



# On the Road to Ghana's Jubilee Oil Discovery: Policy Actions and Initiatives

*John Agyekum Kufuor*

## 1 INTRODUCTION

By the beginning of 2001, which can be described as the turning Point in Ghana's oil and gas exploration history dating back to 1896, a solid foundation had been laid for purposeful management of the oil and gas exploration and production business. GNPC commenced business in 1985 under the PNDC Government with the mandate to promote, develop and manage the upstream petroleum sector. The legal framework to guide and regulate oil and gas exploration and production had been established with the enactment of the Petroleum (Exploration and Production) Law, 1984 (PNDCL 84) and the Petroleum Income Tax Law, 1987 (PNDCL 188).

A Model Petroleum Agreement (MPA) had also been prepared to guide negotiations and preparation of future Petroleum Exploration and Production Agreements among the Government of Ghana, GNPC and

---

J. A. Kufuor (✉)  
Kumasi, Ghana

the International Oil Companies (IOCs) applying for oil and gas blocks in Ghana. With the commencement of operations by GNPC in 1985, promotion of oil and gas exploration was further intensified and resulted in an upsurge in offshore exploration activities. Four new petroleum agreements were signed within two years of GNPC's operations (1985–1987). Similarly, GNPC acquired extensive amount of 2D and 3D seismic data to enable the Corporation gain more understanding and knowledge of the basins and aid its promotional activities.

By the mid-1990s, GNPC had changed its strategy and had expanded its operations into foreign countries such as Angola, Gabon, among others, with the objective of acquiring its own oil blocks for exploration and production of oil and gas. The reason cited was that these countries were already producers of oil and gas and therefore offered a better chance of finding oil in their basins. In addition, GNPC had also acquired marine equipment such as drilling rigs and production platforms which were deployed to provide services to international oil companies globally. These marine equipment included the Drillship D511 which was used for the Corporation's drilling operations in the offshore Tano basin and later leased to IOCs. Others such as the North Sea Pioneer were sent to Angola for oil production on the GNPC/MODEC acquired Block 4 and the production platform-Asterie, which was kept in cold stack in Gabon waiting to be refurbished.

GNPC's international operations did not yield the desired results but rather put a financial strain on the Corporation. By 2001, GNPC had a lot of debt in both foreign currency (dollars) and local (cedis) to settle. GNPC could not pay its suppliers and also maintain the marine assets located in foreign countries. Creditors turned to the Ministry of Energy for payment which greatly embarrassed the NPP Government.

On assumption of office as President of Ghana on 7 January 2001, I considered GNPC's role in the search for oil and gas as very crucial. I have always believed that if Ghana's neighbours, namely Côte d'Ivoire and Nigeria, are endowed with hydrocarbons and therefore producing oil and gas on a commercial scale, then Ghana must also be endowed with oil and gas in commercial quantities in its sedimentary basins. Its basins are similar to those of these two countries to a large extent. I, therefore, did not believe that the Almighty God would be that unkind to Ghana so as to leave the country out. This belief, I have always expressed in private and public discussions.

Given the situation at GNPC, I decided to restructure GNPC and put it back on course to focus on oil and gas exploration, development and production in Ghana. I appointed a new governing Board of Directors to oversee the affairs of GNPC and charged the Board with the responsibility to find oil and gas in commercial quantities for Ghana within the shortest possible time. The Minister for Energy was directed to provide the needed support to GNPC. I again directed the Minister for Energy and the new Board to restructure, downsize and refocus GNPC on its core business of oil and gas exploration, development and production in the Ghanaian sedimentary basins.

The governing board was composed of seasoned and accomplished private individuals with varied experiences in business. GNPC was subsequently downsized and refocused. The staff strength was reduced from 600 to 80 which comprised mainly the technical and support staff needed for oil and gas exploration operations only. All the other non-core activities were liquidated. Marine assets were disposed of to curtail the heavy monthly expenditure incurred in foreign currency on the maintenance of the marine equipment and the upkeep of GNPC personnel manning these equipment. Those which the Board could not find buyers for such as the North Sea Pioneer in Angola were towed to Takoradi Port and disposed as scrap. Landed properties at prime locations in Accra which were not needed were also sold and the proceeds used to repay some of the Corporation's local debts.

The new Board adopted a pragmatic and business approach to managing the affairs of GNPC. During the first four months in Office, the Board caused an in-depth study and evaluation to be conducted into GNPC's past operations, strategies, policies and the results thereof, by an in-house technical committee. In addition, GNPC and the Ministry of Energy jointly organized a workshop at the M-Plaza Hotel in Accra from 29 to 30 November 2001 to discuss the regulatory and fiscal bottlenecks that were making it difficult to attract oil and gas exploration capital into the country.

The workshop concluded that the geology of Ghana's sedimentary basins, though not as prolific as that of Nigeria, was still promising. The workshop, however, noted that the fiscal regime contained in the Model Petroleum Agreement (MPA) was too restrictive and did not make Ghana competitive for upstream investments. The final communique proposed a reduction in certain elements of the fiscal package to make Ghana relatively attractive as an oil and gas investment destination.

Based on the outcome of this workshop, the Board of GNPC in June 2002 commissioned the Economic and Legal Section of the Commonwealth Secretariat, UK, to review the regulatory framework, particularly the fiscal regime for Petroleum Exploration and Production in Ghana. The Report was subsequently presented to GNPC and the Ministry of Energy in January 2003. Lessons were learnt from the in-house studies, the M-Plaza Workshop and the Commonwealth Secretariat Report, which informed the Government and the Board of the need to adopt new strategies, policies and flexibility in the application of the fiscal regime based on the water depth and the expected size of the recoverable resources.

## 2 STRATEGIES AND POLICIES ADOPTED

The following strategy and policy changes were adopted.

### 2.1 *Targeting the Right International Oil Companies (IOCs)*

GNPC's analysis of the behaviour of the IOCs revealed that the majors and super majors were more interested in proven and prolific oil and gas-producing basins. Their reserve materiality thresholds are normally high, and they also have high overheads and therefore are not that much interested in basins which are yet to establish working petroleum systems. Consequently, the Board decided not to focus too much on such companies even though they have better financial and technical capability. The Board also decided not to focus on start-ups and small independent companies without any exploration and production record as they were more likely to default in their work programme and financial obligations. Most of them are speculators whose main objective is to acquire the blocks and flip them to other companies at a premium. Given this analysis, the Board decided to make the medium to large independent IOCs the target of GNPC's promotional efforts. This led to the award of blocks to companies such as Hess Corporation, Tullow Oil plc, Vitol Upstream, Kosmos Energy and Vanco Energy, which satisfied the criteria.

### 2.2 *Block Size*

In line with my directive to find oil in the shortest possible time which, therefore, required more drilling activities in the short term, the Board decided to manage the block sizes allocated the companies so as to have

many more IOCs undertaking exploration in the basins at the same time. Consequently, the sizes of blocks were reduced according to water depth and allocated according to the capabilities of the IOCs concerned.

### *2.3 Focus on Deepwater Exploration*

The GNPC Board also adopted the strategy of focusing on deepwater exploration. This strategy was based on the following: throughout the 1990s, there had been discoveries of giant oil and gas fields in deep waters off the West African Margin such as Girassol and Dalia Oilfields in deepwater Angola, Zafiro Oilfield in Equatorial Guinea, Bonga Oilfield in Nigeria, Baobab Oilfield in Côte d'Ivoire and Chinguetti Oilfield in Mauritania. These discoveries were made in deepwater geological environments similar to what pertains in the Ghanaian deepwater basins. Most importantly, work done by GNPC and other IOCs, such as Hunt Oil, Dana Petroleum and Devon, had demonstrated that the deepwater Tano/Cape Three Points and deepwater Keta Basins have tremendous potential for huge accumulation of oil and gas. The Board's decision was also reinforced by the fact that after almost a century of onshore and shallow water exploration, only a few discoveries had been made and the sizes of the discoveries were marginal and hence, the Board's decision to focus attention on the deepwater Tano/Cape Three Points and deepwater Keta basin. The Board also decided that the small independents could be awarded blocks in the shallow water.

### *2.4 Board Involvement in Joint Management Committee (JMC) Meetings with the IOCs*

The Board also took a critical decision to participate in JMC meetings with the IOCs to ensure that the IOCs' operational concerns were addressed promptly and also to keep them to their work schedules. This ensured that wells were drilled on schedule, thereby improving the chances of oil and gas discovery at any point in time.

### *2.5 Retooling of GNPC Staff and Improvement in Conditions of Service*

The Board took note of the lack of appropriate working tools commensurate with industry practice and authorized the acquisition of computer

workstations and the relevant software for the technical staff which improved their efficiency in the interpretation and analysis of seismic and well data tremendously. The Board realized that the success of the exploration programme depended, in part, on the motivation of the staff and consequently improved the conditions of service of the entire staff to make them happy and also to ensure that GNPC was able to retain its core staff.

### *2.6 Negotiation of Petroleum Agreements*

The Board made a case to the Minister for Energy to change the practice of constituting ad hoc committees to negotiate the terms of petroleum agreements (PAs), to a permanent Standing Committee for efficiency and consistency in the negotiation of the agreements. This enabled experience gained from one agreement to be applied to the next. This practice shortened the agreement negotiating period drastically.

### *2.7 Regular Monitoring of the Implementation of IOC Work Programmes*

The Board introduced monthly reporting on the operations of the IOCs by GNPC Management to the Board. By this way, the Board was able to track the progress of the IOCs in the discharge of the scheduled obligations under the petroleum agreement. This ensured that the IOCs performed their work obligations according to the time schedule leading to timely seismic acquisition, interpretation and drilling of mandatory wells as required.

The strategy and policy changes introduced at GNPC improved organizational and operational efficiency of the Corporation tremendously. The changes resulted in hundred per cent concentration of resources of the Corporation on exploration and production operation activities. Applications from IOCs for award of oil blocks were quickly processed and the necessary decision taken on them within the shortest possible time. Board meetings were held monthly and supplemented by emergency meetings to deliberate on operational and administrative matters. There was a total mobilization of resources for the promotion of exploration activities in fulfilment of the goals of the Corporation.

### 3 RESULTS OF POLICIES AND STRATEGIES ADOPTED

#### 3.1 *Multiple Petroleum and Exploration Agreements Awarded*

During this period of eight years, that is, from 2001 to 2008, a total of eleven (11) petroleum and exploration agreements over eleven oil blocks in both the shallow and deep water were executed with IOCs. These companies were Vanco Corporation of USA, Kosmos Energy/EO Group of USA, Tullow Oil plc/Sabre Oil of UK, Hess Corporation of USA, Vitol Upstream of UK, Gasop Petroleum of Nigeria, Oranto Petroleum of Nigeria, Devon and Enkana of USA and Canada, respectively, and Aker Energy of Norway. In all, a total of 42 applications for blocks were received from various IOCs and evaluated of which eleven were processed for execution of petroleum agreements.

GNPC's efforts were rewarded when in June 2007, Kosmos Energy, Anadarko, and the E.O. Group struck oil and gas in commercial quantities from the Mahogany-I Well in deep waters offshore West Cape Three Points Basin. This feat fulfilled my "prophesy" and belief that Ghana during my presidency would find oil and gas in large quantities. A bottled sample of the sweet light crude oil from the Mahogany-I Well was presented to me at the Castle, Osu, the then seat of government, by a GNPC/Kosmos/Anadarko/E.O. Group delegation to officially announce to the world, the discovery of oil and gas in commercial quantities in Ghana. Inspired by the feat of Kosmos, Tullow Oil and partners also drilled their first well in the Deepwater TanoBlock (DWT) and hit oil and gas from the Hyedua-1 Well in large quantities in September 2007. Samples of crude oil from the Hyedua-1 Well was also presented officially to me at the Castle, Osu, four days after the discovery, to announce to the whole world, a second commercial discovery of oil and gas in Ghana.

Two other companies, which were allocated oil blocks in 2006 during my presidency, namely Hess Corporation of USA and Vitol Upstream of UK and its partner ENI of Italy, also discovered oil and gas in commercial quantities in the deep water West Cape Three Points in 2009.

This feat could not have been achieved without the direction, personal interest and support that my government gave to GNPC. Having made the commercial discoveries, the next phase was the preparation towards the development and production of the fields. GNPC discovered that the Tullow Hyedua-1 discovery straddled the block boundary of the Kosmos Mahogany-1 discovery. The issue was discussed with the Energy Minister and myself for a solution. By industry practice, when two fields

straddle block boundaries, the most economical way to develop the fields is to unitize the field for joint development by the partners. I approved GNPC's recommendation and directed that the two fields be unitized and named "Jubilee Field" to commemorate Ghana's Jubilee Independence anniversary. All the parties, namely Kosmos, Anadarko, E.O. Group, Tullow Oil, Sabre Oil and GNPC, agreed to unitize the two fields.

A Unitization Committee chaired by the Chairman of the GNPC Board, Mr. Stephen Sekyere-Abankwa, was set up to negotiate the terms and conditions of the Unitization Agreement which ought not be in conflict with the two petroleum agreements covering the oil blocks in which the discoveries had been made. A Unitization Agreement was finally executed by the parties. The next stage after the Unitization Agreement had been executed was the preparation of the Plan of Development (POD) for the unitized field. The field contained crude oil and associated gas which had to be commercialized.

In view of the importance of oil and gas to Ghana, I took two critical decisions. My government wanted Ghana to start reaping benefits from the oil and gas resources and also have the country take advantage of the high oil prices prevailing at the time. I consequently directed that the development of the field should be fast tracked—not to take more than three years. Consequently, first oil was to be pumped out by December 2010. The three-year development period was a departure from the industry norm which is between five and six years. Nevertheless, GNPC pressed hard and succeeded in negotiating for the three years. It must be noted that first oil was produced on 15 December 2010, on schedule, and within budget.

### 3.2 *Gas Commercialization*

The second major decision was in respect of the gas commercialization. The preference of the Jubilee Partners was to process the gas offshore on the FPSO. My government again directed GNPC to negotiate for the gas to be processed onshore to enable Ghana obtain maximum benefit by way of employment and the setting up of allied industries to process by-products. My government further directed that all gas infrastructure be owned and controlled by GNPC even though any interested Jubilee Field Partner could buy into the equity of the gas company. By this direction, GNPC took over the development of the gas processing plant and the associated pipelines.



There was the need to complete the gas plant by the time of first oil to prevent gas flaring. GNPC engaged a Ghanaian gas expert, Dr. Ben Asante in August 2008, to be the technical adviser for the gas project. GNPC signed a Memorandum of Understanding (MOU) with Samsung C&T Corporation of Korea to conduct a feasibility study into the gas utilization project. Under the MOU, Samsung C&T Corporation was to raise funds to finance the construction of the gas plant under EPC arrangement if the project was found to be feasible.

Samsung C&T Corporation submitted a draft report for discussion and was asked by GNPC to improve upon certain sections of the report. The final report could not be presented before the National Democratic Congress (NDC) took over government on 7 January 2009 and the MOU eventually lapsed after a while. The NDC Government thereafter started everything afresh with new companies. At the same time as GNPC was working on the gas plant, the preparation of the POD for the Jubilee Field was ongoing. The field development was estimated at a total cost of USD4.5 billion to be financed with debt from international banks.

The Jubilee Partners were to cover GNPC's share of the development cost under their borrowing arrangements at the same interest rate the banks would offer the Partners. This was a good deal for Ghana. The draft POD was ready by the end of December 2008 but could not be approved by GNPC and the government as the NDC had won the December 2008 general election and there was going to be a change in government. The draft POD projected maximum daily production of 120,000 barrels of oil and 120 million cubic feet of gas a day (mmscfd) for the 1st phase development. The estimated recoverable reserves were 278 million barrels of crude oil for the 1st phase development. While the POD for the field development and the feasibility studies for the gas plant were under preparation, I was thinking about ways and means that my government and subsequent ones could manage the expectation of Ghanaians so that the oil find would be a blessing and not a curse as happened in other countries; and secondly, how to manage the nascent oil and gas industry going forward so that Ghana could obtain maximum benefit from the oil and gas exploration and production.

To address the two issues, two major policies were initiated by my government.

### 3.3 *Ghana National Forum on Oil and Gas Development*

My government organized a Ghana National Forum (GNF) on oil and gas development in February 2008 at the Ghana Institute of Management and Public Administration (GIMPA). The main theme of the international forum was how to make the oil and gas discovery a blessing for Ghanaians and not a curse. The Forum was attended by seasoned international and local experts in oil and gas operations, and management and international bilateral and multilateral agencies such as the World Bank, Economic and Legal Section of the Commonwealth Secretariat, Norwegian Ministry of Environment, African Development Bank, Canada-Nova Scotia Offshore Petroleum Board, Ministry of Finance of Norway, Association of Caribbean Energy Specialists Ltd. (ACES) ACES), a Trinidad and Tobago-based consulting firm that provides expertise in different facets of the energy industry, the International Monetary Fund (IMF) and the European Union. After a two-day deliberation, participants supported the theme for the Forum which was the desire to turn the petroleum resources into a blessing rather than a curse.

To achieve this, the Forum proposed a number of policies for the government to adopt.

- i. With the discovery, it was considered appropriate for government to adopt a new petroleum policy and based on this, the government was expected to revise the Petroleum (Exploration and Production) Law (PNDCL 84). The government was also required to enact petroleum Regulations to augment the new Petroleum Act. The Model Petroleum Agreement was also to be revised.
- ii. It was also proposed that a new body be created, under or within the Ministry of Energy to take care of regulatory functions, and the GNPC should become a purely commercial national oil company to take care of government's commercial participation in petroleum operations. In addition, competent governmental institutions could be involved in monitoring petroleum operations within their area of expertise. It was also proposed that the critical elements of Health, Safety and Environment (HSE) be incorporated into the Regulations.

- iii. Based on the petroleum resource base, Ghana was to consider and adopt a long-term national participation in petroleum operation on sustainable basis. In this regard, the private sector was to be encouraged to participate in delivering goods and services to petroleum operations. Adequate measures for developing the capacity and competence to foster national participation in the petroleum sector were to be developed.
- iv. Under fiscal administration, it was noted that, the auditing of capital expenditures and operation costs that are claimed by oil companies is a major challenge to the tax authorities. Sums involved are huge, thereby, justifying serious due diligence. The Forum urged that there should be cooperation between tax authorities and petroleum administration.
- v. Revenue utilization management: The Forum called for a law that would ensure that all revenues from petroleum operations are accounted for in a transparent manner, in the national budget. The utilization of such revenues would also cater for the interest of the future generations. The Forum also proposed that revenue utilization should contain a mechanism for mitigating the negative impact of volatility in oil and gas prices.
- vi. Data Management: The Forum emphasized the value of data not only for government's function of governance but also as a necessity for all commercially interested parties. It also stressed the importance of data as a means of communication between the Government of Ghana and licensees. The Forum therefore called for a digital data bank to be organized to serve both government's needs and that of commercial parties.
- vii. The Forum also advocated for institutional capacity development and human resource development as these are essential for good governance. Petroleum operations also provide opportunities for developing and upgrading competencies across the value chain and in non-oil sectors of the economy. As such, policy guidelines are required to make these capacities relevant and effective.
- viii. On technological management, it was agreed that petroleum operations offer an opportunity to widen the technological base of the country through joint cooperation schemes, therefore, and thus, the strategy for achieving the desired technology development should be reflected in the legislation and contracts.

My government set up various committees under the Chairmanship of Mrs. Chinery-Hesse and with technical support from the Norwegian Ministry of Petroleum and Norwegian Petroleum Directorate, and funding from Oil for Development Agency of Norway. The Committee working on the Petroleum Revenue Management Act began work immediately because the Jubilee Field was being developed and the Act was needed to govern the expected revenues from the Jubilee Field.

The Committee also began work on other legislation such as the Petroleum Exploration & Production Act, the General Petroleum Regulations (LI 2359) and the Petroleum Commission Act (Act 821). Negotiations also began with the World Bank for the provision of funds to implement some of the recommendations from the Forum.

These efforts yielded results under the Professor Atta Mills Government which led to the establishment of the Petroleum Commission in 2011, establishment of the Data Centre, establishment of the laboratories for the Petroleum Department of KNUST and Welding Institute in Maritime University, just to name a few.

It must be noted that the new petroleum management laws and institutions that have been passed or established since 2008 by subsequent governments were based on the recommendations of the Forum organized by my government in February 2008 as already mentioned.

#### 4 CONCLUSIONS

This chapter documented and discussed the policy actions and initiatives, and the results of such actions undertaken by my government (2001–2008) leading up to Ghana's first-ever commercial oil find in 2007. Some of these policy actions and initiatives include targeting the right international oil companies (IOCs), reducing block sizes according to water depth and allocated according to the capabilities of the IOCs concerned, shifting the focus to deepwater exploration, Board Involvement in Joint Management Committee (JMC) Meetings with the IOCs, retooling of GNPC staff and improvement in conditions of service, as well as the regular monitoring of the implementation of the work programmes of the IOCs. The results of these policies and strategies were the signing and award of multiple exploration contracts. For example, from 2001 to 2008, a total of eleven (11) petroleum and exploration agreements covering eleven oil blocks in both the shallow and deep water were executed with IOCs. Also, GNPC's efforts were rewarded when in June 2007, Kosmos

Energy, Anadarko, and the E.O. Group struck oil and gas in commercial quantities from the Mahogany-I Well in deep waters offshore West Cape Three Points Basin. Also, the government convened the first-ever Ghana National Forum on oil and gas development to discuss how to make the oil and gas discovery a blessing for Ghanaians and not a curse. Some of the policies from the Forum which the government (and subsequent ones) adopted included: formulating a new petroleum policy and based on that, revising PNDC Law 84; decoupling of commercial and regulatory functions of the state in upstream operations; and a new fiscal administration framework for petroleum revenue management, among others.