Nigerian Agip Oil Company, Conoil, Addax, Pan-Ocean, NPDC, Oando, Obat Petroleum, Sahara Energy, and Total Nigeria Ltd.

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4. **Melvon Nigeria Limited:** Established in 1994, Melvon Nigeria Limited, a wholly indigenous company, specializes in the provision of integrated services in engineering and technology services, specialist services, procurement/vendor services, pipes and fittings procurement, lease of equipment and vehicles, rental of drilling/fishing tools, and technical manpower services to the oil and gas industry in Nigeria.

Melvons clientele in Nigeria currently includes the following multinational companies in the oil and gas industry: Elf Petroleum Nigeria Limited (a subsidiary of TOTAL), Nigerian Agip Oil Company Limited (a subsidiary of ENI) Nigeria LNG Company Limited, Globestar Engineering Company (a subsidiary of STOLT SA), Nigerian Gas Company Limited (a subsidiary of Nigeria National Petroleum Corporation).

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5. **Adamac Group of companies:** This Group, founded in 1982, is one of Nigeria's leading indigenous providers of complete engineering and construction services to the oil and gas, power-generation and utilities, water development and distribution, refineries and petrochemicals industries in Nigeria. Its range of services includes engineering, training and maintenance, drilling and production services, marine and offshore services, oilfield supply and oil well services, quality assurance and machine-shop services to such companies as AGIP, Ashland, Chevron, Eleme Refining Company Limited, Elf, Halliburton, Mobil, National Electric Power Authority, Nigerian Ports PLC, NNPC, NPDC OMPADEC, Petroleum Trust Fund SAIPEM, Schlumberger, DCO FOREX, Shell Nigeria, State Governments, Texaco, Warri Refining and Petro-Chemical Company Limited, etc.

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6. **Ariboil Company Ltd** ventured into the Nigerian petroleum industry in 1988 and today it is the leading provider of centrifuges to the industry. It also carries out drilling of mud solids, control/barite recovery and work-over brines filtration for the oil exploration majors such as Addax Petroleum Development Nigeria Limited, Agip Energy & Natural Resources Nigeria Limited, Brandt (A Varco Company), ChevronTexaco Nigeria Limited, Ensco Drilling Nigeria Limited, Exxon Mobil (Mobil Producing Nigeria Unlimited), Forasol Drilling West Africa Limited, Lonester Drilling Nigeria Limited, Nexen Petroleum International, Inc. Shell, Total Upstream Nigeria Ltd.

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Website: <http://ariboil.com/index.htm>

7. **Petrolog Group:** Petrolog has been in Nigeria for the last 22 years. It started out as a services provider to the oil and gas industry, mainly in the area of geological logging and hydrocarbons

evaluation. The company gradually grew and expanded into other kinds of service. It currently has a drilling contract with Pan Ocean Oil Company for a period of two years. A similar contract has been signed with Addax Oil Company. In addition, several mud-logging units are working for different companies. Petrolog has several professional consultants working for Shell and Exxon Mobil.

Clients:

Exxon Mobil, Ashland, Conoco, NAOC, ELF, Schlumberger, Chevron & Shell.

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8. **Ciscon:** Ciscon was founded in 1986 but became fully operational in 1998. It employs over 300 people with a common set of values. Its African operations are in Port Harcourt, Warri, and Lagos and its US operations in Houston Texas. Today Ciscon is progressing on the fast track to become the best completions company in West Africa by executing, learning and adapting to new technological changes.

Its services cover well completion liner hanger, tubular services, geological services, drilling tools rental services, supply of cementing aids equipment and services for the oil and gas industry, provision of fully developed machine shops equipped to handle all challenges in the present oil gas and marine industry.

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9. **Vigeo Oil & Gas:** Vigeo Limited provides specialized support services such as oilfield services, energy business development, Vigeo logistics, Vigeo Learning Center for major players in the Nigerian oil and gas industry. In the last few years the company has built a strong franchise and a track record of excellent performance. This has enabled Vigeo Limited to maintain its relationship with its numerous clients over the years, providing integrated quality technical-support services to its diverse clients in the Nigerian oil and gas sector.

These services are provided in partnership with various strategic alliance partners, which include: Farstad Shipping ASA, Noble Denton, Germanischer Lloyd GmbH, Consulectra, Ocean Rig, Angus Fire, and Redwing Safety Shoe Company.

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Eket: 26, Edoho Eket Street, off RCC Road, Eket.
t: +234 (0) 802-359-3612, (085) 700-788

- 10. Trevi Foundations Nigeria Ltd:** Trevi Foundations Nigeria Limited is a Trevi Group company dedicated to the construction of special foundations. The company was established in Nigeria in 1977 on the basis of Trevi's first experience of working in Nigeria, in 1967. It provides engineering design, civil engineering, power-station, petrochemical, industrial plant and oil company facilities, dam and hydro-electrical plants, marine-construction and shore-protection works, pre-cast work water wells, and oil-investigation and geo-technical laboratory services to Shell, Borini Prono, NNPC, Nigerian Agip Oil Comp, Nigerian LNG, Chevron, and Mobil.

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- 11. Fung Tai Engineering Co. Ltd:** A company with a global network spanning the four continents of the world, Africa, Europe, North America and Asia, Fung Tai Engineering was incorporated in Nigeria in 1992, with the primary objective of contributing to the rapid industrialization of the country through the provision of vital infrastructure, using its resources and the experience acquired in Asia, Europe and the Middle East.

Services: planning and studies, pipeline engineering and design, engineering, procurement and construction (pipeline systems, oil and gas storage and delivery), project management, construction management, road construction, and marine services and dredging; these services are furnished to NNPC, Enugu State Government, and NEPA

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- 12. TECON:** Tecon Oil Services Ltd is a wholly owned indigenous oilfield services company incorporated under the law of the Federal Republic of Nigeria. This company, which had an

annual turnover of over USD \$50 million, is in the business of providing oilfield-equipment rental services to the major players in the upstream sector of the Nigerian oil and gas industry, such as hydraulic workover units, well-intervention services, snubbing, completions and re-completions, including 460K, 340K, 225K and 150K hydraulic workover units and specialist HWO/snubbing crew, drilling/workover rigs, conventional, land and swamp operations, rental workstrings and drillstrings - drill pipes, tubing, drill collars, heavyweight drill pipes, washover pipes and handling tools for drilling, workover, completions, gravel packing, well testing, ESS, slim hole, multilaterals, etc. As one of the foremost indigenous service providers in the petroleum industry, TECON has redefined the standards of well-engineering services through its stock of technically sophisticated equipment and pool of very experienced and professionally sound personnel.

TECON's clients: Shell Petroleum Development Company Nigeria Limited, Elf Petroleum Nigeria Limited, Halliburton Energy Services, Nigerian Agip Oil Company, Addax Petroleum Exploration (Nig.) Ltd, Chevron Nigeria Limited, Mobil Producing Nigeria Unlimited, Lonestar Drilling , Pan Ocean Oil Corporation, Forasol Drilling, Statoil Nigeria, and Star Deep Water Petroleum Limited.

Contact information:

47, Yeshayahu Lasode Crescent,
(By Mobil House), Victoria Island,
Lagos, Nigeria.
Tel: 234-1-4803413, 2618371, 7918094.
Fax: 234-1-2618371
Email: ccm@teconoilserv.com
info@teconoilserv.com

- 13. Paradigm Services (Nig.) Ltd:** Paradigm is an engineering-solutions company offering integrated and customized solutions in the following areas: electrical contracting services, fabrication services, marine equipment, and equipment rental for clients including Lusteel, Amber Resources, BJ Services, Bouygues Offshore (NISSCO), Catermaar Offshore Service Daewoo, Five Anchors Group (CLIPPER MARINE) Halliburton Energy Services, Horchi Construction, Interoil Services, Macobar International, Mallard Bay Drilling, Mobil Producing, Pellegrini, Profab, SBM Offshore, Schlumberger group, Shell, TRANSOCEAN SEDCO FOREX, Wasco Oil tools, Weatherford, WillBros.

Contact information:

e-mail: asharma@paradigmservices.net

- 14. JAM Services Company Limited:** JAM Services Company Limited is an engineering and construction company that has been in civil engineering/construction, environmental engineering, and technical support services operations since 1994, when it was incorporated as a limited liability entity under the law of the Federal Republic of Nigeria. It is registered with the Department of Petroleum Resources of the Nigerian National Petroleum Corporation and the Inland Revenue Service.

Its clients include SPDC, Totalfina Elf, SNG, Ashland, Willbros, NDDC, and the Niger Delta Development Basin Authority.

Contact information:

HEAD OFFICE ADDRESS
JAM Services Company Limited
No. 2 Anokwuru Street
Port-Harcourt
Rivers State, NIGERIA
E-mail: enquiries@jamservicesco.com

- 15. GLOBAL MARINE AND ENERGY NIGERIA LIMITED:** This company is an offshoot of ELIZABETHANS MERCHANDISE LIMITED and was incorporated on 20 March 2001. It

carries out dredging services, marine and special transportation, petroleum storage and sales, licence services, drilling services and drilling-rig supply, pipeline/production services (pipeline/production facility operation), maintenance and consultancy services, exploration and petroleum operations, and equipment-leasing for the oil and gas industries. Its current asset base is in excess of 950 million naira.

Contact address

Suites B184 – 185,
Ikota Shopping Complex,
Lekki Peninsular, Ajah, Lagos,
Lagos, NIGERIA.
Tel.: 234 1 461 8461
Fax: 234 1 461 8462
Cell: 234 803 304 3117
info@globalmarinenergy.com
<http://www.globalmarinenergy.com/>

PORT HARCOURT OPERATIONAL BASE

Global Jetty:
35A Eastern Bye Pass, Marine Base
P. O. Box 4414, Trans Amadi,
Port Harcourt, Rivers State
NIGERIA
Tel.: 234 84 233 692 , 234 84 233 693
Fax.: 234 84 234 590

16. **Kasolute Nigeria Ltd:** Kasolute was incorporated in 1990 with a commitment to tackle the technological challenge of facilitating the pioneering process in the services sector by supplying directional drilling, measurement while drilling and directional surveying services on the basis of an extensive professional capability. It was inspired by the challenges of the oil and gas industry and had enormous support from the World Bank and Shell Petroleum Development Company Ltd. Its first trial contract was in 1991.

Contact information:

Plot 59 Trans Amadi, NBM Compound,
Trans Amadi Industrial Layout,
Port Harcourt,
Rivers State, Nigeria.
Tel: +234 84 239065, 230166-7
Fax: +234 84 230167
E-mail: info@kasolute.com

17. **Bj Services Company Nigeria Ltd:** Bj Services is an international oil company based in the United States. Its core business comprises cementing, stimulation, down-hole tools and coiled tubing services worldwide. BJ also provides tubular services, process and pipeline services, and specialty chemical services in selected markets in the world.

Contact information:

Plot 470 Trans Amadi Industrial Layout,
P.M.B. 11, Port Harcourt.
Tel: (234)-84-335428, 331537

18. **KCA DEUTAG:** KCA DEUTAG maintains head offices in Aberdeen, Scotland, and Bad Bentheim, Germany, as well as a number of regional offices in Europe, Russia, the Middle East, Africa, Asia and the United States. The company operates in Nigeria under the name Deutag Drilling Nigeria Ltd and is mainly involved in drilling activities.

Contact information:

Km, 15 Ph/Aba Expressway, P.O.Box 3604, Port-Harcourt.
Tel: (234)-84-237210 Ext. 21547

- 19. OILSERV Limited:** OILSERV Limited was incorporated in 1992 and commenced business in 1996. It is an indigenous engineering company that pools the expertise of very experienced and exposed engineers and technicians to provide engineering services in the areas of construction, consulting services and turnkey projects relating to platforms, production facilities, and the installation of bulklines.

Contact information:

42, Nembe road, Rumuibekwe estate, Port-Harcourt, Rivers state Nigeria.
Tel: 234-84-610739, Fax: 234-84-611626

Lagos Office

5th floor, Stallion House 2 Ajose Adeogun Street Victoria Island, Lagos, Nigeria.
Tel: 234-1-2610396, 234-1-2616676

- 20. SOWSCO Well Services (Nig.) Ltd:** This company provides high-pressure pumping, head-maintenance and engineering services and engineering consulting services to the likes of Shell, NAFCON, NNPC, Ashland Oil, Addax, Negris, Chevron, Daewoo, and Oilserve.

Contact information

Plot 212, Trans Amadi Industrial Layout
Phase II, P O Box 6726
Port Harcourt. River State
Tel: 084-238581, 236774
Fax: 084-238581
E-mail: info@sowsco.net

- 21. ARCO Petrochemical Engineering Co Ltd:** Arco Petrochemical Engineering Co Ltd was founded in 1980 to provide indigenous engineering and procurement support services to the Nigerian oil industry in the areas of global maintenance and repair, logistics support, turnkey contracting and project consulting, call-off stocking, equipment supply and installation, expatriate and local specialist personnel, education and training, high-pressure pumping, head maintenance, engineering and engineering consulting to such companies as Shell, NAFCON, etc.

Contact information

42 Adetokumbo Ademola Street,
Victoria Island, Lagos
Tel: 01-2616132, 2612159, 2611259

- 22. Global Energy Company (GEC):** Global Energy Company has been an active player in the sub-Saharan African petroleum industry since 1992. The company specializes in the delivery of innovative products and applications in the fields of exploration geology, production engineering and energy advisory services, and it has made its mark in these core-activity areas. In 2001 GEC transformed its service capabilities and market position through the acquisition of Nigerdock plc, the foremost ship-repair, shipbuilding and offshore construction/fabrication facility in the West African subregion.

Contact information

182b Kofo Abayomi Street,
Victoria Island, Lagos.
Telephone: +234 1 2616949, 2621297, 2626723
Fax: +234 1 2621296
Email: mdo@globalenergyco.com

Port-Harcourt Office
Plot 228, Trans Amadi Industrial Layout, Phase II.
Telephone: +234 084 235326 / 571124
Fax: +234 084 235326
Email: pho@globalenergyco.com

Warri Office
18, Airport Road, Warri.
Telephone: +234 053 320325-6
Fax: +234 053 320326
Email: pho@globalenergyco.com

- 23. Environquest Nigeria Limited:** Environ Quest provides integrated environmental and natural resource management services such as air-quality monitoring, environmental baseline surveys, environmental due diligence, environmental assessment, industrial remediation, waste-management, health, safety and environment (HSE) management, testing and analysis, equipment procurement, and geographic information system (GIS) solutions in order to address environmental problems and the risks associated with businesses in the oil sector.

Its clients and projects include Lagos Metropolitan Development Project (LMDP), ESIA and the resettlement policy framework (RPF), geophysical investigation and site assessment for major financial institutions, phase-I environmental site assessment of oil and gas facility (phase-I ESA for General Electric at Port Harcourt), West African power-pool environmental assessment guidelines development, environmental assessment of Heineken Brewery Plants, stack emission monitoring (Nigerian Breweries Ltd), environmental impact assessment of aviation-fuel tank-farm depots at Lagos International Airport, West African Gas Pipeline (WAGP), environmental and social impact assessments for the Escravos gas projects, environmental impact assessment of the Bonga offshore field development, environmental impact assessment for the Lagos power project, and wetland restoration in the Niger Delta.

Contact information

12a Akin Adesola Street
PMB 71156 Victoria Island
Lagos, Nigeria.
Telephone: 234-1-4715200, 7201268, 7224869
Hotlines: 234-803-3184776, 234-802-3027575
Facsimile: 234-01-7224869
E-mail: info@environquest.com
Website: <http://www.environquest.com/>

- 24. J. Ray McDermott :** J. Ray McDermott is a leading worldwide marine solutions company with fabrication facilities in the Americas, the Middle East, the Caspian and Asia and the Pacific. Its services include the design, fabrication, transportation and installation of offshore platforms, and the installation of offshore pipelines.

Contact information:

Africa RE, Karimu Kotun St,
Victoria Island. Lagos, NIGERIA
Tel: 234-1-262-6697

- 25. Oceanee Integrated Services (OIS):** OIS is a leading provider of services in the marine and engineering sector of the Nigerian oil and natural gas industry. Established in 1999, Oceanee is registered with the Directorate of Petroleum Resources (DPR) and recommended by National Petroleum Investment Management Services (NAPIMS) as a local-content input provider in engineering and construction, supplies and materials utilization, calibration and maintenance of downstream and upstream equipment, pipes and tanks; owners, operators and charterers of OSVs, tugs and barges, finished products suppliers and procurement.

Contact information:

42 Bishop Oluwole Street
CR State Liaison Building
Ground Floor
Victoria Island
Lagos, Nigeria
Tel: (01) 270-1554
Tel: (01)295-1256
Fax: (713)456-7930 (US dialing)
E-mail:
hq.oceanee@oceanee.com
west.oceanee@oceanee.com

26. **ProSol Nigeria:** ProSol offers a complete package for the successful execution of small- to medium-sized engineering projects, providing engineering, design, logistics, project-management, and construction services to the oil and gas industry in Nigeria. ProSol is based in Warri, Delta State, which is the hub of the oil and gas industry in this region.

Contact information:

Warri
Tel: 234 802 305 7034
E-mail: mailto:projsolnigeria@yahoo.com
Website: <http://www.prosolnigeria.com/>

27. **Executive Services Ltd:** Executive Services Ltd is an indigenous company which has been involved in the oil and gas sector in West Africa for over 15 years. It was established as a vessel supply company in the early stages but later expanded into construction, fabrication, and painting and coating contracts. It furnishes its services to Exxon Mobil, Shell, Mobil Producing, etc.

Contact information:

#2A Railway Close, D/Line, Port Harcourt, Rivers state
+234-84- 575429
executiveservices2002@yahoo.com

Pelfaco Nigeria Ltd: Pelfaco was incorporated and commenced operations in October 1988. It is a fully indigenous company, incorporated to carry on the business of providing specialized services in engineering, procurement, construction, and maintenance of oil and gas facilities. It also provides dredging services in swampy areas, among other civil projects. Pelfaco's clients include NNPC (PPMC) Shell Petroleum Development Company Limited, Texaco Nigeria plc, Mobil Producing Nigeria Unlimited (MPNU), National Oil & Chemical Company Limited, Mobil Nigeria plc, Federal Urban Mass Transit Programme, Texaco Overseas Petroleum Company of Nigeria Unlimited, Federal Department of Fisheries/World Bank programme.

Contact information:

No 1a Forces Avenue,
Old G.R.A Port Harcourt,
Rivers State, Nigeria,
Telephone: 234 84 239333, Fax: 234 84 238 582
E-mail pelfaco@yahoo.com

28. **RANGK LIMITED:** RANGK Limited is a multi-faceted yet specialized maritime and consultancy company dedicated to seafaring and the operational efficiency of seafarers. It was established in 1990 to help to overcome the dearth of indigenous experts and professional participation in the maritime industry, in Nigeria in particular as well as in Africa in general, in the areas of oilfield support services, scientific data acquisition and management, coastal management/dredging, buoyage, surveying, salvaging, clearance of wrecks and derelicts, maritime/navigational data acquisition and management, transportation and haulage of wet and dry

cargo, fishing and fisheries development, ship management and brokerage, and maritime consultancy.

Contact information:

25, Musa Yar'Adua Street
Victoria Island
Lagos, Nigeria

29. **Akenneth Piling Foundation Nigeria Limited's:** This company's core business is piling.

Contact information:

Plot 217 Trans Amadi Industrial Layout,
P.O.Box 5817, Port Harcourt
Tel: 9234)84

30. **Zukus Industries Ltd** provides high-pressure pumping and portable multiphase well-testing services, as well as marine services and environmental and corrosion services.

Contact information:

EVOG Yard, off Enerhen Road,
P.O.Box 1192, Warri,
Tel: (234)-53-250880,
Fax: (234)-53-252392, 253354
zukub@linkserve.com

31. **Oiltest Services Limited** provides surface and down-hole fluid sampling, well-analysis, coil-tubing and completion services, as well as slicking and surface testing, and installation services.

Contact information:

Offices: Plot 182, Trans Amadi Layout, Port Harcourt, Nigeria.
Tel: 234-84-230931
Email- <mailto:sales@oiltest.ng>

32. **AABOG International (Nig.) Ltd** provides engineering, electrical and instrumentation, procurement, and pipeline-integrity monitoring services.

Contact information:

Office: Plot 69/70 Ordinance Road,
Trans Amadi,
Port Harcourt,
Rivers State
NIGERIA
Tel: 084-611211 Fax: 084-611189
E-mail: george@aabog.com
Website: <http://www.aabog.com/>

33. **Unitop International Limited** is involved in the provision of construction and maintenance services, and the hiring of barges and house-boats for clients such as Chevron, Dredging International, Anderson Dredging, and Parker Drilling.

Contact information:

23 Ogunu road, Warri, Delta State, NIGERIA
Tel: 234-53-253370 Fax: 234-53-253507
E-mail: unitop50@hotmail.com

34. **Dubi Nigeria Company Limited** furnishes drilling, waste-management, fluids-filtration and drilling, and mud-solids-control services.

Contact information:

Office: 26, Km. 16, Aba/Port Harcourt Expressway Port Harcourt
Tel: 234-84-612525
E-mail: Ify@phca.linksolve.com

35. **Eharime Nigeria Limited** is the sole agent for SPILLAWAY Bioremedial Products (Sales and Marketing) and provides oil-spill bioremediation (land and water), industrial remediation, and equipment and tools procurement services to the oil and gas industry.

Contact information:

Office: 26, Association Avenue,
Ilupeju, Lagos, NIGERIA
Tel: 234-1-4971425 Fax: 234-1-4971425
E-mail: eharime@hotmail.com

36. **ELP INTEGRATED SERVICES** provides environmental consultancy services, training, data management, and certification services.

Contact information:

Office: 20 Alcon Road Woji, Port Harcourt, Rivers, NIGERIA
Tel: 234-803-3167783
E-mail: elpngr@yahoo.co.uk
Website: <http://www.uk.geocities.com/elpngr>

37. **Geocare Technologies Limited** furnishes environmental management, environmental assessment, audit and monitoring, and safety consultancy services for the oil and gas and engineering sector.

Contact information:

Office: H7, Idioro court,
Okesuna Street, Lafiaji,
Lagos Island, Lagos, NIGERIA
Tel: 234-802-3074877
E-mail: geocare@extracare.com

38. **DOORMAN LONG ENGINEERING LIMITED:** Doorman Long commenced business in 1949 as a structural engineering fabrication company, as a wholly owned subsidiary of British Steel. The indigenization policy of the Government of Nigeria resulted in the reduction of British Steel's holding to 60 per cent, with the remaining 40 per cent held by Nigerian citizens. Today however, the company is entirely Nigerian-owned. Over the past five years it has diversified into metal fabrication for the oil and gas industry, where it has pioneered the establishment of a process-equipment fabrication capability in Nigeria. It provides structural-steel, process-equipment and marine-structures fabrication services to the likes of Nigeria LNG, etc.

Contact Information:

Agege Motor Road, Lagos

39. **Fairshores Limited:** Fairshores Ltd is a Nigeria-based company providing leading-edge technology-driven services in the fields of Teletest[®] pipeline and process pipework inspection, QA/QC, project-management and specialist manpower services, GRE piping systems, complete multi-phase systems solutions, engineering and construction management, and Twister[®] supersonic gas treatment solutions to the Nigerian oil and gas industry, in association with its international partners.

Contact information

Lagos Nigeria:

Suite 5, No. 2/4 Mosley Road,
Entrance opposite Nitel Gerrard Road, Ikoyi, Lagos
Tel: 234 (0) 1 2693324
Mobile: +234-(0)803-300-8232
e-mail: rotimi.dosekun@fairshoresltd.com or nitex@infoweb.abs.net

Port-Harcourt Nigeria:

#32B Bori Road,
Rumuibekwe Housing Estate
Opposite Shell Camp, Aba Expressway
P.O.Box 7056, Port Harcourt.
Tel: 234 (0) 84 612736/7
Mobile: +234-(0)803-309-3510
e-mail: infofairshores@fairshoresltd.com or dada.thomas@fairshoresltd.com

40. **Interdrill Nigeria Limited** is mainly involved in mud-engineering services.

Contact Information

17, St. Mary's Hospital Road,
(off Airport Road), P.O.Box 3273, Warri
Delta State

41. **Contraco Nigeria) Limited** specializes in consultancy, agency, supplies, engineering, fabrication, project-management, shipping and handling services.

Contact information:

Suites 8D Prince's Court,
37 Ahmed Obibudo Str.
V/Island, Lagos,
Tel: (234)-2623536, Tel/Fax 234-1-7748001,
Email: contracohq@aol.com, contraship@aol.com

Annex 14 The seven main sedimentary basins, their size, main reservoirs and exploration status

Main Basin	Sizeland prospectively	Main reservoirs/hydrocarbon habitat	Status	Operators	Remarks
1. Anambra (Cretaceous)	Oil and condensate: 1 billion STB. Gas: over 1 million TCF	Ajali sandstones	Proven oil and 705 billion cubic feet of gas from 2 discovery wells, 18 wells drilled to date.	Elf, Shell	High geothermal gradient, 19 blocks
2. Benin (Dahomey) Embayment (Cretaceous)	Proven hydrocarbons: 15 million barrels of oil and 1 trillion cubic feet of gas	Mainly stratigraphic with minor structural/fault control.	Interest/scramble by many operators. 1 discovery well in 1996	Yinka Folawiyo (indigenous operator) backed by Abacan Resources of Canada	Extends across the Nigerian-Benin border to Seme field. 18 blocks.
3. Benue (Cretaceous)	60,000 sq. km., Estimated hydrocarbon volume: 500 million barrels	Asu river group	Relatively unexplored over 3000 km of 2D seismic. Shell's well Kolmani-1 spudded mid March 1999.	Chevron, Elf and Shell commenced exploration in 1994 in the Gongola sub basin.	Ongoing exploration activity. 29 blocks
4. Bida (Cretaceous)	20,000 sq. km.		Relatively unexplored although large acreage holdings have been established.		18 blocks
5. Chad (Cretaceous)	35,000 sq. km.,	Tight reservoirs	Active exploration. 7,000 km of 2D seismic data, and 24 wells with marginal shows in well Wadi-1.	NNPC's Frontier Exploration Services (FES)	Improved seismic techniques required for further basin evaluation 48 blocks
6. Niger Delta (including the relatively new concessions in Nigerian deep water) (Tertiary)	75,000 sq. km. of sedimentary basin fill, and over 12 km thickness in its central part. Recoverable hydrocarbons: Over 20 billion bbls. Of oil and 120 trillion of gas.	The paralic Agada formation which lies between the base continental and the source rock Akara formation	Mature hydrocarbon province with vast potential still	57 indigenous and all major multinational companies including Shell, Elf, Mobil, Chevron, Texaco, and Agip	One of the most prolific hydrocarbon provinces in the world. Five major depobelts with a few major sub division. 164 blocks.
7. Sokoto (Cretaceous)	30,000 sq. km.,	Shallow basin with sedimentary thick-ness between 500 & 1500 metres.	Exploration activities by Elf and Mobil. Over 1200km of 2D seismic acquired by Elf.		

Annex 15 Nigerian data profile

POLITICAL OVERVIEW

President: Olusegun Obasonjo (since May 29, 1999)

Vice President: Atiku Abubakar

Location/size: West Africa, bordering the Atlantic Ocean (on the south and west), Cameroon (on the south), Chad (on the east), Benin (on the west), and Niger (on the north); 923, 770 square kilometers

Population: 132.8 million (2002 estimate)

System of Government: Federation with 36 states

Major cities: Abuja (capital), Lagos, Kaduna, Enugu, Ibadan, Kano, Port Harcourt, Aba

Languages: English (official), Hausa, Ibo, Yoruba and some 250 ethnic dialects

ECONOMIC OVERVIEW

Currency: naira

Market exchange rate (02/08/04): \$US 1=132.82 naira

GDP (current \$, 2002): \$43.5 billion

GDP growth (annual %) (2002): - 0.9

GDP Implicit price deflator (annual % growth) (2002): 11.6

Total exports (2002): \$14,912 billion

Crude petroleum (2002): \$13,306 billion

Liquefied Natural Gas (2002): \$886 million

Foreign direct investment (net inflows) (current \$, 2002): \$1.3 billion

Present value of debt (current \$, 2002): \$31.5 billion

ENERGY OVERVIEW

Proven oil reserves (1/1/03 est.): 31.5 billion barrels (*OPEC Statistical Bulletin*)

Oil production (Jan. 2004 est.): 2.4 billion (NNPC)

OPEC crude production quota (1.935 million barrels a day, July 2002; 142 million, August 2004)

Crude refining capacity (1/1/03 est.): 438,750 bbl/d

Natural gas reserves (1/1/03 est.): 124 trillion cubic feet (tcf)

Natural gas production (2001 est.): 0.55 tcf

Natural gas consumption (2001 est.): 277 billion cubic feet (bcf)

Electricity generation capacity (1/1/01 est.): 5.9 gigawatts

Electricity generation (2001 est.): 15.67 billion kilowatt-hours

ENVIRONMENTAL OVERVIEW

Total energy consumption (2001 est.): 0.92 quadrillion Btu (0.2% of total world energy consumption)

Energy-related carbon emissions (2001 est.): 23.5 million metric tons of carbon (0.4% of world carbon emissions)

Per capita energy consumption (2001 est.): 7.8 million Btu (as against United States rate of 341.8 million Btu)

Per capita carbon emissions (2001 est.): 0.2 metric tons of carbon (as against United States rate of 5.5 metric tons of carbon)

Energy intensity (2001 est.): 8,315 Btu/\$1995 (as against United States value of 10,736 Btu/\$1995)

Carbon intensity (2001 est.): 6.21 metric tons of carbon/thousand \$1995 (as against United States value of 0.17 metric tons/thousand \$1995)

Source: Compiled from data of the World Bank and the United States Energy Information Administration.