

The Niger Delta of Nigeria: A World Class Oil Region in Africa, 2000-2006

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Abstract

Nigeria is the largest crude oil producing country in Africa, the sixth petroleum giant in the Organization of Petroleum Exporting Countries (OPEC) and the eleventh in the world (Okodudu 2007:10). But it gained world class fame only in the year 2000 through oil production in its Niger Delta region. The scholarship of this essay is how the region attained this feat at the beginning of the twenty – first century. The work also documents the seventeen giant oil fields that made it possible and the aggressive drilling campaigns in the region. Other topics addressed include the oil and gas reserves in the Niger Delta, crude oil production from 2000 to 2006 and its export values in US dollars.

Introduction

The Niger Delta is the southernmost region of Nigeria. Although it occupies ninety percent of the Nigerian coastline, it is specifically between the Mahin river estuary in the west

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and the Cross River estuary in the east. The region has been producing oil since 1956. From this time to the end of the twentieth century, it was not a world class oil region. The major constraint was the inability of its giant fields to produce oil in great quantities. On attainment of this feat at the beginning of the twenty-first century, it became listed as a world class oil region.

Many have conducted researched on Nigerian petroleum in the Niger Delta. The literature that focuses on this topic is written in the early twenty-first century. Amongst them are the following: Ikoku C. U. *Petroleum: Mankind's Best Friend* (Port Harcourt, 2000) and Udo, E. J. "Impact of Oil Exploration in Akwa Ibom State" (Uyo, 2001). Others are the recent works of Okowa, W. J. *The Problems and Prospects of the Niger Delta* (Port Harcourt, 2007) and Jaja, J. M. *Underdevelopment and Conflict in the Niger Delta: The Tragedy of Oil Exploration* (Port Harcourt, 2007).

These works address the problems of community relations and the underdevelopment of the Niger Delta. The work of Okowa evaluated the prospects of the Niger Delta in Nigeria and how the latter marginalized her Delta region. None of these works examined how the region became world class in petroleum production which this paper addresses to fill in this gap in the petroleum history of Nigeria. First, the aggressive drilling campaigns of the early twenty-first century must be considered.

The Aggressive Drilling Campaigns of the Early Twenty-First Century

One of the most significant events in the history of the Nigerian petroleum industry in the Niger Delta is the aggressive drilling campaigns that took place between 2000 and 2006. At the beginning of the twenty-first century, the petroleum industry progressed beyond a doubt and the Niger Delta became a world class petroleum region, especially in Africa. The Nigerian Petroleum Development Company (NPDC) and the Nigerian Agip Oil Company (NAOC) had a joint venture agreement in the year 2000. This led to the first open competition for crude oil blocks as well as the discovery, building, and production of Okono offshore field in 2001. Four years later, the first marginal oil field awards to indigenous firms were created and the second open competition for oil blocks started in 2005 (Obiozor 2005).

Anyway, between 2000 and 2003, more than fifty onshore and deepwater oil blocks were discovered in the Niger Delta. These were located in the shallow and continental shelf, deep and ultra-deep offshore and onshore. In the year 2000 alone, thirty new oil blocks were offered for bidding with Shell having 30% stake in the Nigerian energy sector. The petroleum history of Ibah (2000:17-18) documented some of these blocks found in 2000 as Oil Prospecting Lease (OPL) 135, 236, 304 and 452 in the Niger Delta onshore. Six blocks discovered in the continental shelf are OPL's 229, 233, 239, 240, 277 and 467. The eleven blocks in the deep and ultra-deep offshore of the Niger Delta include OPL's 214, 242, 243, 249, 250, 318, 320, 322, 324 and 326. Among the deep water oil blocks discovered in 2003 are OPL's 220, 221, 222, 246, 247,

217, 218, 219, 245, 244, 216, 215, 243, 212, 213, 248, 211, 250, 210, 209, 315 and 316 (Lawal 2004: 12).

In the case of OPL 222 explored by Chevron Texaco, two reservoirs of oil were found. The first oil found on the block and drilled was from Ukot I exploration well. But the second that came from Usan I well produced 5000 barrels of crude oil daily from a water depth of 750 meters. This reservoir contributed immensely to the company's growth (Pryor 2002:19).

However, the Federal Government of Nigeria allocated these blocks to 57 multinational and indigenous petroleum firms for exploration. Some of them are Shell Petroleum Development Company of Nigeria (SPDC), Exxon Mobil, Agip Energy and National Resources (AENR), Chevron Texaco, Petrobras, Esso Exploration, Nexen Petroleum Nigeria and Petroleum Production Company as well as the Nigerian government owned National Petroleum Development Company (NPDC) established in the 1980s for petroleum exploration.

SPDC did not only use this aggressive drilling period to upgrade her oil fields and flow stations in the Niger Delta. They also achieved a million barrels of oil daily. Shell principal officers, like Mr. Salim Al Alawi, Mr. Oghale Ibi, Dondo Ahire, Hans Flikkema and Don Boham (2003:25) clarified how the one million barrels per day mark was reached. According to these authorities, who were the heads of field engineering, production geology, well operations swamp east, corporate well engineering and external relations, respectively, their budget for 2003 was to drill an additional 62 oil wells. But they could only accomplish 51 that added 136,000 barrels per day to their corporate holdings. As a result, in two days time 5–6

October, 2003, Shell's total production increased from 1.007 million barrels per day to 1.012 million.

Other petroleum players in the Niger Delta ,like Agip Energy and Natural Resources (AENR), also developed their old and new oil fields in 2003. Ekundayo (2003:25) gave an instance of Okono and Okpoho Fields where Agip spent more than US\$400 million to increase the capacities as well as commissioning a new Floating, Production, Storage and Offloading (FPSO) Vessel called *Mystras*. Because of their discovery of more fields in the Niger Delta region, they were able to increase their total crude oil production from 90 million to 250million barrels in 2003. In the agreement they signed in 2000 with the Nigerian Petroleum Development Company (NPDC), Agip provided the funding and managed the new fields jointly with NPDC.

In 2004, the Federal Government of Nigeria granted equity shares in five offshore blocks to NPDC. According to NPDC's chairman, Abba Dabo (2004:3), the blocks OPL's 214, 242, 256, 244 and 318 that are in the oil-rich Niger Delta will enable the NPDC to earn revenue for Nigerian Government through the Nigerian National Petroleum Corporation (NNPC).

With the advantage Exxon Mobil had in the Eastern Obolo (Andoni) part of the eastern Niger Delta offshore, they were able to develop the East Area Additional Oil Recovery Project (EAAORP) in a joint venture with the NNPC. Ugwuanyi (2004:18) stated that the result will increase Exxon Mobil's production from 750,000 barrels per day in 2000 to 500 million in the future.

As for Total, then TotalFinaElf, their Amenam-Kpono Project was exploring over one billion barrels of oil reserve in

Eastern Obolo (Andoni). The findings of Ekundayo (2004:23) brought into focus the US\$2 billion Amenam-Kpono Field. This is in addition to building and monetizing Amenam Kpono Oil and Gas Export Project (AKOGEP) Phases I and II in the Eastern Obolo offshore. Also within this period of 2003, they were developing their Akpo and Usan deep offshore projects as well as the second phase of Ofon Field also in the Eastern Obolo (Andoni) offshore area of the Niger Delta.

Going through the frequency of these aggressive exploration and exploitation of the petroleum industry, the Nigerian Government came up with more Oil Prospecting Leases (OPL). Thus in February 2003, thirty one indigenous oil firms were awarded the OPL to explore 24 marginal petroleum fields in the Niger Delta. Adindu (2004:12) mentioned the total oil reserves in the marginal fields then as 1.36 billion barrels per day. Being handled by indigenous firms, it is a giant step towards the development of the Niger Delta region in particular and Nigeria in general.

However, the revelations of Isiwu (2004:13) put Nigeria's overall crude oil reserve at about 33.4 billion barrels in 2003. Not less than 95% of it was in the Niger Delta region. Before then the estimate of recoverable oil was 22.5 billion barrels. In spite of the fact that they are processed through seven terminals and floating production vessels, the oil came from the 3000 kilometers of pipelines that cross the Niger Delta. These pipelines link 275 flow stations to the existing seven petroleum terminals that process it for export.

Until the end of 2006, Nigeria's petroleum deposits were concentrated in the Niger Delta's onshore and offshore swamps and continental shelf. Experts, like Ikoku (2000:47), have proved that it will continue to flow for the next forty

years. Because it is light sweet crude with low sulfur content, it will continue to be the most preferred worldwide since it can be more easily obtained and refined than heavy crude (Onyige 1989:176).

A close study of it depicts the position that the Niger Delta oil has promoted Nigeria in the comity of world petroleum producing countries. In 2003, Nigeria was the eleventh largest oil producer in the world. The ranking were as follows: Saudi Arabia, USA, Russia, Iran, Venezuela, Kuwait, Iraq, United Arab Emirate, Mexico, China, Nigeria, Libya, Canada, Indonesia, Kazakhstan, Algeria, Norway, and Britain. As a result, the Niger Delta is a world class petroleum region within and outside Africa (Ibah 2004:8).

The Niger Delta as World Class Petroleum Region in Africa

The strategic position of the Niger Delta as a world class petroleum region was well spelt out when it was listed in the *USA Geological Survey World Petroleum Assessment* (2000). Thus, a world class giant oil field produces between 500 million and five billion barrels. In the case of the Niger Delta of our study, the seventeen giant petroleum reservoirs that are world class oil fields meet the criteria as shown on Table 4 below.

Table 1: Niger Delta World Class Oil Fields

| S/N | Operator | Oil Fields | Date Discovered | Reserves (Mmbbls) |
|-----|----------|----------------------|-----------------|-------------------|
| 1. | Shell | Bonga | 1993 | 600 |
| 2. | | BongaSouth West | NA | 600 |
| 3. | | Bomu | 1958 | 875 |
| 4. | | Cawthorne Channel | 1963 | 750 |
| 5. | | Forcados – | 1968 | 1,23 |

| | | | | |
|-----|------------------------------|---------------------------|------|-----------|
| | | Yokri | | 5 |
| 6. | | Imo River | 1959 | 875 |
| 7. | | Jones Creek | 1967 | 900 |
| 8. | | Nembe Creek | 1973 | 950 |
| 9. | Exxon Mobil | Edop | 1981 | 733 |
| 10. | | Erha | 1991 | 1,20 0 |
| 11. | | Ubit | NA | 945 |
| 12. | Chevron Texaco | Agbami | 1998 | 1,00 0 |
| 13. | | Meren | 1965 | 1,10 0 |
| 14. | | Apoi- North- Funiwa | NA | 500 |
| 15. | Total (Total Fina Elf) | Okan | 1965 | 800 |
| 16. | | Amenam- Kpono | 1990 | 500 |
| 17. | | Obagi | 1964 | 670 |

*NA: Not Available.

Source: Emmanuel O. Egbogha, "Fifty Years of Petroleum Exploitation in Nigeria: Public Lecture Presented at the First Emmanuel Egbogah Lecture Series on Petroleum Policy and Strategy at the University of Port Harcourt, March 27-29, 2006, pp.35-36.

According to Imomoh, (2006:7) the Niger Delta oil fields were the second largest oil fields in the world. Superseding them were the super-giant oil fields found in the Middle East, especially those of the Iranian or Persian Gulf. Simply put, it is the size of the oil wells, not the number of wells discovered, that matters. Like in Nigeria, the Niger Delta

did not only pioneer petroleum production, but it also has the largest fields in the country and in Africa in general. This includes the Bonga, Agbami and Okan Fields at the Escravos in the western Niger Delta as well as Amenam-Kpono in the Eastern Obolo (Andoni) part of the eastern Niger Delta offshore (Akintunde 2000:5).

Bonga for instance is Nigeria's first deep offshore field which was discovered by Shell in 1993 and holds the Oil Prospecting License (OPL) 212 of the same year. It is this pioneer Nigerian deep offshore field that is contributing immensely to the petroleum industry. Thus, it has since 29 December 2005 been increasing Nigeria's crude oil export by 200, 000 barrels daily. The field which was developed by Shell Nigeria Exploration and Production Company (SNEPCO) at the cost of US\$3.6billion in a joint venture with First Oil, Esso, Agip and Elf covers 60 square kilometre area in the Niger Delta water depths of over 1000 meters (Wihbey 2006: 28, 30).

The Bonga field exposed the acumen of indigenous technology in Nigeria through their offshore loading buoy. The latter constructed by an indigenous company, Nigerdock, Lagos, became reputed as the world's 'first largest and most technologically advanced polyester deepwater bouy' (Egbogah 2006:28-30). This was made possible by the successes of petroleum businessmen in deep offshore development. Their exploration and development of the Niger Delta oil made Nigeria the African hub of petroleum (Ayiga 2003:11).

Another example comes from the Agbami Oil Field of Chevron-Texaco. This offshore deep water field, located 70 miles or 113kilometres offshore the central part of the Niger Delta on OPL Block 216, was discovered in 1998. According to Meze (2008), although it is in the water depth between 4,200

feet and 5,400 feet, the field covered 45,000 acres or 182 square kilometers and was given to Chevron-Texaco by the Federal Government of Nigeria as the Oil Mining Leases (OML) 127 and 128. Because of the huge petroleum deposits of not less than 900 million barrels, the appraisal work was completed in a record time of three years after the discovery and drilling commenced in 2004 (Salau, 2008).

Notwithstanding the fact that Chevron-Texaco is developing the field with Petroleo Brasileiro (Petrobras) SA and Total SA, Agbami is recorded as one of the biggest fields of Chevron. It is expected to produce about 100,000 barrels of oil daily which will boost Chevron's total output of 250,000 barrels per day. According to Ferreira, Petrobras Manager in Nigeria, Abami alone is estimated to endow Nigeria with not less than US\$2 billion or N224 billion yearly whenever it is in full operation. In fact, Chevron's affiliate company, Star Deep Water Petroleum Limited, who is contracted to operate Agbami had brought a US\$1.1billion Floating Production Storage and Offloading (FPSO) vessel for the storage and processing of the oil from the Agbami Field. In fact the storage capacity of this vessel is said to be not less than 20,000, 000 barrels. Chevron-Texaco uses the field to pioneer the use of a new technology of Steel Catenary Risers (SCR) to produce oil from the deep sea wells (Makoju, 2008).

It is interesting that Nigeria, the country of exploration, has hand in the fabrication of the components of the project. The offloading buoy was done by Nigerdock Plc, Lagos; parts of the topsides by Daewoo Limited, Warri and both the suction piles and manifolds were the handiwork of Grinakars-LTA in Port Harcourt (Ferreira, 2008). Apart from the fact that these explorations brought about the world class

nature of these oil fields in the Niger Delta, there are other numerous wells owned by other oil conglomerates that increased the Nigerian oil reserves.

Nigerian Oil and Gas Reserves in the Niger Delta

Reserves are said to be estimated volumes of oil accumulation that are available for production in commercial quantity. Nigerian oil reserves in the Niger Delta started with 0.184 billion barrels in 1958 and rose to 16 billion barrels in 1986. In order to increase it, government policies in 1990 encouraged the exploitation of several deep offshore blocks in the Niger Delta with water depths of 3000 meters (Ugwuanyi 2004:10).

Nevertheless, the reserves came owing to the effectiveness of the petroleum firms. The drilling campaigns for the realization of effective exploration and exploitation were entrusted to many firms including Statoil, Amoco, Exxon (now ExxonMobil), Shell and Conoco. As a result, the reserve increased to 33.4 billion barrels in 2003 and continued to increase to 35.9 billion in 2005. By 2006, it was reading 36 billion barrels. For this reason, petroleum businessmen in the Niger Delta projected that by the year 2010, the production of Nigerian crude oil will reach the landmark of 40 billion barrels (Wihbey 2006:1).

Nigeria is also doing well in proven gas reserves in the Niger Delta. Egbogah (2006:12) demonstrates that gas reserves started with 2, 260 billion cubic feet in 1958. However, by 2006 the Niger Delta as world class oil region had increased to 187 trillion cubic feet.

Unlike it, the actual daily production of crude oil stood at 1.8 million barrels per day in 1990 and 2.6 million barrels

daily in 2005, which continued in 2006. Nigeria became the largest oil producer in Africa, sixth in the OPEC, fifth largest supplier to the United States of America and eleventh in the world. However, the NNPC and the Department of Petroleum Resources (DPR) made it possible for the Nigerian Government to know that about 116 out of 300 marginal fields in the Niger Delta are potentially productive. Interestingly, about 1.3 billion barrels are the oil reserves in these marginal areas of the Delta. Increases in oil reserves were regularly encouraged by the Federal Government of Nigeria. The Niger Delta became the source of this encouragement through the opening of its ultra-deep offshore for oil blocks. These blocks that were acquired by the Nigerian indigenous and international petroleum firms were rapidly developed to become a part of the Niger Delta oil fields (Indiamaowei 2004:15-18).

As soon as the Niger Delta offshore was opened up for exploration and exploitation, the number of petroleum firms increased to fifty nine. In fact, more than 46 of them went into intensive exploitation of crude oil and condensate. For this reason, 91 of the 177 Oil prospecting Licenses (OPL's) were converted to Oil Mineral Leases (OML's) and 22 new oil blocks were given to both indigenous and multi-national oil firms in the country in the year 2000 (Awajiokwaan 2004:8). The indigenous firms include Monipulo of Chief O. B. Lulu-Briggs of Rivers State, Zebra, Dubri, Consolidated Oil and not the least is Amni International that is one of the oil players in the Eastern Obolo (Andoni) platform of the Niger Delta offshore (Daukoru, 2004:21-26). Their activities contributed not only to the increase of Nigerian oil production, but also to making the Niger Delta a world class oil region in Africa. Between 2000

and 2006, crude oil production in the region increased as shown below.

Table 2: Nigerian Crude Oil Production in the Niger Delta Region, 2000-2006 in Thousand Barrels Per Day and Its Export Values in US Dollars

| Year | Daily Average | | Cumulative | Amount in (US\$ million) |
|-------|---------------|--|------------|--------------------------|
| 2000 | 2,250 | | 20,964,067 | 20,040 |
| 2001 | 2,300 | | 21,803,567 | 17,188 |
| 2002 | 2,240 | | 22,621,167 | 17,083 |
| 2003 | 2,330 | | 23,471,617 | 22,184 |
| 2004 | 2,500 | | 24,384,117 | 33,309 |
| 2005 | 2,600 | | 25,333,117 | 46,770 |
| 2006 | 2,600 | | 26,282,117 | 46,770 |
| TOTAL | | | | 203,344 |

Sources: Emmanuel O. Egbogah, "Fifty Years of Petroleum Exploitation in Nigeria: Public Lecture Presented at the University of Port Harcourt, Nigeria, in 2006," (Port Harcourt: MSS, 2006), pp.12-13, 23. *OPEC Statistical Annual Bulletin, 2003-2006*.

Conclusion

This work examined the Niger Delta of Nigeria as a world class petroleum region. It centered on the drilling campaigns that took place in the first six years of the twenty-first century. The campaign stabilized the daily crude oil production to about two million barrels. This actualization further developed the capacity of the petroleum fields. Seventeen of the petroleum fields became recognized worldwide as world class oil fields: they contributed to the daily production of 2.6 million barrels of crude oil in the Niger Delta of Nigeria in 2006. Between the years of 2000 and 2006, Nigeria derived a total of US\$ 203,344,000,000 from crude oil sales in the world market.

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