Aje Field and Petroleum Discovery in Lagos State Nigeria

By

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Abstract
This paper traces the history of search for bitumen, oil and gas in the Lagos area from early 20th century to the announcement of the eventual commercial production of oil in Lagos State on the 3 of May 2016. It chronicles the growth of OPL 309 from a rank, undrilled, frontier asset to a producing OML 113 acreage. It explains the geological data and formation of the area and predicts potentials for the discovery of sizable oil and gas reserves in the area. The research for the paper confirmed that the commercial production of oil in Aje Field is a breakthrough in efforts to encourage local indigenous companies and personnel to be actively involved in the upstream sector of the petroleum industry. However, it is noted with regret that not much has been achieved in terms of local capacity building and petroleum technology transfer or development as virtually all of the technical work was done and still being done by the foreign partners and their expatriate staff. The paper also cautions the federal and Lagos State governments, as well as the oil producing companies involved in the prospecting, exploration and production of petroleum in the area against both the economic and environmental mistakes associated with the discovery and production of petroleum in the Niger Delta region of Nigeria.

Keywords: Lagos Lagoon, Aje Field, Bitumen, Dahomey-Benin Basin, Turonian, Cenomanian, Albian, Oil and Gas

Introduction
The announcement on the 3rd of May 2016 that commercial production of petroleum has commenced in Aje Field offshore of Lagos comes 113 years after the search for oil began in the Lagos area. The search for oil in the Colony of Lagos and the Southern Protectorate of Nigeria dates back to 1903 when the Nigeria Properties (Limited) and the Nigeria and West African Development Syndicate (Limited) commenced exploration for bitumen, coal and oil. ¹ They had two concessions that covered a territory of 400 m² in Agbabu-Mulekangbo area of Lekki Lagoon region² (Fig. 1 and 2). The lagoon is located in Lagos and Ogun States.

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¹Bitumen has been described as “Naturally occurring near-solid hydrocarbon” and Petroleum as “Naturally occurring hydrocarbon compounds. Crude oil and gas in solution…” See Momodu Kassim-Momodu, Glossary of Petroleum Industry Terms (2007). The American Association of Petroleum Geologists (in their “Introduction and Summary”) describes petroleum as ‘an extremely complex mixture of hydrocarbon … compounds, with minor amounts of nitrogen, oxygen, and sulphur impurities’. Liquid petroleum is called crude oil, petroleum gas is called natural gas, while semisolid and solid petroleum are called by various names depending on the location and use. These names include bitumen, asphalt and tar. Bitumen is that semisolid and solid petroleum that is used mainly for road paving and water proofing. See The American Association of Petroleum Geologists, “Introduction and Summary” 2008. You will find this on the website http://www.aapg.org/series/StaticContent/AAPG_files/html/intro517.html

According to Phia Steyn, “Geological investigations by Bernard A. Collins (1903-4, and 1904-5) and A.H. Harrison (1904-5) confirmed the existence of vast bitumen deposits as well as the possibility of petroleum.”\(^3\) They stated *inter alia* in their report:

“Notwithstanding the shallow depth at which the deposits occur and the tropical heat of the territory, the bituminous deposits so far located are in a plastic condition; this seems to show that there is still a flow of liquid from the original source, and gives the expectation that oil exists in considerable quantity.”\(^4\)

At this time, the colonial government was more interested in agriculture and forest resources. Oil was not a priority and could only be included in development planning if commercial quantity and quality was discovered. The colonial government therefore left oil prospecting and exploration entirely to the private companies. They were only prepared to give small loans as the Colonial Governor pleased. The companies lacked the resources for serious exploration and so the prospecting and exploration activities of the two companies as well as the third concessionaire, the Northern Nigeria Exploration Syndicate were indeed quite limited.

However, the situation changed in 1905 when John Simon Bergheim a British investor showed interest in oil prospecting and exploration in the colony.\(^5\) He incorporated the Nigeria Bitumen Corporation in England in November 1905. As pointed out by Steyn\(^6\) and contrary to the view promoted by Njeze,\(^7\) Frynas\(^8\) who have been cited by many other writers, Nigeria Bitumen Corporation was not a German company. It was a British-registered company. Its shares were traded on the West African Market of the stock. The incorporation of the company in Britain was in line with general British colonial oil policy, which determined in 1904 that oil exploration concessions in the British Empire should preferably only be granted to companies registered in Britain or its colonies.\(^9\) The 1907 Ordinance made the search for oil in Nigeria a monopoly of British companies and citizens. Section 15 of the Ordinance further specified that all members of the directorate of these companies be British subjects.\(^10\) A German company could not have been granted any concession for oil prospecting or exploration in Nigeria at that time. This principle was retained in the 1914 Mineral Oils Ordinance, which applied to all areas Nigeria after the amalgamation of Northern and Southern Protectorates. The 1925, 1950 and 1958 amendments retained this provision.

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\(^3\)Ibid

\(^4\) The Times, 8 Nov 1905, 15a. No reference is made in Nigerian newspapers on these two ventures beyond the Lagos Standard of 4 Nov 1903 and 24 Feb 1904 noting the arrival of B.A. Collins and his departure for Liverpool. Steyn (op. cit) points out that the possibilities and successes of the colonial oil ventures were extensively reported in The Times and The Petroleum Review, both to reassure current investors and to convince prospective investors of the profitability of investing in colonial oil exploration ventures.

\(^5\)Bergheim had extensive experience in the European oil industry, in particular in Galicia and Romania, and was also the co-founder and co-owner of the Galizische Karpathen-PetroleumAktiengesellschaft. See also The Times, 11 Dec 1912, 9; The Petroleum Review, 26 Sept 1908, v

\(^6\) Op. Cit.


\(^8\) Frynas Jedrzej George, Oil in Nigeria: Conflict and Litigation Between Oil Companies and Village Communities. 2000 Business & Economics. P 9

\(^9\) McBeth, British Oil Policy 1919-1939, 1.

Discovery of Oil in Lekki Lagoon Area November 1908

The Nigerian Bitumen Corporation acquired and started work in the exploration concessions previously held by Nigeria Properties and the Nigeria and West Africa Development Syndicate. A year later, the company acquired the concessions of the Northern Nigeria Syndicate in the same Lekki Lagoon area and adjacent to its concession in the area. Like his predecessors, Bergheim soon became cash-strapped and he had to approach a reluctant Admiralty and Colonial Office in London for financial assistance towards the end of 1906. Even with the support of Sir Walter Egerton\textsuperscript{11}, the Governor of Southern Nigeria at that time, it took another one year of negotiations before the British government granted the company a loan of £25,000.00 in late 1907. The first instalment of the loan was paid in February 1908.\textsuperscript{12} The loan was used to purchase a new oil rig which was immediately deployed to drilling in the Lekki Lagoon concession area.

Their search for oil instead of bitumen started in earnest in 1908 with the new rig. Between 1908 and 1912 the company drilled about 15 wells in the concession. Oil was struck in November 1908 at well number 5\textsuperscript{13} and it initially started to flow at the rate of 2000 bbls per day before water intrusion from the lagoon soon reduced it to 50 bbls, and with significant environmental impact as the lagoon and the immediate environment soon became polluted. Oil was again struck at well number 12. It was very good quality oil without gas.\textsuperscript{14} Again as was the case with well no. 5, water flowed continuously into the most promising wells and they did not possess the equipment to deal with the catastrophe. At that time (1906 to 1912), the oil prospecting companies operating in the colony did not have the necessary equipment or personnel to deal with the environmental impact of their operations or the equipment to remove or separate the water that flowed nonstop into most of the promising wells. They also had difficulties coping with the swamps and flooding during the rainy season with all the environmental and health hazards.

After drilling about 15 wells with all the challenges associated with producing the few promising wells, the company soon ran out of money and again approached the colonial government for loan. While this was being considered in London, John Simon Bergheim who was the only link between the company and the Admiralty and Colonial office in London died in December 1912.

\textsuperscript{11}Sir Walter Egerton was of the view that the colonial government ought to be playing a greater role in economic development of the colonies and he believed that Southern Nigeria would achieve rapid economic development if private investor received some financial assistance from the colonial government. He therefore embarked on development projects to improve the infrastructure, he encouraged the exploitation of known mineral resources, and sought expansion of existing agricultural exports while developing new agricultural exports. See Carland, The Colonial Office and Nigeria, 101-117, 191-192.


\textsuperscript{13}The Petroleum Review, 19 Dec 1908, 337-338; The Times, 7 Jun 1910, 15e; 10 Oct 1911, 15e.

\textsuperscript{14}Steyn, Op. Cit
The friendly Governor Sir Walter Egerton was about the same time transferred from the Southern Protectorate to British Guiana and was replaced by Sir Fredrick Laggard. Laggard was
very reluctant to assist or encourage the colonial government investing in speculative oil ventures.

Despite the exploratory successes of the Bitumen Corporation and the prospects for commercial quantity and good quality oil in the Lagos Lagoon area in the beginning of the 20th century, the Nigeria Bitumen Corporation ceased all operations in December 1913 and was liquidated in 191415 due to lack of the necessary equipment, lack of finance and inability of the expatriate personnel to cope with the harsh swamp environment. Njeze16 and Frynas17 link the cessation of operations by the company to the outbreak of the First World War but historical and legal record show that the company ceased operations and was liquidated for reasons given here before the First World War.18 International and multinational oil companies that came in after the Nigerian Bitumen Corporation moved to the eastern and the Niger Delta parts of the country.

**From OPL 309 to OML 113: The Aje Discovery**

**The Story of Aje Field.**

There was no serious prospecting for oil in the Lagos and Lekki Lagoon area until 1991 when Yinka Folawiyo Petroleum (YFP), a private Nigerian indigenous oil company started exploratory work in Oil Operating Licence 309 (OPL 309) in the Benin Basin, offshore Lagos. It was a Sole-Risk Contract, awarded as part of the Indigenous Thrust, an initiative of the Nigerian government to foster the growth of local, home-grown, independent Exploration and Production (E&P) companies who could build capacity and produce oil and gas the way the global oil majors had been doing in the country for over sixty years.

However, YFP with no prior experience at running an E&P project, had to seek technical partners to help raise fund, evaluate the asset, drill and appraise the successful prospects. All through the years, until Field Development Plan was approved in 2014, YFP retained a 60% equity on the licence, while these technical service providers, holding 40%, basically grew the value of OPL 309 from a rank, undrilled, frontier asset in 1991, to a producing acreage in May 2016.

Oil and gas was discovered in the Aje-1 well in 1996. The well encountered oil and gas over three zones of the Cretaceous Turonian age. It flowed at the rate of 60.2 Million standard cubic feet of gas a day (MMscf/d), 1,729 barrels of condensate a day (BCPD) and 2,389 barrels of oil a day (BOPD).

In 1997, an appraisal well, Aje-2, flowed 16.5 MMcf/d and 450 BCPD from the shallower zone tested in Aje-1, as well as 3,866 BOPD from a deeper separate additional zone which had not been encountered in the Aje-1 well.

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15 See also Carland, The Colonial Office and Nigeria, 193-6. Note that the company was liquidated before the start of World War 1
18 Njeze, ‘Oil Concessions and Land Acquisition in Nigeria’, 166; Frynas, Oil in Nigeria, 9, footnote 5. Also, The Times, 16 Oct 1911, 19e., 11 Dec 1912, 9; 24 June 1913, 17c; Confidential letter from the Petroleum Department, 12 Nov 1936, BP 44063, BPA; Carland, The Colonial Office and Nigeria, 193-6.
The difference in results of Aje 1 and 2 created a geologic conundrum for the field appraisal, and as such, for development. The sand that flowed 2,389 Barrels of oil per day in Aje-1 was not the same that yielded 3,866 BOPD in Aje-2. The report said that the oil zone in Aje-2 was a deeper separate additional zone (Cenomanian formation) which was not encountered in Aje-1.

In spite of all this success, the dominant field development thinking about Aje was to produce the field as essentially a gas field. It took another seven years to drill a third well, Aje-3, because the companies that funded the drilling of Aje-1 and 2, either didn’t feel that the field as a whole was viable enough for them as a commercial oil producer, or left the partnership for other reasons. At this point in time, talk of gas based solutions dominated the conversation around how to produce the Aje Field. Aje Field is located in the extreme western part offshore Nigeria, adjacent to the Republic of Benin border in the Dahomey Basin. It is situated in water depths ranging from 100 to 1,500 metres, about 24 kilometres from the coast, and 64 kilometres from Lagos and 12 kilometres close to the West African gas pipeline operated by Chevron.

Syntroleum Corporation,19 one of YFP’s early partners and technical advisers noted that “Although the Aje Field contains potentially commercial volumes of crude oil, condensate and natural gas liquids, it has needed a viable development solution since its discovery in 1996 due to the large natural gas volumes present”.

Syntroleum was offering its gas-to-liquids (GTL) technology, which it framed around its GTL Barge concept. The company further stated that it believes that “... the Aje-3 well has the potential to confirm large commercially viable crude oil and condensate volumes as well as natural gas reserves sufficient for Syntroleum's GTL Barge”.

Based on Sovereign Oilfield Group's technical evaluation of Aje's commercial oil and gas potential and additional work carried out by Syntroleum involving the GTL Barge as a possible development solution for the Aje Field's gas reserves, Syntroleum and YFP executed a Heads of Agreement (HOA) under which terms Syntroleum was to bring in a qualified industry participant with offshore operating experience to join it in the drilling of the Aje-3 appraisal well.

In 1998, the Department of Petroleum Resources DPR, Nigeria’s petroleum industry regulatory agency, granted the application to convert the Oil Prospecting Licence (OPL) 309 to an Oil Mining Licence (OML) with a term of 20 years.

The third well, Aje-3, was drilled in 2005 with the expectations of resolving the extent of the several different reservoirs encountered in Aje-1 and 2. That well confirmed the structural interpretation and resolved fluid distribution, but penetrated rather poorer quality reservoir.

Fig. 3 shows the map of OML 113 while Table 1 shows some technical information on the Aje Field. The Dahomey Basin in which Aje Field is located, is on the same transform margin as the Tano Basin, in which Teweneboa and Jubille fields offshore Ghana lie.

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19 A United States of America company engaged in developing and commercializing proprietary gas to liquids and Coal to liquids processes known jointly as the Syntroleum Process. It is the parent company of Syntroleum Nigeria Limited.
Table 1. Aje Field Technical Information

<table>
<thead>
<tr>
<th>Location</th>
<th>Dahomey Basin Offshore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block</td>
<td>OML 113</td>
</tr>
<tr>
<td>Area</td>
<td>960 km²</td>
</tr>
<tr>
<td>Water Depth</td>
<td>100 – 1,500 meters</td>
</tr>
<tr>
<td>Reservoir</td>
<td>Abeokuta Formation</td>
</tr>
</tbody>
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Fig 3. P-block-map-OML 113\(^{20}\) showing Aje Field. The Red Line is the West African Gas Pipeline. Source: Offshore Technology.com

\(^{20}\)OML 113 license has full 3D seismic coverage from survey acquired in 1997 and 2014.
The Breakthrough and the Exit of both Chevron and Providence

Aje field’s breakthrough well was Aje-4, drilled in 2008 by the USA oil major Chevron Corporation, operating through its Nigerian subsidiary, Chevron Nigeria Deepwater as the Technical adviser, with an 18% working interest (which was 45% contributing interest). The well encountered five separate hydrocarbon zones, with a total gross pay of 290metres (690 feet). It also hit pay in a deeper exploration target. Aje-4 broached upper cretaceous oil and gas bearing reservoir in the primary target (a zone that had been encountered in Aje -1 and -2), with a gross hydrocarbon column of 102metres (335feet) and also encountered a deeper Albian (middle cretaceous) pay zone, which was mapped below the structure, capturing a further 52metres (170feet) gross hydrocarbon with downhole pressure and sampling indicating gas condensate, and a deeper 18metres (60feet) hydrocarbon column, which was also logged as hydrocarbon-bearing.

After this well, geoscientists working on the project concluded that:

“Aje is primarily a gas condensate field formed in a four-way dip closure trap. It contains gas and oil in the Turonian and Cenomanian reservoirs and an additional gas layer of the Albian formation. Gross contingent resources of the Aje field are estimated at 380Million Barrels of Oil Equivalent (BOE). Of this 28% is oil / condensate, 20% is LPG and 52% is gas”.

By 2009, Chevron, assigned the responsibility to prepare a development plan for the field, was planning towards “First Gas” for Aje Field by 2017. The plan was to pump the gas directly into the West Africa Gas Pipeline (WAGP), on which thoroughfare, the field lies. Officials at YFP the official operator of the OML were worried about the timeline. They felt that 2017 was too far for a field that was discovered 21 years earlier.

In late 2011, Chevron sold its 18% working interest to two Nigerian independents, Energy Equity Resources (EER) and First Hydrocarbon Nigeria ((FHN) at that time a subsidiary of Afren plc). Providence Resources another partner, also exited, selling its 2.667% to Jacka Resources Limited (Jacka).

The arrival of FHN and EER saw the process move quite rapidly. A decision was taken in 2013, to look at a two phase development, the first of which was to produce the Cenomanian oil reservoir (however small it may be), originally encountered in Aje-2 and confirmed with Aje-4. So, for the first time since discovery in 1996, Aje Field was seen as an oil producer. The true figures and data after that, are hard to come by. Perhaps, when YFP decides to talk, there will be full disclosure of the true volume of oil per day Aje Field will deliver, at peak, as well as the number of years’ oil production in the field is expected to last. The partners on the project as at the time commercial production of oil commenced are Yinka Folawiyo Petroleum (YFP), Vitol Exploration Nigeria, FHN, Panoro Energy, Energy Equity Resources and Jacka Resources.

The possibility that Aje Field may start as an oil producer, while the gas component of the field is developed later, hastened the Final Investment Decision, taken in 2014, after the DPR approved the plan. The field was developed as a subsea tie back to a floating, production, storage and offloading (FPSO) vessel.

Although only Aje 4 (re-entered) and Aje-5 (new drilling) were completed as of the time of inauguration in first week of May 2016, a total of six producers, including Aje-1, Aje-2 are planned for the field. This means that there are two more wells to be drilled and completed. Aje 4
and 5 are connected to subsea wellheads and associated flowlines and manifolds in 320ft water depth. The flowlines are, in turn, connected to the FPSO through risers.

YFP and its partners’ 25 years of sustained exploratory, appraisal and development activities in OML 113 has yielded Nigeria’s first commercial discovery and production of crude oil in the western part of the country and in Dahomey Basin. It is a breakthrough in efforts to encourage local indigenous companies and personnel to be actively involved in the upstream sector of the petroleum industry. However, not much has been achieved in terms of local capacity building and petroleum technology transfer or development as virtually all of the technical work was done and still being done by the foreign partners and their expatriate staff.

The Aje oil field is said to hold reserves of about 650 billion cubic feet (bcf) of gas, which if harnessed in two to three years could provide all the gas feedstock Lagos needs for the thermal power stations and other manufacturing concerns in the state and parts of Ogun State. It is expected that the first two wells in Aje Field will initially produce about 12,000 barrels of oil per day. If more wells yield further commercial quantity, YFP will not have to go too far for a market, as there will be a ready local market in Dangote Refinery also located in Lagos State.

In the meantime, the subsea installation activities started in Aje in January 2016 were completed in March 2016, ready for the hook up to the Front Puffin Floating Production Storage Offshore (FPSO), which arrived in Nigeria from Singapore on March 16, 2016. The Front Puffin has a production capacity of 40,000 barrels of oil per day and a storage capacity of 750,000 barrels.

As stated earlier, the Aje Field has been proved to contain hydrocarbon resources in sandstone reservoirs in three main levels – a Turonian gas condensate reservoir, a Cenomanian oil reservoir and an Albian gas condensate reservoir. As confirmed by John Hamilton, Panoro Chief Executive Officer, AGR TRACS International calculated the gross Cenomanian oil Proved Plus Probable Reserves estimate associated with the Aje-4 and Aje-5 wells, and the gross Contingent Resources estimate associated with the future drilling of Aje-6 and Aje-7 wells. Hamilton reports that AGR TRACS International calculated these as 23.4 MMbbl and 15.7 MMbbl respectively (on a gross basis), indicating a mid-case expected ultimate recovery of 39.1 MMbbl from the Cenomanian oil reservoir once all four wells have been drilled. AGR TRACS International also calculated the Turonian gas and condensate/oil best estimate gross contingent resource as 163 MMboe. However, field development plan makes provision for third Turonian gas condensate development phase conceptualised to involve not less than three wells expected to be capable of producing over 500 billion cubic feet of gas, 22 million barrels of condensate and 40 million barrels of liquefied petroleum gas (LPG) from the Cretaceous transform margin and the syn-rift plays in OML 113. The field has a striking similarity with the producing Jubilee Field, offshore Ghana close-by, especially with its multiple oil, gas and gas condensate reservoirs in the Turonian, Cenomanian and Albian sandstones. The Cenomanian crude from Aje Field is light, sweet, under-saturated oil of approximately 39.4 API gravity with a gas oil ratio of 375 – 480 scf/bbl.

21 John Hamilton, Chief Executive Officer in an official press release in Panoro’s London office on the 4th of May 2016
22 Ibid
23 Ibid
Best Practices and Lessons from Niger Delta

The announcement that production of oil in commercial quantity has started in the territory of Lagos was received with ecstasy. There was open expression of expectation in the top echelons of the state government that as an oil producing state, Lagos would now be qualified for greater share of the national cake and federal government monthly financial allocation to states. Emphasis seems to be on cash and benefits derivable from oil. The state government seems to be oblivious of the environmental catastrophe that oil production and pipeline ruptures and deliberate pipeline blow-ups have caused in the Niger Delta oil producing areas for several decades.

The Governor of Lagos State, Mr. Akinwunmi Ambode, is reported to have said when the chief executive of YFP paid him a visit to formally break news of the achievement in his office that

“By virtue of this achievement, the 13 per cent derivation that is due to oil producing states, Lagos will start to partake from it by your very good gesture. So, we officially declare Lagos State an oil producing state. We also notify the Federal Government by this action that we would be sharing out of the 13 per cent derivation. All we need to do is to apply and then we join”

The governor saw the feat as opening up a new page for revenue generation in the state. However, he certainly missed the golden opportunity to emphasize the need for YFP to ensure best oil field practices, excellent safety and health policies and practices as well as appreciable corporate social responsibility. The management of YFP on its part has not made any reference to the company’s responsibility to ensure best oil field practices and responsible health and safety policies and practices. YFP and the venture partners all seem to be wallowing in the euphoria of commercial production of oil, without a thought of how to give the needed assurance that they are committed to the protection and preservation of the environment as well as being conscious of their greater responsibility to the communities and the nation.

However, Table 2 shows Panoro Energy ASA’s Statement of Responsibility which is the minimum that should be expected of any petroleum upstream operator who strives to demonstrate best oil production practices. If YFP is guided by similar policies and is committed to applying guidelines already established by the Department of Petroleum Resources, the challenges similar to those in the Niger Delta will be avoided.

On the economic and revenue angle, Lagos State has a robust and industrialized economy. Successive state governments since the 1980s have battled with environmental filth, portable water and housing challenges. The government must not allow itself to be carried away by the fact of oil production in the state. Experience of the nation and especially the Niger Delta states is a pointer to the economic disaster that can befall a community, and indeed a nation that abandons its areas of diverse economic strength to settle for a mono and finite product whose monetary value is subject to global forces that are out of its control.

24 Vanguard Newspaper 16 May 2016
PANORO ENERGY ASA STATEMENT OF RESPONSIBILITY

**Operations:** We have a commitment to operate responsibly wherever we work in the world and to engage with our stakeholders to manage the social, environmental and ethical impact of our activities in different markets in which we operate.

**Anti-Corruption:** Our corporate conduct is based on our commitment to acting professionally, fairly and with integrity. Panoro Energy does not tolerate any form of bribery and corruption.

**Community and Local Impact:** We believe that working in partnership with communities over a sustained period of time is the most effective way to achieve real results and lasting change. Our approach is to engage with our neighbours, community leaders, non-governmental organisations and charities to understand the implications of our activities and changes in industry and wider society.

**Environment:** We are committed to understanding, managing and reducing the environmental impact of our activities and to implement internationally recognised environmental management systems to achieve this aim. As an oil and gas exploration and production company, we have an important role to play in environmental management particularly in relation to impact of our seismic, drilling and production activities on the environment.

**Health and Safety Policy:** We will make special provision for the health, safety and welfare at work of our employees and others who may be affected by our activities.

**Human Rights:** As an international Company, we have a responsibility to uphold and protect rights of the individuals in all aspects of our operations across the world; we also recognise the opportunities we have to contribute positively to global efforts to ensure that human rights are understood and observed.

**Political Involvement:** Laws and regulations governing the activities of public affairs practitioners or attempts to influence the policy environment vary around the world. Panoro Energy will uphold the spirit and letter of all relevant laws in relation to our political activities.

**Responsible Procurement and Supplier Management:** We spend money purchasing goods and services to support the delivery of our business activities. In the course of this activity, we are responsible for delivering value to our investors, while observing responsible purchasing practices, which align with our business principles.

**Security:** The security of Panoro Energy’s staff, contractors and other stakeholders and Panoro Energy’s assets, including its intellectual property and other intangible assets, is vital to the success of the organisation. To this end, Panoro Energy will strive to ensure that effective security measures are in place and that all employees and contractors contribute to security.

Table 2. Panoro Energy ASA Statement of Responsibility. Source: Panoro Energy ASA

**Conclusion**

Though the success recorded by YFP and the foreign partners shows that indigenous operators can indeed lead partners to prospect for, explore and produce petroleum, it is noted with regret that not much has been achieved in terms of local capacity building and petroleum technology transfer or development. Virtually all of the technical work was done and is still either directed or being done by the foreign partners and their expatriate staff after 25 years.

The process of awarding oil blocks in Nigeria in the last two decades saw the government issuing OPLs and OMLs to individuals who have no idea of what operates in the petroleum industry.
These influential individuals openly hawk these licenses to foreign investors who come in to exploit the nation’s hydrocarbon and deprive the nation of revenue that could have accrued to it if the blocks were operated by the national petroleum corporation or local indigenous producers like YFP. The Nigerian individuals who receive these licenses soon become billionaires with their wealth stacked away in foreign countries, paying ridiculous or no taxes at all to the Nigerian state. There should be strict compliance with the provisions of the law in the award of OPLs and criteria for conversion of the OPLs to OMLs as was done with YFP.

OML 113 has prospects for the discovery of large petroleum reserves. Our prediction and expectation is that if it happens, and YFP pays great attention to indigenous capacity building and petroleum technology acquisition and development, YFP will grow to become an international company with operations in other African countries in the next twenty-five years.