GLOBAL BUSINESS REPORTS

INDUSTRY EXPLORATIONS

Ghana Oil & Gas 2012

Economy • Exploration • Oil • Natural Gas • Challenges • Services

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Dear readers,

Akwaaba.

A simple word, meaning "welcome" in Twi, the most widely spoken language in Ghana; a word that epitomizes the culture and people of this West African nation. In Ghana, it is more than simply a word, however – one could say it is a lifestyle. Throughout our three months in the country, we were greeted with warmth, hospitality and genuine concern for our welfare, for which we are forever grateful.

We begin with this because it may help to offer insight into what has made Ghana an economic success story over recent years, with a skyrocketing rate of growth that outpaces most countries in the developed world. Ghanaians love their country fervently; the most common question we received was, "How do you like Ghana?" said with sincerity and passion.

To the uninitiated, Ghana is a country that challenges the paradigm of the West African region. The buzzing capital of Accra is home to a Western-style shopping mall, modern cinemas, and numerous cuisine options of varying prices. Multiple cultures and ethnicities gather in the city and beyond. Away from the country's white-sand beaches, the interior boasts green hills and botanical gardens that would not look out of place in Asia or South America. The northernmost areas, on the edges of the Sahara, contain wildlife that attracts international tourists hoping to catch a glimpse of the elusive elephants of Mole National Park.

Emerging from a colonial past, Ghana has grown into a strong nation in her own right, and touted as an example of good governance for its neighbors. Elections are largely free and fair, with 73% of the eligible population casting their vote in the 2008 presidential election. Even after the sad death of the current president, John Evans Atta Mills, analysts are predicting a smooth transition come this year's presidential vote.

Simply put, Ghanaians truly value their reputation as one of the African continent's most stable, investor-friendly countries, and take great pride in maintaining it as such.

Now more than ever, this philosophy must be put into practice in order to ensure the sustainable development of the country's oil reserves. Too often oil leads to sharp societal contrasts: of wealth and poverty, regional divisions, and war and peace.

Key governmental initiatives, from local content laws to anti-corruption bills, demonstrate the seriousness of policymakers to combat these potential minefields. An overarching theme amongst our interviewees was how these oil revenues will translate into the betterment of each and every Ghanaian, regardless of social status. In a country where 28.5% of the population lives at or below the poverty line, this is vitally important to put into practice.

The years ahead hold great promise for Ghana, both economically and socially. Oil production is scheduled to begin again in earnest, after a period of stagnation. Elections will bring a new president, and perhaps a new government.

This book is a microcosm of the burgeoning oil industry in Ghana. Our interviewees vary from government figures to multinational companies to domestic service companies; all of them have unique insights into what shapes (and will continue to shape) the Ghanaian oil industry. We would not have been so successful without the help of numerous people who shared our commitment to portray an accurate assessment of the market in Ghana, and we thank you here.

With fond regards,

Angela Harmantas,
Pavlina Pavlova
Global Business Reports

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This research has been conducted by Angela Harmantas, Pavlina Pavlova, and Tom Hurst | Edited by Barnaby Fletcher | A Global Business Reports Publication | For more information, contact info@gbreports.com or follow us on Twitter @GBReports.com

Running Towards Prosperity

An Introduction to Ghana's Economy and Hydrocarbon Industry

"Ghana is very important to Engen as a company. In the past we used to call Ghana the gateway to West Africa. It is still the gateway to West Africa, and even more so now, with the discovery of oil. There are a lot more economic activities taking place now and it is a country you can use to launch into the sub-region. Therefore, it remains very important to the overall strategy of Engen."

- Henry O. Akwaboah,
Managing Director, Engen Ghana Limited

Ghanaian Hydrocarbons

A brief overview of the oil and gas industry

Ghana's prosperity has always been tied to the extractive industries. The Wagadogu Empire of the 7th to 13th century, the capital of which lay around 500 miles to the north of the country's modern capital, Accra, and from whose rulers the name "Ghana" (meaning "warrior king") is derived, controlled the gold trade of western Africa. Muslim writers, brought to the empire through trade, spoke of the wealth contained in the southern gold mines; it was reputed that even the court dogs wore golden collars. The Ashanti Empire

Population: 25,241,998 (July 2012 estimate)
Capital: Accra
Head of Government: President John Dramani Mahama
Currency: Cedi (GHS)
GDP: $38.6 billion (2011 estimate)
Growth Rate: 14.4% (2011 estimate)
GDP per Capita: $3,100 (2011 estimate)
Economic sector breakdown: agriculture: 28.3%, industry: 21%, services: 50.7% (2011 estimate)
Exports: $13.13 billion (2011): gold, cocoa, timber, tuna, bauxite, aluminum, manganese ore, diamonds, horticultural products
Imports: $14.03 billion (2011): capital equipment, petroleum, foodstuffs
Major Trade Partners: China, Netherlands, UK, Nigeria, US

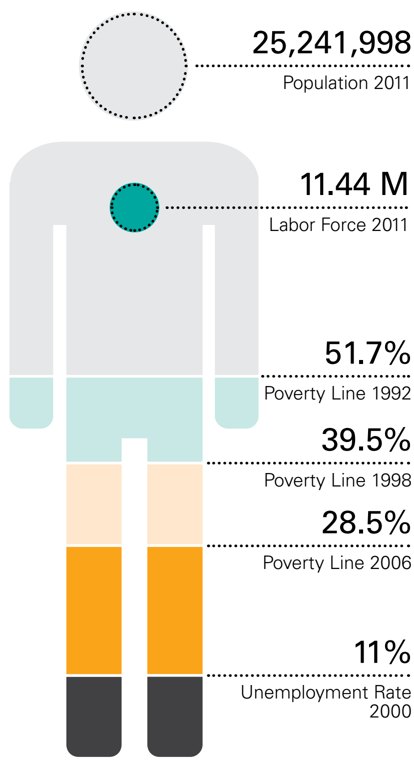
Yet resources have not always brought benefits to the African continent. European's, initially Portuguese, first arrived on the shores of modern Ghana in the 15th century searching for the source of African gold. The Dutch, the British, the Spanish, and other Europeans all followed and soon turned the country into a hub from which they could control the extraction and exportation of gold and other minerals. This stretch of coastline consequently became known as the "Gold Coast": a littoral that gained infamy as one of the primary points of departure for slaving vessels at the height of the slave trade.

Ghana won independence from Britain in March 1957: the first sub-Saharan African nation to achieve freedom from European colonization. While the immediate post-independence history was one of political strife and economic uncertainty, recent decades have seen Ghana striving to reclaim its ancient prosperity. The country has experienced uninterrupted GDP growth since 1985; 2012 will see this growth enter its 28th consecutive year. In 2011 the country posted an impressive growth rate of 14.4%, making it the second fastest growing economy in the world behind Qatar. Indeed, in many ways Ghana is the poster child of a continent that in recent years has found its economic confidence; until 2015 it is estimated to grow at an average of over 7% per annum, the eight-highest growth rate in the world.

Strong macroeconomic policies, a stable

Domestic Market: Population and Poverty

Source: CIA World Factbook



government and the exploitation of the country's plentiful natural resources have been the foundations for a growth that is apparent wherever you look: vehicle purchase grew by a record 88% in 2011; energy consumption is rising by an annual average of 10%; 2011 saw production of cocoa, of which Ghana is the world's second-largest producer, rise to a record 1 million tons; and a rebasing of national accounts in 2011 has propelled Ghana's global position to among the lower middle income group of countries.

In this context, the addition of an oil and gas industry promises to bring grand rewards. In 2007, commercial quantities of oil were discovered off Ghana's coast in two sites that would come to be known as the Jubilee fields. The effect that this will have on Ghana's rise is promising; the "black gold" could form a basis of wealth just like ordinary-coloured gold did in the past. The African Economic Outlook predicts the oil industry to add 0.7% to GDP growth in 2012 (7.6% non-oil growth, and 8.3% with oil) and 1.4% to GDP growth in 2013 (6.3% non-oil growth, and 7.7% with oil).

Yet the excitement should be tempered by caution. This is the region, after all, for which the phrase "the curse of the black gold" was created. Admittedly, Ghana seems less likely than its regional peers to succumb to the problems stereotypically associated with resource-based African economies: resource nationalism, corruption, and "Dutch Disease". In terms of GDP-per-capita it outperforms its neighbours and even regional giant Nigeria. The proportion of its population living below the national poverty line has fallen from 51.7% in 1992 to 39.5% in 1998 and 28.5% in 2006, and has undoubtedly fallen further since then. In Transparency International's Corruption Perceptions Index 2011 it ranked 69th, tied with the European nations of Italy and Slovakia, and above Latin American powerhouse Brazil.

Nonetheless, however, there are risks. Ghana's decision late last year to re-examine the fiscal arrangements of the mining sector could well be a sensible decision in line with the International Monetary Fund's (IMF) advice to raise taxes. Yet some are seeing it as a populist measure driven by the upcoming elections in December this year. This election may make a continuing reduction of the fiscal deficit politically untenable, especially in a country where GDP-per-capita is still only $3,100, threatening the sensible macroeconomic policies the government has previously adhered to.

Ghana's track record is good. Sensible policies have led the country ever closer to prosperity (ranked seventh in Africa in the Ibrahim Index of African Governance 2010). A free press (one of only five Sub-Saharan African nations ranked as "free" by Freedom House's Freedom of the Press 2012 report) plays an important role in holding politicians accountable. The December 2012 election is expected to maintain Ghana's tradition of peaceful democracy. All of this points to the country's ability to successfully integrate the oil and gas industry into their growth.

Today West Africa's warrior king faces a new battle; to ensure that the discovery of petroleum sustains the promising growth of its economy rather than condemning it to the mistakes of past oil exploitation in the region. •

14.4%

GDP Growth Rate
2011

Source: World Bank

8.8%

Inflation Rate
Average Consumer Prices 2011

Source: International Monetary Foundation, CIA World Factbook

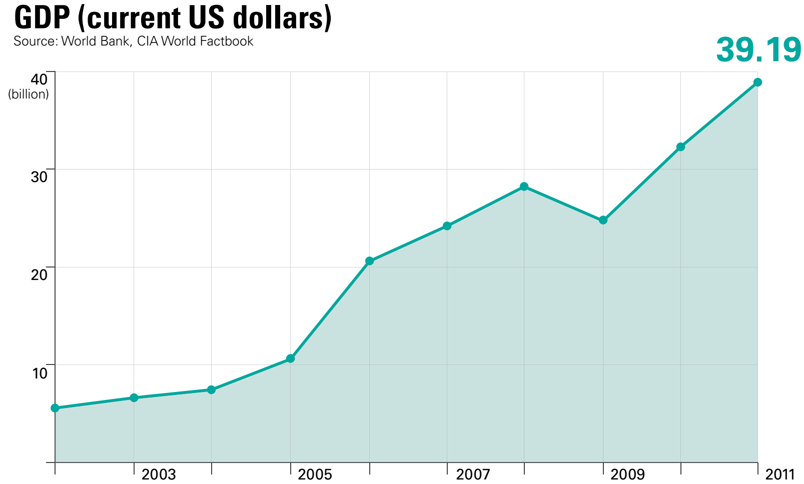
39.4

Gini Index
2005-06

Source: CIA World Factbook

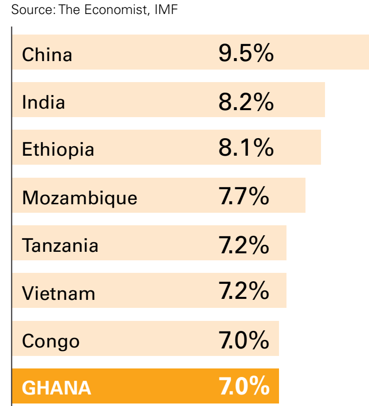
GDP (current US dollars)

Source: World Bank, CIA World Factbook



World's Fastest-Growing Economies (20011-2015)

Source: The Economist, IMF



Annual average GDP growth

Interview with Dr. Joe Adjei

MINISTRY OF ENERGY

What measures have been taken to ensure that Ghana will become a major exporter of oil and power by 2012 and 2015? What action still needs to be taken to achieve this target?

Energy is critical for the development of the Ghanaian economy, although a recent study that was carried out by the government highlighted that access to credit and energy are two key constraints to future economic growth. Ghana experienced a major power crisis in 2006-2007, which ultimately reduced Ghana's GDP by 1%. It is vital for Ghana to have an internally robust system. The Ministry of Energy will introduce a business-focused policy for the export of electricity to neighboring African countries. The Ministry of Energy has created structured IPP and PPP models to encourage the private sector to invest in Ghana. The government has created an attractive investment environment for independent power producers, and provides assistance to companies by taking an equity stake, which enables the private sector to remain the operator.

There have been more than 40 discoveries in Ghana since the discovery of the Jubilee Fields. The Ministry of Energy is working with IOCs to develop discoveries that are proven to be of commercial value. Tullow is working with the Ministry of Energy on the TED project, which is three different discoveries that have been combined together to produce 120,000 boe/day. The Ministry of Energy will have 180 days to approve Tullow's Plan of Development. In addition, Kosmos has made four different discoveries, which is estimated to produce an additional 120,000 boe/day. These discoveries will ensure that future oil production in Ghana will be sustained. In addition, Eni and Vitol have made a discovery of 1.6 trillion cubic feet of recoverable gas reserves, which will be fast tracked to enhance the export of power.

What initiatives are the government creating in order support investment throughout the value chain from upstream, downstream and generation?

The government has two different models for investment into power generation, supporting independent power producers by providing easy access to land and basic infrastructure. Companies who choose to work with the government through the PPP Model with the Ministry of Finance can agree on what percentage of equity the government will take and receive help if debt components are necessary.

The FDI for the whole of Africa decreased by 12% in 2011, although Ghana's FDI doubled from $650 million in 2010 to $1.2 billion in 2011. The counter-risk in Ghana has decreased significantly because of political stability, which has increased the amount of investment into the country. Ghana will be able to raise the necessary investment that the country requires if it continues to maintain an attractive investment climate with clear regulations for investors.

The government has been encouraging transmission companies to take loans within Ghana. The cost of transmission should not be a significant component in the tariff; investments have been created to make the pass through tariff as low as possible, which ultimately makes the tariff affordable for the end user. The Ministry of Energy will be able to recoup the investment that we have made in the future, although there is a lot of additional investment needed. The Ministry of Energy is also working with private financers who are willing to invest into facilities.

The biggest challenge that the Ministry of Energy will face is within the distribution sector because of the lack of technology in the equipment. The distribution system in Ghana needs to be re-designed and old transformers need upgrading to enable them to meet current demand. As the service and manufacturing sectors in Ghana continue to grow and use energy productively, investors will see that projects in Ghana can provide a return on investment. If Ghana plans and executes the Chinese gas project successfully, it will receive $15 billion of revenue over the next five years, which will ensure that the country improves in terms of education and health, which will benefit local people.

How can the Ministry of Energy work with other key stakeholders to empower local Ghanaians to participate in Ghana's oil and power development?

Ghana has been successful within the power sector. There are three different local companies that manufacture cables and conductors and the government has taken an $80 million local facility to produce all of the required conductors for 2012. International contractors use their own experienced supervisors to ensure that projects meet specific requirements, although local construction contractors are used to complete projects.

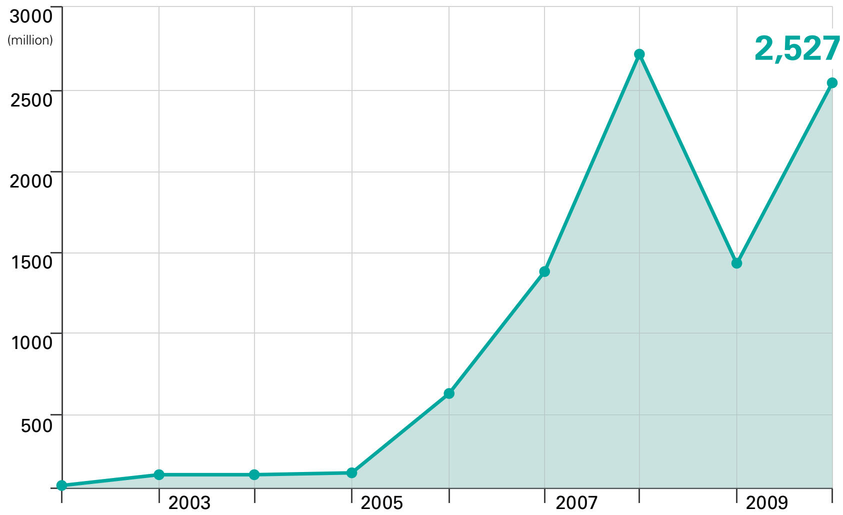
Ghana was not prepared in advance for the discovery of oil, so the country is still trying to develop its resources to meet the demand. Legal framework is being established and the Ministry is working with the private sector to train local Ghanaians, although it will be difficult for Ghana to maximize the local content benefits of the Jubilee Fields. Twenty-four students were accepted into the Tullow scholarship program in 2011, which increased to 50 students in 2012. The students were given the opportunity to complete their Masters Degree in different areas and these students will return to Ghana to work in the industry. The Ministry of Energy has finished the Local Content Policy and the Implementation Structure and Guidelines and we are working with the Norwegian government to develop legal framework for accidental work with local people.

Do you have a final message for our readers about Ghana's future development in the energy and petroleum sectors?

The Government of Ghana is committed to working with investors to establish agreements that benefit both parties. The Ministry of Energy can assure all investors that Ghana will uphold its integrity and it is our mission to banish the conception that Africa is a corrupt continent. Ghana welcomes all investors into our country, providing that they respect our laws and our people. It is vital to create employment for the growth of Ghana's economy and it is important for investors coming into Ghana to use the same environmental standards and regulations as they would in their own countries. Ghana is prepared to set the pace for the whole of Africa. •

Foreign Direct Investment, Balance of Payments (current US dollars)

Source: World Bank



GDP (purchasing power parity) 2011

75.9

billion dollars

Country comparison to the world

81

Source: CIA World Factbook

Budget Revenues 2011

8.76

billion dollars

Source: CIA World Factbook

Budget Expenditures 2011

10.38

billion dollars

Source: CIA World Factbook

GDP (per capita) 2011

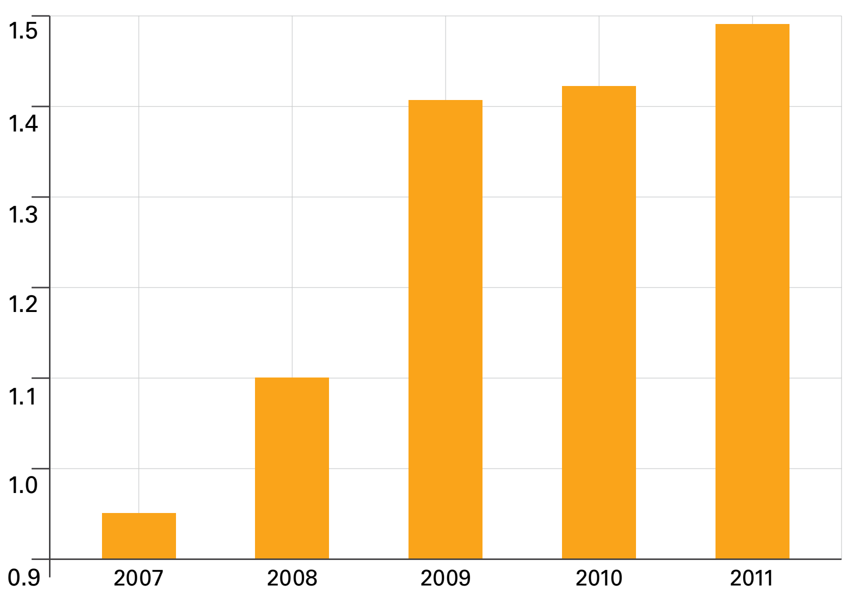
3,100

dollars

Source: CIA World Factbook

Exchange rates cedis (GHC) per USD dollar

Source: CIA World Factbook



Budget Deficit 2011

-4.3%

of GDP

Source: CIA World Factbook

Investment (gross fixed) 2011

19.9%

of GDP

Source: CIA World Factbook

Courtesy of Technip

Undeniable Potential: **Ghana's Upstream Oil Industry**

"We prefer not to comment on the negativity that can surround analysis of the growth of the petroleum sector in other countries, but here in Ghana the company and the country are tied together in this pioneering effort to demonstrate to the world that African countries can get it right and that oil and gas can be the catalyst for development, growth and progress."

- Gayheart Mensah,
Communications Manager, Tullow Oil

The Jubilee Oilfields

An introduction to Ghana's upstream oil production

While oil exploration has been carried out in Ghana since 1896, success was often hard to come by. Between 1898 and the late 1990s, an estimated 100 exploration wells resulted in just one significant discovery; that of the Saltpond oil field, which remains in production to this day.

It was arguably not until the passing of the Ghana National Petroleum Corporation Law in 1983, and the subsequent establishment of the Ghana National Petroleum Corporation (GNPC) in 1985, that serious emphasis was placed on oil exploration in a country that had previously been seen as risky and unfriendly to oil investment.

In 2004 the GNPC signed a Petroleum Agreement to explore the West Cape Three Points block with a consortium of Kosmos Energy acting as operator, with Tullow, Anadarko, Sabre Oil and the E.O. Group; in 2006, another agreement was signed with Tullow as operator of Deepwater Tano. On June 7, 2007, Tullow announced a discovery at the Mahogany-1 well, just southwest of Takoradi in Ghana's Western Region. The well, drilled to an overall depth of 3,826m, penetrated gross reservoir sands of 271m and net hydrocarbon pay of 96m, with a gravity of 37 degrees API. A further discovery was made via the Hyedua-1 well, yielding similar results.

Following a series of similar discoveries within the Deepwater Tano and West Cape Three Points blocks, the consortiums embarked on an ambitious plan to bring the wells into production as quickly as possible; by December 2010 first oil was achieved at Jubilee, becoming the fastest comprehensive full-scale development.

The initial project, known as Phase 1, used the FPSO Kwame Nkrumah, anchored off the shores of Takoradi. The vessel, named after Ghana's first President, is a 60m- by 330m-long tanker with the capacity to process 120,000 barrels per day before exporting to refineries using shuttle tankers. Oil traders Vitol and Trafigura are regular buyers of Ghanaian oil, which is then marketed to refiners internationally.

Initial production ranged from 66,000 bopd to 88,000 bopd, before levelling off at 70,000 bopd by the end of 2011. These targets did fall short of expected targets of 120,000, but according to Gayheart Mensah, communications manager at Tullow Oil, the primary reason relates to a technical difficulty with the oil well design completion. "The consequence of this was a situation in which we were experiencing less than expected flow from several of the wells. Redesigns have been successfully carried out and we are currently monitoring the affected wells to ensure the positive impact of these changes," he says.

With Phase 1 now complete, and all 17 wells brought onstream, the attention is now focused on what sort of exploration potential still exists in the region. Based on current proven reserves, production from the Jubilee field is expected to peak from 2013-2015 at 120,000 barrels of oil per day, and last for 20 years.

The next phase of development, Phase 1A, consists of eight new wells; five producers, three additional water injectors and the expansion of the subsea network. The first of the Phase 1A wells is expected to come on stream by mid-2012, with production expected to average between 70,000 and 90,000 bopd by the end of the year.

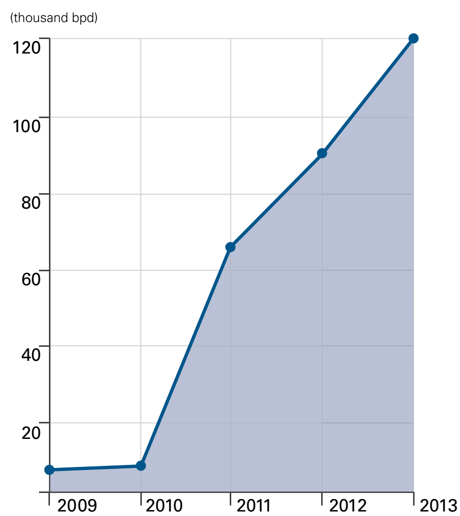
Additionally, in August 2011 at the West Cape Three Points block, light oil was discovered at the Akasa-1 well. The reservoirs encountered are similar in age to those discovered at the Jubilee field and the oil samples recovered indicate 38 degrees API gravity. The West Cape Three Points operator, Kosmos, remains in discussions with the Government of Ghana in relation to further appraisal and development plans for the Mahogany, Teak, Banda and Akasa discoveries. •

Ghana's Oil Reserves (billion barrels)

CIA World Factobook (2011)	0.66
Nana Boakye Adjaye, Chief Executive, GNPC (2011)	1.25
Revenue Watch	0.8-1.8
Extractive Industries Transparency Initiative (2012)	1-1.5
Tullow Oil (2010)	0.78-4
Moses Asaga, Chairman, Parlimentary Sub-Comitee on Energy	5

Ghana's Oil Production

Source: CIA World Factbook, GBR, Various



African Oil Producers

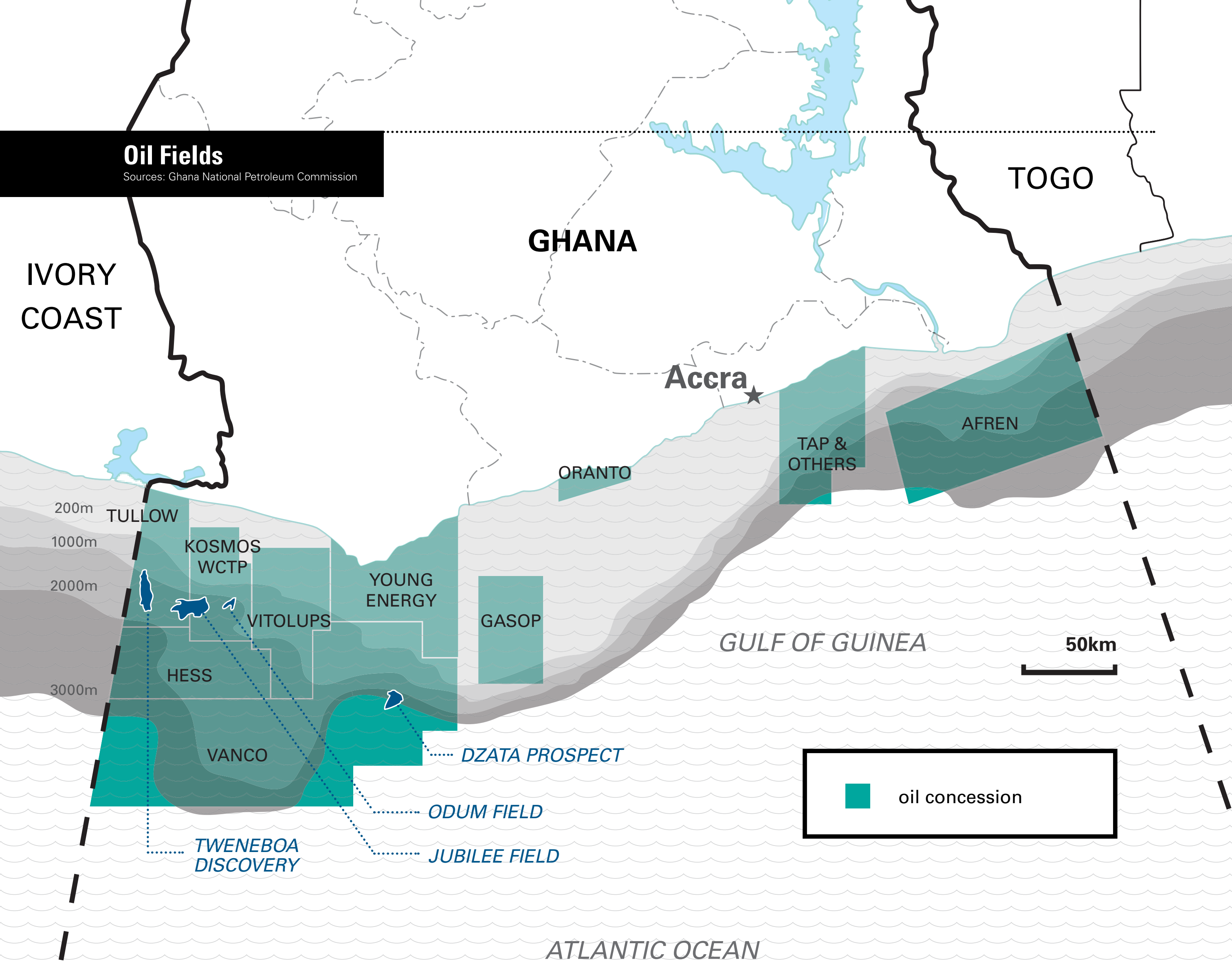
Source: Various

(thousand bpd)

1. Nigeria	2,211
2. Algeria	2,125
3. Angola	1,948
4. Libya	1,790
5. Egypt	680
14. GHANA	**66**

Oil Fields

Sources: Ghana National Petroleum Commission



Discovery Timeline

Source: Ghana National Petroleum Commission

Field: Saltpond
Basin: Saltpond
Year: 1970
Fluid type: Oil & Gas

Field: Cape Three Points
Basin: Cape Three Points
Year: 1973
Fluid type: Oil

Field: South Tano
Basin: Tano
Year: 1978
Fluid type: Oil & Gas

Field: 3-AX block
Basin: Tano
Year: 1979
Fluid type: Gas

Field: North Tano
Basin: Tano
Year: 1980
Fluid type: Gas

Field: West Tano - 1
Basin: Tano
Year: 2000
Fluid type: Oil

Field: Jubilee
Basin: Tano
Year: 2007
Fluid type: Oil & Gas

Interview with **Gayheart Mensah**

COMMUNICATIONS MANAGER, TULLOW OIL

In December 2010, Tullow Oil began to produce oil from its Jubilee Fields site. At only 40 months after the first discovery, this made it the fastest ever full-scale deep-water development. What was the background to this achievement?

The Jubilee Fields discovery was made in 2007 by a partnership of six oil companies: Tullow, Kosmos, GNPC, Sabre Oil, Anadarko and the EO group. After the discovery there was a widespread agreement between these oil and gas companies and their development partners to begin production as soon as possible. The Government of Ghana was also interested in a swift transition from discovery to production, seeing it as a catalyst for development. The very nature of this agreement between the government and the oil and gas companies provided a platform for rapid development.

Another important factor is that infrastructure, facilities and equipment were ordered ahead of schedule. Normally when you discover an oil field you would want to understand the characteristics and the nature of the find. This requires the collection of large amounts of data, which is a time-consuming process. In this instance the partners decided to place orders while they were still collecting data on the fields. As a result the production operation had the resources to be flexible and to react as new information on the characteristics of the site were received.

Finally, Tullow's involvement as the operator of the site influenced the speed of development. Our internal structure and approach encourages the dynamic progression of projects. We were, and still are today, a very small company, with a flat hierarchy. This allows decisions to be made quickly and for us to operate in a reactive, fleet-footed manner.

Are there lessons that can be learnt from the experiences of other countries in Africa to ensure the sustainability of oil and gas production in Ghana and to ensure benefits to the local community?

Tullow firmly believes that the oil and gas fields in Ghana represent a very good opportunity for not only the growth of the economy in this country but also for development that will benefit Ghanaians. We prefer not to comment on the negativity that can surround analysis of the growth of the petroleum sector in other countries, but here in Ghana the company and the country are tied together in this pioneering effort to demonstrate to the world that African countries can get it right and that oil and gas can be the catalyst for development, growth and progress.

The one thing we would emphasize is that partnership, collaboration and continued engagement with local stakeholders are critical factors to the success of a project on this scale. Ghana has demonstrated this quality, a commitment to working together, we believe this has been crucial and is a valuable lesson that should be shared.

Tullow has made a long-term commitment to its involvement in Ghana, how important is developing local capabilities and employing local people to that commitment?

Tullow do not employ local people because it is demanded; we employ them because we see it as a rational way of doing business. It makes commercial sense, because if you develop capacity and capabilities in a country, using local raw materials and local service providers represents a significant saving.

The transfer of skills and technology to local populations is important socially. We strongly believe that it is our responsibility to focus on local content. To this end we have put in place a number of initiatives; for example in January of this year we launched what we call the 'Tullow Group Scholarship scheme'. Under this scheme, every year we will sponsor 50 students to study abroad, completing Masters Degrees in various disciplines related to oil and gas.

We have stated that by 2015 at least 95% of our employees in Ghana should be Ghanaians. Currently more than 85% of employees are Ghanaians, not merely working at low levels but throughout the organisation; as heads of departments and in positions of authority and importance.

What is the current rate of production from the Jubilee Fields site and does this meet with expectations for the current phase of the project?

The rate of production has varied from a low of 70,000 to a peak of 88,000 barrels of oil produced per day. Tullow had projected last year that production would reach 120,000 barrels per day. The primary reason that we are yet to reach this target relates to a technical difficulty with the oil well design completion. The consequence of this was a situation in which we were experiencing less than expected flow from several of the wells. Redesigns have been successfully carried out and we are currently monitoring the affected wells to ensure the positive impact of these changes. This was a specific technical issue that has no relation to the remaining capacity of the site; in this respect our projections for production have not changed.

What are Tullow's prospects for growth in West Africa and what is the likelihood of significant discoveries being made in the near future?

Tullow has a track record in not just following what others do; we have our own philosophy when it comes to exploration. The Jubilee site has unique geological characteristics, and we are convinced that equivalent geological plains can be found in other parts of the world and can reap similar rewards. We are using data analysis to pursue exploration in areas with similar geological conditions in Liberia, Cote d'Ivoire and outside of Africa, in French Guyana. We are very confident that we will come up with significant and exciting sites in West Africa in the near future. •

Exploration Potential

The possibility of undiscovered reserves

It may be argued that the 120-plus years of exploration activity in Ghana mitigates any excitement over the potential for further discoveries; after all, many claim that the country's four offshore basins (Accra-Keta, Saltpond, Tano, and Cape Three Points) are already relatively well-explored. The geology of these basins has undergone detailed analysis.

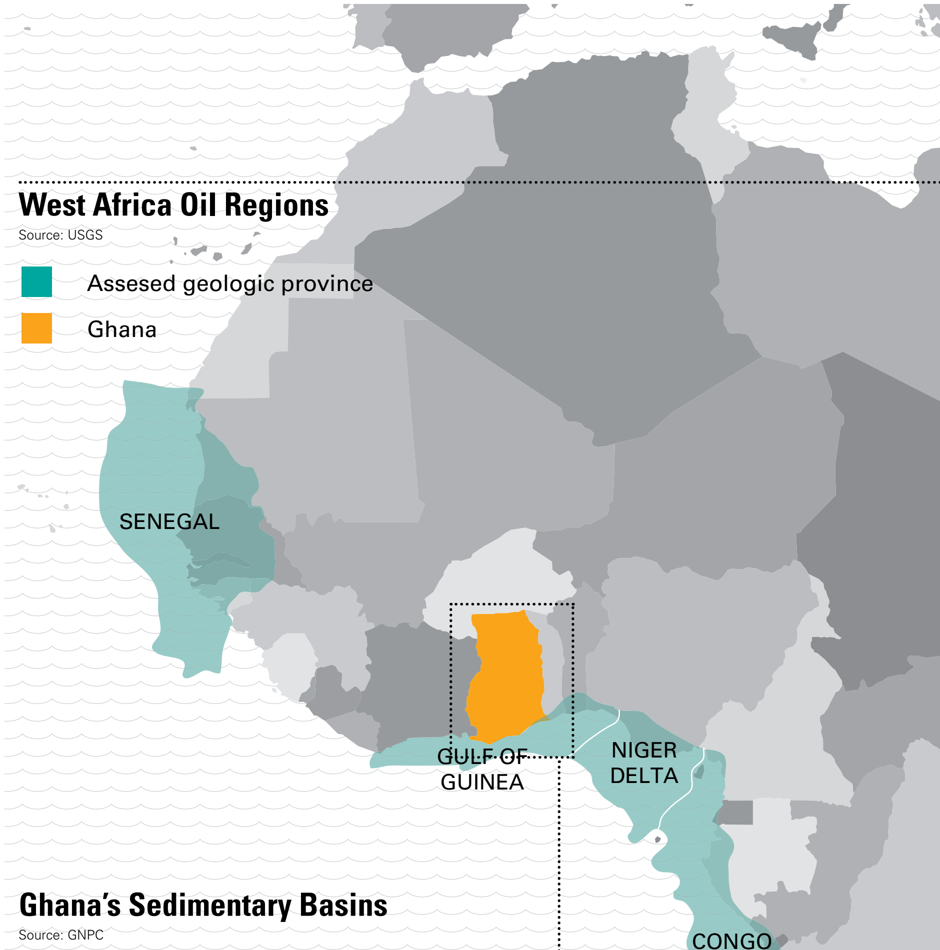
However, the length of exploration history is not an accurate indication of the amount of exploration carried out. According to the GNPC, a mere 110 wells have been drilled in the country to date. Offshore exploration did not start until 1968. Exploration focus only turned to deepwater after 2001.

While we may predominantly associate the Jubilee Fields with Ghanaian hydrocarbons, there have in fact been a number of significant discoveries since 2007. While precise numbers vary according to the definition of "significant", it is safe to say that five of these discoveries are potentially commercially viable: Jubilee, Odum, Sankofa, Tweneboa, and Dzata. All four of the country's offshore sedimentary basins have confirmed petroleum systems.

The Accra-Keta basin, the only offshore basin to not to have hosted a major discovery, bears resemblance to known offshore systems in Cote d'Ivoire (with both Teriary and Cretaceous prospectivity), is claimed to be similar to geography in Nigeria, and has attracted the interest of such multinationals as Eni and Mitsui. What is more, the onshore potential of Ghana is virtually untouched. As of April this year, not a single license had been granted for the 107,100 square kilometers of onshore basins (the onshore extensions of the Accra-Keta and Tano basins plus the Voltaian basin). The Voltaian basin covers 40% of the nation's

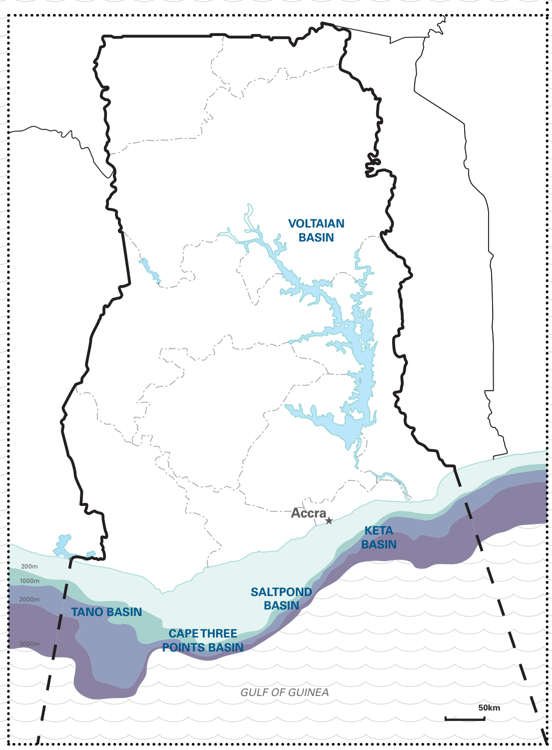
West Africa Oil Regions

Source: USGS



Ghana's Sedimentary Basins

Source: GNPC



"Ghana is interesting for the future of Expro's business growth because the country is beginning to get involved in deep water exploration. Deepwater exploration has certain technical challenges that need to be overcome, which is where Expro is the market leader. There are certain restrictions that come with deepwater technology, so Ghana is pushing the boundaries of the well testing industry."

Allan Sutherland, Ghana Country Manager, Expro

"The Jubilee site has unique geological characteristics, and we are convinced that equivalent geological plains can be found in other parts of the world and can reap similar rewards. We are using data analysis to pursue exploration in areas with similar geological conditions in Liberia, Cote d'Ivoire and outside of Africa, in French Guyana. We are very confident that we will come up with significant and exciting sites in West Africa in the near future."

Gayheart Mensah, Communications Manager, Tullow Oil

"The oil and gas industry in Ghana will grow significantly over the next several years, which will provide more employment for Ghanaian people. Over the next year, the current number of rigs will double as eight to 13 new rigs are built in the country, which will encourage new players to enter the Ghanaian market. The Government needs to invest heavily in sufficient infrastructure in order to allow the industry to develop to its full potential."

Darren Last, Operations Manager Ghana, Global Energy Ventures

"Menergy and other local companies can see the potential but do not necessarily have the capacity to capitalize. This is why we believe that collaboration is so important; sharing expertise creates new opportunities and expands companies' capabilities. Partnerships can also be a way around the financial demands that large-scale projects in the sector implicate. Currently in Ghana there simply is not the financial capacity to finance exploration and production projects so assistance is needed from further afield."

Roy Aboku, Business Development Manager, Menergy International

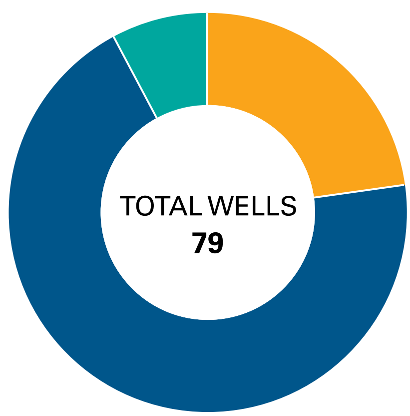
landmass, has a thick sedimentary cover and, from what is known of its geology, is analogous to petroleum-hosting basins in North Africa, Brazil, and elsewhere.

On a technical side, the Ghanaian government has facilitated exploration to an extent that surpasses many of its regional peers. The GNPC has 12,227.78 square kilometers of 3D seismic data and 33,126.00 square kilometers of 2D seismic data available for review or licensing. The Voltaian basin, the least explored of Ghana's prospects, has for quite a while been the subject of a planned exploration program by the GNPC. Late last year it was revealed that they plan to spend $40 million to begin onshore exploration in this basin.

The regulatory framework, discussed in more detail in the section "The Business Environment", is also investor friendly. In short, undeniable potential remains. •

GNPC Wells

Source: GNPC (as of 2009)



Onshore	18
Shallow water	55
Deep water	6

Courtesy of Technip

Providing for Ghana's Energy Needs: **Ghana's Natural Gas Industry**

"There is a great opportunity for using gas as a power source. It is a cleaner fuel and does less harm to the environment than the burning of fuel or coal. The pricing of gas is advantageous; it costs less than any liquid fuel and is less susceptible to price fluctuations. Long term contracts with pipelines ensure that prices remain stable and avoid the volatility of crude oil's value."

- Kweku Awotwi,
CEO, Volta River Authority

Powering Prosperity

Providing energy for Ghana's growing economy

Typical of many rapidly growing economies, Ghana's power generation has struggled to keep up with increased demand. The result has been spates of blackouts that started with regularity in 2007 and have continued to the current day, combined with electricity prices that, already high, have increased with depressing frequency.

The power sub-sector involves the generation, transmission and distribution of electrical energy for industrial, commercial and domestic use in Ghana. The Power System of Ghana is run by three utility companies; the Volta River Authority (VRA), Ghana Grid Company Limited (GRIDCO) and Electricity Company of Ghana (ECG).

The Volta River Authority has the primary function to supply electrical energy and therefore the Authority is responsible for the generation of electricity and GRIDCO is responsible for the transmission of electricity in Ghana. VRA supplies electricity in bulk to Electricity Company of Ghana and Northern Electricity Department for distribution to consumers. The total installed generating capacity of electric power in Ghana is about 2,000 MW, comprising of 1,100 MW of hydro generation (Akosombo and Kpong stations) and the remainder from thermal generation.

The annual growth rate in electricity demand over the past three years has exceeded 10%, with peak power increasing by 100 MW between first quarter 2011 and first quarter 2012. It is estimated that Ghana requires capacity additions of about 200MW to catch up with increasing demand in the medium to long term. The problems in meeting this rising demand are numerous: 69% of Ghanaian electricity is generated by hydropower, making it vulnerable to climatic variations; corruption creates an unequal burden of electricity payments (Ghanaian newspaper The Mirror published investigations showing that 354 state and private enterprises evaded electricity bill payments early this year); erratic supplies of gas from neighbouring Nigeria have affected the operations of the country's six thermal generation facilities; and the current infrastructure is inefficient and underdeveloped.

Ghana's electricity distribution infrastructure is extensive providing access to about 66% of the population. Transmission infrastructure has, however, deteriorated over the years, resulting in transmission bottlenecks, overloaded transformer sub stations and high system This leads to frequent interruptions in power supply and relatively high system losses. While national access is about 66%, access in the three northern regions is about 30%.

In terms of infrastructure, positive signs can be taken from Ghana's 2012 Budget, which allows for the rehabilitation, upgrade and construction of various ECG primary substations. On the supply side, gas is the answer.

Gas production from the Jubilee and other fields is currently nonexistent, yet the infrastructure is being put in place to exploit this gas. With the existing thermal power plants unable to attain full generation capacity as a result of limitations in fuel supply

owing to rising fuel prices, this should play a vital role in ensuring that Ghana's generation capacity is a help rather than a hindrance to continued economic growth.

Ghana's generation company, the Volta River Authority (VRA), is aware of this and increasingly expanding their portfolio to include thermal generation. The VRA currently has a contract to procure 123 million cubic feet of gas per day from Nigeria, via the West African Gas Pipeline, however this supply has not been as stable required. This contract came into effect in November 2011 and the country currently receives around 60 to 80 million cubic feet per day (cfd). Kweku Andoh Awotwi, chief executive of the VRA, explains: "we are expecting supply levels to reach the full amount later this year; the pipeline that acts as the conduit for this gas was designed to carry up to 474 million cfd. There is gas in Ghana and the government has assured the VRA that we will be the first customers to which they turn. The expansion of the thermal portfolio comes with the expectation that gas will be a significant source of fuel."

The potential for this is obvious. "The VRA will add 450 MW of capacity to Ghana's national grid over the next three to four years, and is expected to reach a total capacity of 3000 MW by 2019. To finance this growth we hope to raise around US$250 million from commercial buyers by the end of this year. Ghana's energy consumption will continue to grow and gas will become an important source of power. This presents challenges but also represents an excellent opportunity for investors to come in and monetize gas power generation in Ghana," says Awotwi.

Planned Expansions

Source: Ministry of Energy

TOTAL CAPACITY INCREASE:
Today = 2,169.5 MW
2015 = 5,000 MW

Takoradi Power Plant (T2):
Today = 220 MW
Expected = 330 MW

Kpone Thermal Power Plant:
Today = 0 MW
Expected = 220 MW

Tema Thermal Power Plant 1:
Today = 110 MW
Expected = 330 MW

Tema Thermal Power Plant 2:
Today = 49.5 MW
Expected = 180 MW

Takoradi Thermal Power Plant:
Today = 0 MW
Expected = 132 MW

Bui Hydropower Plant:
Today = 0 MW
Expected = 400 MW

Juale Hydropower Plant:
Today = 0 MW
Expected = 90 MW

Pwalugu Hydropower Plant:
Today = 0 MW
Expected = 48 MW

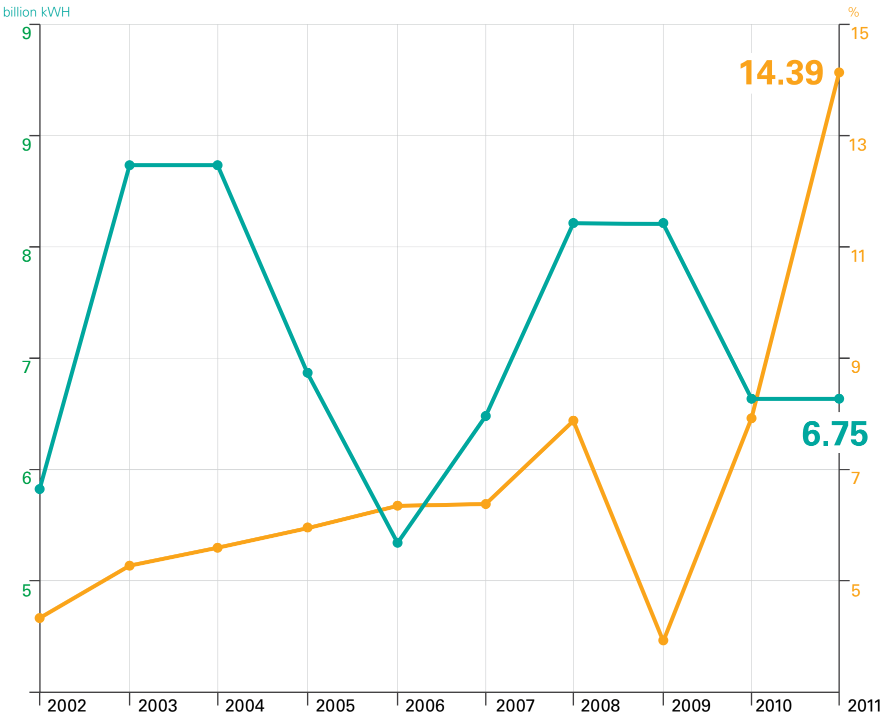
Hemang Hydropower Plant:
Today = 0 MW
Expected = 93 MW

Ghanaian Power Generation

Source: CIA World Factbook

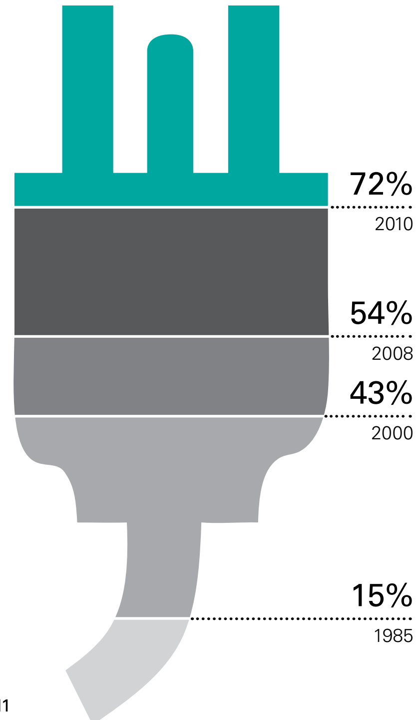
GDP Growth Rate

Source: World Bank



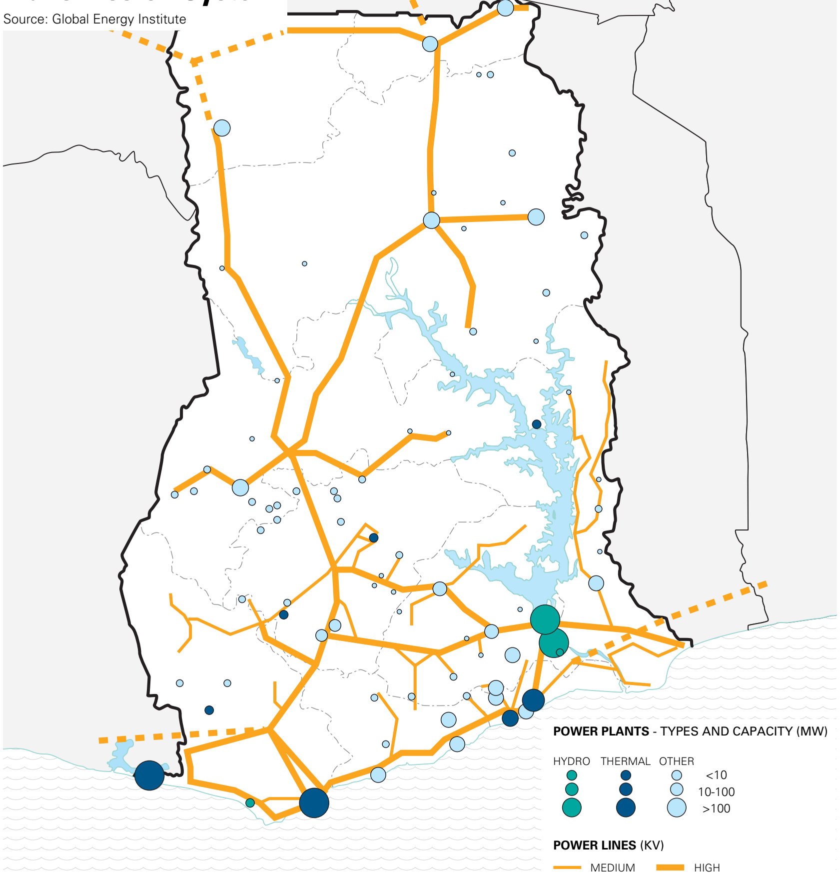
Access to Electricity

Source: Ministry of Energy



Transmission System

Source: Global Energy Institute



Average Annual Rate of Economic Growth since 1985

3.5%
to
6.5%

Source: Ministry of Energy

Average Annual Rate of Electricity Demand since 1985

10%
to
14%

Source: Ministry of Energy

Interview with Kweku Awotwi

CEO, VOLTA RIVER AUTHORITY

Could you provide us with an overview of the power generation facilities and pipelines that the VRA is responsible for?

In Ghana we have an electricity capacity of 2,000 MW, of that 1,200 MW are generated through the use of hydropower. In addition to this the VRA operates four gas turbines and one steam turbine in Takoradi and three sets of single-cycle machines in Tema. Finally we have what we call 'emergency sets': a series of one to two megawatt units that give us an extra 75 MW of emergency capacity. The VRA is in the middle of a phase of expansion; in the first half of this year we gained parliamentary approval for the construction of a new power plant in Takoradi. This project will be executed in partnership with Abu Dhabi National Energy Company (TAQA) and will extend capacity by 110 MW. Another project that will come online over the next three to four months is a joint venture with Canadian investors to build a 132 megawatt green fuel construction. Beyond these two projects we are carrying out feasibility surveys for the proposed construction of a 300 megawatt dam in the north, a 100 megawatt wind turbine on the coast and we have tendered for our first solar power generation facility. We are committed to growing Ghana's power generation facilities to meet with the growing demand of the Ghanaian population.

The VRA has announced plans to use natural gas as a major source of electricity. Does this mark a strategic shift and what are some of the reasons behind this decision?

It is more a development than a strategic shift. The VRA recognizes that Ghana's capacity for hydro-electric power generation has effectively been reached. However the country and its demand for electricity continue to grow so alternative sources of power must be found. The most realistic solution is to generate power thermally using coal, liquid fuel or gas. In Ghana we do not have coal so until recently we have used crude oil and sometimes diesel as fuels for our generators. There is a great opportunity for using gas as a power source. It is a cleaner fuel and does less harm to the environment than the burning of fuel or coal. The pricing of gas is advantageous; it costs less than any liquid fuel and is less susceptible to price fluctuations. Long term contracts with pipelines ensure that prices remain stable and avoid the volatility of crude oil's value. This is evidenced by the current gas supply we receive from Nigeria which does not increase or decrease in price dramatically.

How will the expansion of infrastructure to cope with increased demand be financed?

Ghana's use of electricity is increasing rapidly and the current infrastructure does not have the capacity to sustain this growth too far into the future. On a country level, efforts have been made for several years to de-regulate the system to allow for greater private sector involvement. For example in 2005 a new law was passed that separated power transmission and generation. The idea was to create a level playing field for any other independent producer to come in and invest. So far the only major arrival has been that of the Chinese but the hope is that as the rules become better articulated and established other private players will be involved. As far as the VRA is concerned our duty is to supply Ghanaians with the electricity they demand. Our expansion plans will add 450 MW of capacity to Ghana's national grid over the next three to four years. Projecting further forward, we expect to reach a total capacity of 3,000 MW by 2019. To finance this growth we hope to raise around $250 million from commercial buyers by the end of this year. Next year if growth continues as we have projected we will issue a long term bond to raise further funds. Ghana's energy consumption will continue to grow and gas will become an important source of power. This presents challenges but also represents an excellent opportunity for investors to come in and monetize gas power generation in Ghana. •

Gas production

The development of Ghana's associated gas

The 2007 Jubilee oil discoveries, and indeed the discoveries since, hold large quantities of associated natural gas. Indeed, as of last year Ghana's total reserves of natural gas lay at 22.65 billion cubic metres; a not insignificant volume.

Yet exploitation of these reserves has been delayed. While the rapid progression from discovery to oil production at the Jubilee fields was impressive, Ghana has not yet becoming a producer of natural gas. In the first five months of 2012, for example, Ghana still imported $73.5 million of natural gas from Nigeria. Due to these delays, the associated gas from the Jubilee fields has so far been re-injected into the field, however Joe Asamoah, technical director of the Ghana Chamber of Oil and Gas, has said that this is affecting oil production.

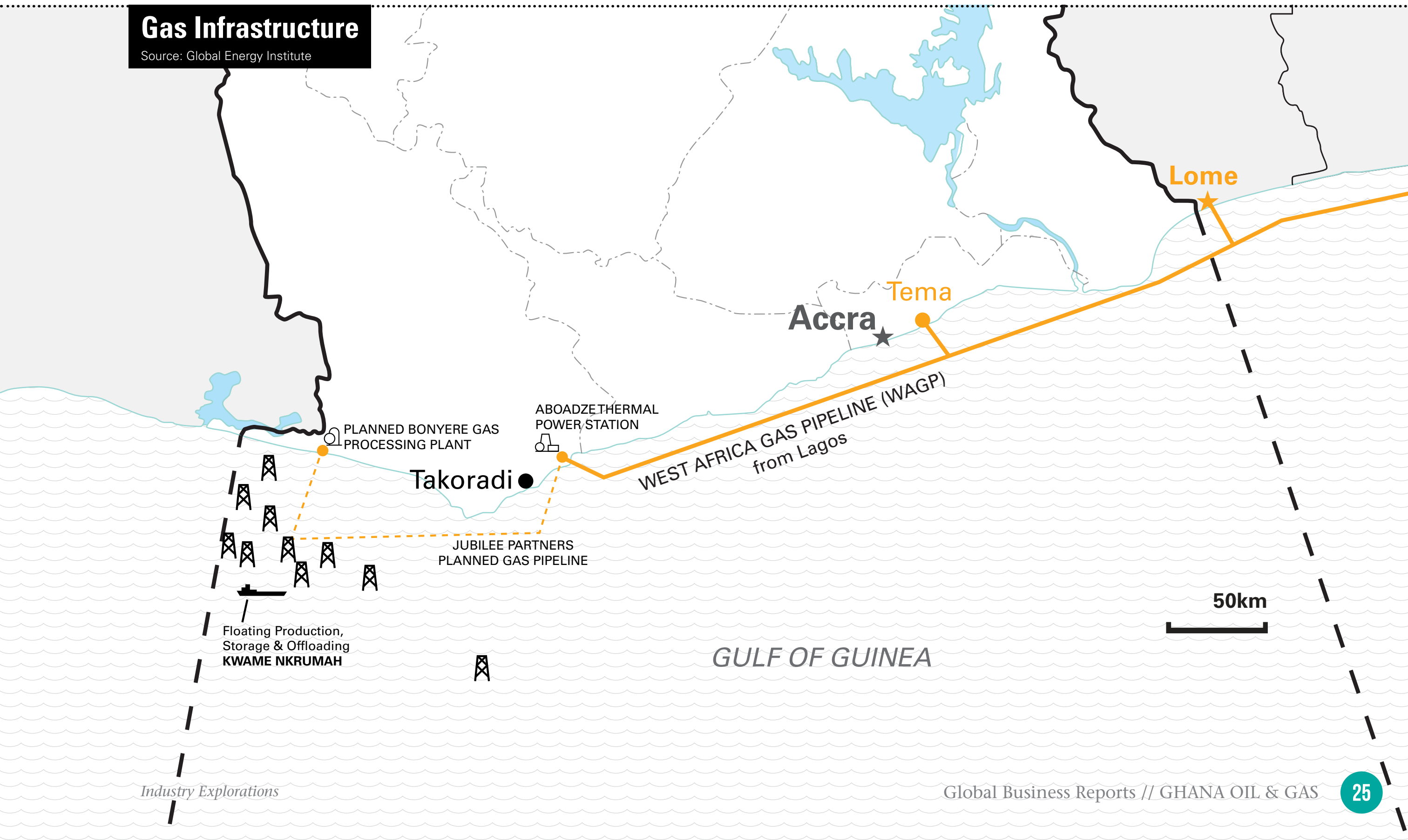
The delay in developing Ghana's gas production can be attributed partly to a lack of clear mandate. With both the Ghana National Gas Company (GNGC) and the Ghana National Petroleum Company (GNPC) developing their own master plans for gas production, causing a bit of confusion over who is responsible for overall management of gas reserves.

The GNGC was established in 2011 with the aim of implementing the gas infrastructure plan. However, GNGC was incorporated under the Companies Code, rather than by specific statue like the GNPC. This raises questions about the nature of its relationship with the GNPC and with the government; including the difference between the GNGC's mandate and the GNPC's Natural Gas Transportation and Processing Project. These questions have yet to be fully answered.

Despite this confusion, projects are moving forward. GNGC announced their plan for a $700 million onshore gas processing plant in November 2011. This plant would have a 120,000 square foot a day processing capacity. GNPC awarded contracts for offshore pipelines in October 2010. •

Gas Infrastructure

Source: Global Energy Institute



Interview with Toufic Haroun &

DIRECTOR

Erik Holst-Roness

MARKETING MANAGER- AA HORIZON LTD.

Could you provide us with a brief introduction to the company?

TH: AA Horizon is the leading provider of high quality power generation equipment to industry in Ghana.

In Ghana we have worked for GNPC, Apollo and Halliburton and we are currently working for other drilling companies.

We are working in the oil and gas industry, although it has not been a major focus for the company up until now. We have supplied eight power generators for oil rigs. Over the last three years we have been focused on the telecommunications industry. Our office in Ghana has been established for 18 months and we will be increasing our human resources to meet growing demand. The company's reputation is positive from service providers who supply us with a commercially viable volume of work.

What services do you provide to oil and gas companies?

TH: AA Horizon Limited is service based and we have done a lot of maintenance, design and refurbishment work on power systems. We are associated with power systems, engines or generators and and we have the capability to supply seven different sizes of generators to our customers.

The company has remote monitoring systems that enable management to control generators, monitor fuel consumption and to identify any problems. A challenge of operating in Africa is that the environment is more difficult so there is a natural acceptance of lower quality services. AA Horizon Ltd. offers our customers three-year warranties on power generation products compared to only one-year warranties on the same products in countries like Iraq.

EHR: The company has a retail base in addition to a workshop and a network of transportation to get products to customers. Our customers receive a better service from Horizon than from other companies.

What are the company's competitive advantages?

TH: Our attention to detail and our level of service are our main competitive advantages.

We take into consideration the needs and requirements of each of our individual customers and provide solutions to specific problems or issues. We are able to enhance existing products by the service that we provide. Aftersales only accounts for 20% of our total sales but our clients are willing to pay a higher price for our products because of the high level of service that we offer. Our service levels include a three-year warranty on generators; moreover, replacement machines are always available when a fault is not immediately repairable.

TH: There is no competition for the services that we provide as no other companies are able to compete with Horizon.

What is your growth strategy for Ghana?

TH: In 2010 our revenue was US$4 million, in 2011 we generated US$12 million and by the end of 2012 we hope to generate US$20 million, US$5 million of which has been achieved in Q1 2012. We see the market potential potential in our sector in oil and gas in Ghana of US$10 million annually; the total market of the oil and gas industry in Ghana is hundreds of millions. We have plans to raise our profile for the service and maintenance of oil and gas equipment. In addition, we have started to design our own generators for the oil and gas industry and re-design existing machines by improving them.

How do you recruit your employees?

TH: We have a very strong training program as we are prepared to bring in experience from anywhere and have a mixture of South African, Lebanese, Filipino and Indian employees. The oil and gas industry is a highly skilled industry and we are raising our standards up to ISO 2001 to become a certified organization. We have a Center of Excellence in our workshop where we will train 300 employees in 2012 and we have a staff recruitment program where we have seven trainees that have been with us for four years. In addition we have sponsorship programs from junior level through to university.

What is your final message for our readers?

TH: Ghana has had a 20% growth rate without oil and gas, but this will increase tremendously over the next 2-3 years with oil and gas investment. Ghana has a lot of potential and the longer companies wait to invest, the harder it will be. AA Horizon is currently working in other sectors in Sierra Leone, Liberia and Uganda and we are looking at work in Nigeria. In addition to service, we have found a big requirement for inventories of equipment and we are quickly becoming the largest holder of standardized equipment in Ghana. Drilling service providers want a reliable supply of stock and we are currently in talks with companies who require our services so another area of future growth is the supply of specialist equipment. •

"Ghana's use of electricity is increasing rapidly and the current infrastructure does not have the capacity to sustain this growth too far into the future. On a country level, efforts have been made for several years to de-regulate the system to allow for greater private sector involvement."

Kweku Awotwi, CEO, Volta River Authority

"The GIPC is looking to attract independent power producers to ensure that Ghana will be able to export cheaper gas power as a commodity to neighboring countries like Nigeria that will have an increased demand for power in the near future. The West African Pipeline currently imports gas from Nigeria to Ghana, although we believe that this will reverse and Ghana will be the net exporter of power to Nigeria by 2020."

George Aboagye, CEO, Ghana Investment Promotion Centre (GIPC)

"The company has remote monitoring systems that enable management to control generators, monitor fuel consumption and to identify any problems. A challenge of operating in Africa is that the environment is more difficult so there is a natural acceptance of lower quality services."

Toufic Haroun, Director, AA Horizon Limited

"The government has two different models for investment into power generation, supporting independent power producers by providing easy access to land and basic infrastructure. Companies who choose to work with the government through the PPP Model with the Ministry of Finance can agree on what percentage of equity the government will take and receive help if debt components are necessary."

Dr. Joe Adjei, Minister of Energy, Ghana Ministry of Energy

Natural Gas Imports

2009:
197,977

2010:
15,616,648

2011:
30,524,558

cubic meters

Source: Ghana Energy Commission

Natural Gas Proven Reserves (2011)

22.65

billion cubic meters

Source: CIA World Factbook

Natural Gas Proven Reserves by African Nation

Source: Ministry of Energy

	trillion cubic meters
Nigeria	5.292
Algeria	4.502
Egypt	2.186
Libya	1.548
Angola	0.309
Cameroon	0.135
Mozambique	0.127
Ethiopia	0.113
Republic of Congo	0.090
Sudan	0.084
18. GHANA	0.022

Courtesy of Technip

Engineering Progress: **Services Available to the Ghanaian Chemical Industry**

"Managing a business in Ghana is quite straightforward; it presents no more problems than running a business anywhere else in the world; but the issue at the moment is getting product into the country. The infrastructure is good and the systems and procedures are good, but nonetheless they are inadequate to cope with the sheer volume of product that is entering the country. Oil and gas has obviously made a noticeable difference, but it is also from mining and general growth in the economy."

- Phil Upton,
Co-Founder, ITSC

The Service Industry

The support available to Ghana's upstream pioneers

"The Ghanaian petroleum sector has experienced dynamic growth but is still at an early stage of evolution," says Roy Aboku, Business Development Manager of Menergy International, an oilfield services company established in Gabon in 1989 that was one of the first movers in Ghana, entering the country in 1994.

What is true of the sector as a whole is certainly true of its surrounding service industry. Equipment suppliers, logistics providers, inspection and fabrication companies, financial services, and the rest of support network one would expect to be accompanying a petroleum industry have all sprung up with remarkable speed to cater for the needs of the explorers and producers.

Global Energy Ventures, for example, were the first fabrication and inspection company in the field when they entered the country in 2008, yet Darren Last, country manager for Ghana, now describes the market as "extremely competitive".

Despite this growth, it must be remembered that the industry is very new; the increased focus on deepwater production presents technically demanding projects for service companies that are only just beginning to establish their presence. Oil production is also not yet at a level at which its demand for services is constant.

Now that Phase One of production has come to a close, the industry as a whole has entered a quiet period as companies wait until Phase Two begins later this year. "The rate of production from oil fields is not reliable and the surges and downturns have an instant impact on our business," says Soraya Anglow, executive director at Greenline Logistics, a 100% Ghanaian-owned company offering logistics management, warehousing and haulage across the country. "Many companies will make large investments or diversify their services anticipating growth that may or may not come," she said.

There is no clear-cut plan for the future of oil production in Ghana; new sites may be discovered tomorrow that could shift the focus of the industry. For service companies, managing growth in order to develop sustainably yet remain responsive to the fluctuations of the oil industry is a major challenge.

Some service companies have chosen to limit their growth in order to avoid a future situation where their capacity outstrips demand. Others, however, have used the somewhat erratic nature of current production demand to expand their portfolio. "The unreliable nature of oil production is another primary obstacle as this is an industry in which downtime costs millions of dollars. To combat this issue Menergy has emphasized broadening the range of services we offer and growing the company in a sustainable manner," explains Aboku of Menergy International.

Whatever their strategy, or the services they provide, all companies servicing the oil and gas industry should be aware of the need for a long-term strategy; a requirement arguably more important in Ghana, where short-term demand may fluctuate substantially, than in other markets. "The new players that are entering into Ghana should have a long-term strategy to grow their operations in Ghana," says James Wood, managing director at Edward Mensah, Wood & Associates, a large insurance brokerage in Accra. "We want to work together with new players to grow and develop the insurance industry in Ghana to the same high standards that are expected overseas. Local brokers currently have limited knowledge about oil and gas insurance, which needs to be developed to enable the industry to have a better future."

continued on page 32

Interview with
Darren Last

COUNTRY MANAGER, GLOBAL ENERGY VENTURES

How significant is Ghana to Global Energy Ventures' overall strategy?

Global Energy Ventures was the first fabrication and inspection company in Ghana when it established a presence in 2008. The company currently has 60 employees in Ghana and an additional 60 employees in Abidjan. Ghana is becoming increasingly important for West Africa as a whole, so it has been an important focus for Global Energy Ventures to develop local content and establish a structure within the country from the very beginning. Global Energy Ventures support Transocean and ENI rigs all over the world.

In 2008 Global Energy Ventures was awarded a three-year contract with Tullow that, along with other international companies have ensured that the standards in Ghana match worldwide requirements. Ghana accounts for 40% of the company's revenue; 60% of revenue is generated in Abidjan where operations are more fabrication oriented and there is less competition because of the prematurity of the market. We are striving to increase our fabrication capacity in Ghana, although the market is extremely competitive. Global Energy Ventures is currently evaluating potential opportunities in Togo, Tanzania and Namibia to enable us to increase our presence in Africa.

Can you provide us with a deeper insight into your working relationship with Transocean?

The work that Global Energy Ventures does for Transocean includes NVT, inspection, fabrication and full lifting surveys, which can take three employees up to four weeks. In addition, Global Energy Ventures employees carry out OCTG inspections, thread inspections and Bottom Hole Assembly, which involves drilling tools.

What unique challenges have Global Energy Ventures had to overcome whilst operating in Ghana?

Imported equipment can cause logistical challenges because of the lack of knowledge in Ghana about oil and gas equipment, so it is important for Global Energy Ventures to forward plan and invest more resources into spare equipment and tools. As the Ghanaian oil and gas sector develops, knowledge will improve and local vendors will establish that will manufacture equipment locally.

Has Global Energy Ventures' earning reports been affected by the gap between exploration and Phase Two of production?

It is hard to measure to what extent Global Energy Ventures has been affected as different clients require surveys and inspections at different times, which means that the company has not experienced a downturn in business.

How has the rapid development of the oil and gas industry affected Global Energy Ventures' business?

It has not been an issue to source the necessary equipment, although it is difficult to source the suitable skills and labor that the company requires. Individuals require a minimum of seven years training to qualify to become an inspector because of the lack of resources and training capabilities in Ghana. Global Energy Ventures is investing in the training of Ghanaian employees and selects six university students every twelve months to embark on our Graduate Program where there is an opportunity for a position within the company.

It is important to empower local communities to participate in the development of the oil industry and Global Energy Ventures has a target to employ 90% local content within the next two years.

What business growth has Global Energy Ventures experienced over the last few years in Ghana?

The company's revenue has increased by 120% in the last eighteen months. Global Energy Ventures has plans to acquire Sling Press, which will enable us to manufacture our own slings. Projections for Q1 2013 are to increase the company's revenue to $750,000 per month.

How competitive is the Ghanaian market for the services that Global Energy Ventures provides? How does Global Energy Ventures remain competitive?

The two major competitors of Global Energy Ventures are Tuboscope who are the largest in the world and APAVE who are a non-profitable firm that are owned by the French Government. Global Energy Ventures strives to be the best and our success is demonstrated through our extensive client list. The company transfers British expatriates to Ghana to manage departments whilst transferring their knowledge to local employees. Global Energy Ventures has the expertise to succeed, although the size of the company works as a disadvantage as many larger players are obliged to work with our larger competitors because of global contracts.

How do you foresee the petroleum industry evolving in Ghana?

The oil and gas industry in Ghana will grow significantly over the next several years, which will provide more employment for Ghanaian people. Over the next year, the current number of rigs will double as 8-13 new rigs are built in the country, which will encourage new players to enter the Ghanaian market. The Government needs to invest heavily in sufficient infrastructure in order to allow the industry to develop to its full potential. The oil and gas sector is a unique industry that is potentially dangerous; employees need to be trained correctly, which ultimately takes time. Global Energy Ventures will have expanded operations in Africa and into the Middle East or potentially set up more operations in the UK. •

continued from page 30

Nevertheless, the booming industry offers potential for growth, provided that service companies heed this advice. The oil and gas sector has enabled our company to grow every year, and Wood and Associates is able to choose clients carefully," says James Wood, managing director at Edward Mensah, Wood and Associates, an insurance brokerage.

Other companies are looking to expand beyond the borders of Ghana. "In 2012 we are expanding our operations by opening offices in Liberia and Sierra Leone where there is active oil and gas exploration," says Frank Tony Eshun, managing director at Damco, a worldwide provider of freight forwarding and supply chain management services.

Darren Last of Global Energy Ventures, a fabrication and inspection company specialized in West Africa, sees significant potential for taking the expertise developed in the country to other parts of the continent. "Global Energy Ventures is currently evaluating potential opportunities in Togo, Tanzania and Namibia to enable us to increase our presence in Africa," he says.

Ghana is not just one country among many for regional-focused companies however. Due to a combination of reasons (including political stability, a relatively clear regulatory framework, and an infrastructure that, while not perfect, is nonetheless more comprehensive than that of many of the country's neighbours) many companies view Ghana as a center from which to expand. "Ghana is very important to the oil industry as a whole, and as a hub for Sub-Saharan Africa, and Expro intends to use it as a logistical and operational base," says Allan Sutherland, Ghana country manager for Expro, a global leader in subsea safety systems.

Ghana's service industry is not yet as mature as it could be, but neither is a lack of necessary support a challenge for explorers and producers to the same extent as it is in other relatively new jurisdictions. International service providers have had their entry into the country, following in the footsteps of international oil companies, facilitated by the nation's stability and business environment. Local companies have also sprung up, showing admirable entrepreneurial spirit. •

Courtesy of Technip

Interview with Allan Sutherland

COUNTRY MANAGER, EXPRO

How significant is Ghana to Expro's overall strategy?

Ghana is interesting for the future of Expro's business growth because the country is beginning to get involved in deep water exploration. Deepwater exploration has certain technical challenges that need to be overcome, which is where Expro is the market leader. There are certain restrictions that come with deepwater technology, so Ghana is pushing the boundaries of the well testing industry. Ghana is very important to the oil industry as a whole, and as a hub for Sub-Saharan Africa, and Expro intends to use it as a logistical and operational base.

The third quarter of 2011 was a very busy time for the Jubilee field's production; exploration and tunnel developments were also occurring. After this exploration finishes, it is about another year before you move to complete wells for long-term development. Exploration is tailing off and Jubilee is in full production. Expro will soon start to complete more wells for Jubilee and production will increase significantly, with improved completion designs. Expro will use Ghana as an operational base for other countries, such as Eni Togo, Tullow Kenya, and Mitsubishi Gabon, which are not reflected on the Ghana books. Expro recently moved their regional Sub-Saharan Africa headquarters from Cape Town to Accra, which shows how serious the company is about the country's prospects.

What are the core services that Expro offers in Ghana?

Expro's core service is the subsea safety systems, an area in which we are recognized as the best in the world. We also offer well testing, where we test the production well's viability. When we examine the exploration and appraisal wells, we test whether the tools are working, if the reservoir is flowing, and if we expect to get good results to relay to the FPSO. The deepwater challenge is maintaining control of these wells in a safe manner. If anything goes wrong, we can isolate and disconnect the well within a manner of seconds. Our people are exceptional, the tools are excellent and the support that we offer is top notch; the excellence comes from the engineering team that designed these tools.

How did Expro's relationship with Tullow come about?

There are only three companies in the world that can viably tender for the Jubilee project, and we won the contract with Tullow for exploration and appraisal at Jubilee in 2007. At that time, Expro did not have an office in Ghana, but we decided to build a bespoke facility in Ghana rather than wait for the completion phase, as our competitors did. Expro has a very practical relationship with Tullow. They have had a very aggressive completion schedule, and we have had to keep up with these demands. The main challenges have been sourcing equipment and, more significantly, personnel. We are now getting ready for the next phase of Tullow's production schedule, and to prepare, we have extended our operational capabilities and trained many local engineers, in order to jump ahead of the competition.

As the oil industry in Ghana heats up, what added pressures are put on Expro's shoulders?

The market has opened in Ghana and there are more contracts to be won. Expro is currently focused on consolidation; we have concentrated on the quality of equipment that is available in Ghana. Again, the challenge is finding skilled personnel; we are investing heavily in local recruitment by building the company with local Ghanaians, but the transition to senior management takes time. We have had to refuse new work because we will not compromise our safety standards. Until Expro reaches the point were we can deliver quality service in a safe and sustainable manner, we are not taking tenders. Expro is concentrating on steady, managed growth.

How do initiatives such as the Graduate Development Program help to empower Ghanaians?

The important question for Ghanaians is how the oil industry will benefit local communities. Many countries have experienced significant social challenges with an influx of 'fast money'. Expro invests heavily in initiatives such as the Graduate Development Program; the company also tries to make partnerships with local vendors. Expro developed our Graduate Development Program because we needed to get our local content up to a point where they would be able to become senior operators within two years. In many West African countries, particularly Ghana, the educational system is very strong, and Expro can afford top-quality graduates with a few years of experience. The Program is divided into 4 years of 6-month stages; the training begins locally and moves to Expro's offices in South Africa, as well as international training in London, Calgary and Houston. Trainees get assessed after every stage, and gradually the assessment becomes more challenging. At the end, there is a commitment on the part of our Sub-Saharan country managers that they will give preferential positioning to these graduates. Globally there are 32 participants, and the two Ghanaians in the program are currently entering the second stage.

Where would you like to see Expro's Ghanaian business in the near term?

Expro will continue to deliver excellent service to our clients over the coming years. Eventually, we would like to see every oil rig in Ghana staffed with Expro personnel, and delivering safely and sustainably. Another goal is to increase Expro's local content; we are already at 95% on the operations support side, and are increasing the ratio on the operations side through initiatives such as the Graduate Development Program. Expro's long-term vision is to have a 100% Ghanaian operation; we are committed to the country and will be here for many years to come. •

Interview with
Michael Savage

MANAGER, SGS

Could you provide us with a brief introduction to SGS?
SGS has a presence in over 140 countries and employees 80,000 staff worldwide. The structure of SGS Ghana is divided into four business lines; oil and gas, logistics, agriculture and an environmental department equipped with a laboratory. SGS Oil and Gas is a relatively small division within the company in Ghana. We currently employ sixteen staff that are involved in the initial and discharge inspection of ships and tank collaboration.
The Ghanaian office deals with Bulk Road Vehicles that transport products to refineries and require collaboration to ensure that the right amount of fuel is carried.
We are in currently in talks with the NPA to renew the same license that we had 10 years ago, which will enable us to work on the collaboration of underground plants and filling stations. In addition, meter collaboration and tank leak protection, which is an environmental hazard, are other business areas that we are interested in working in.
Originally we had hoped to open an oil analysis laboratory by Q4 2011 and are currently in talks with our Head Office in Geneva to obtain final approval by Q4 2012. The laboratory instruments measure pressure and temperature and require collaboration for accuracy. A cycle has been set up for the re-collaboration of equipment.

How important is the oil and gas industry to SGS in Ghana?
Oil and gas is important business for SGS in Ghana today. As a global company we are able to draw on our expertise and knowledge to grow in a range of sectors in Ghana.
We have been involved in a fuel program for Shell where additives are added to regular petrol to enhance the performance of the fuel in the vehicle, which results in better mileage, decreased emissions and more environmentally friendly fuel.
Currently, SGS's biggest business is the collaborations and inspection of vessels that bring fuel into the country.

Is SGS involved in any training programs in Ghana?
SGS is focused to set up a training program where experienced expatriates from global offices will embark on a 3-6 month training period to share and transfer knowledge to local employees who have the capabilities and qualifications to work in the industry.

Can you provide us with an example of an innovative technological solution that has been applied successfully in Ghana?
Oil exploration uses PVT Analysis equipment that is not easily available, although SGS is one of the only companies worldwide that has ownership of the Pressure-Volume-Temperature (PVT) technology. Oil and gas companies that do not have the technology are required to send PVT samples to Orlando or Belgium for analysis, which is inefficient in terms of both time and money. However, if technology is available onsite, the process is extremely efficient. Hess is a company that we will be marketing the PVT technology to.

What is your strategy to expand SGS's market share in Ghana?
Our strategy is to employ the best people. SGS is interested in a whole range of services, instead of focusing on one specific area. This will enable SGS to offer a whole spectrum of integrated services to our clients. We are using our resources from Europe and America to expand our market share.

Where do you expect to see SGS Ghana in five years time?
SGS will be a diverse company that will employ up to three hundred people. We will be able to offer oil and gas companies a complete package of services.

What is your final message for our readership?
SGS Ghana is able to draw on global expertise to provide investors in Ghana with any service that they require. •

Local Content

Developing the Ghanaian skillset

While the industry may not be providing employment at quite the rate that some hoped, local content laws have been a key agenda for the Ghanaian government since the very beginning. The government seeks to achieve a minimum of 90% local content and local participation in all aspects of oil and gas industry value chain within a decade. The policy framework has proposed specific targets for direct employment in the exploration and production of the oil and gas. On the management level, 50% of the management staff must be Ghanaians from the start of petroleum activities of the licensee, with the percentage increasing to 80% within five years, after the start of the activities.

The policy framework has proposed specific targets for direct employment in the exploration and production of oil and gas. On the management level, 50% of the management staff must be Ghanaians from the start of petroleum activities of the licensee, with the percentage increasing to 80% within five years after the start of the activities.

Adequate training in the area of health and safety must continue to be a priority for companies operating in the oil and gas space. "The oil industry has European and UN standards to adhere to as well as new safety standards in the country," says Anura Kaluarachi, general manager of Takoradi Gas, a leading industrial gas manufacturer located in Ghana's oil city. "This helped us to raise our standards, as we had to comply with their regulations in order to do business with multinationals."

Individuals require a minimum of seven years training to qualify to become an inspector because of the lack of resources

Education Expenditure

5.4%

of GDP

45th in the world

Source: CIA World Factbook

Literacy Rates

67.3%

of total population

61.2% **73.2%**

Source: CIA World Factbook

School Life Expectancy

Source: CIA World Factbook

Total Population	10 years
Male	11 years
Female	10 years

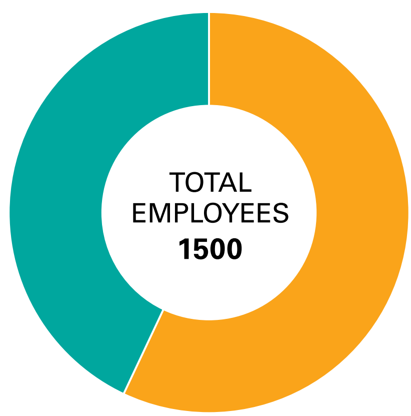
Labor force by occupation

Source: CIA World Factbook

Agriculture	56%
Industry	29%
Services	15%

Employment in the Oil and Gas sector

Source: Ministry of Energy



Ghanaian Employees	840
Expatriate Employees	660

and training capabilities in Ghana, says Darren Last, country manager of Global Energy Ventures, a UK-based well servicing company in Takoradi. "The oil and gas sector is a unique industry that is potentially dangerous; employees need to be trained correctly, which ultimately takes time."

Despite these challenges, success stories abound. "The Jubilee Fields project was completed with 45,000 Ghanaian man-hours without one incident onsite or one injury," says Stephane Sole, country manager at Technip, a French company that provided engineering and construction services at Jubliee. "We have developed an in-house HSC program, and created a partnership with Kumasi University that offers scholarship programs and specific oil and gas training for Ghanaians. In addition, we place emphasis on employing Ghanaian employees to work on our projects and we are creating an engineering company that will transfer more technology and increase man-hours for local people."

Different companies have taken different approaches; the linking theme is an encouragingly proactive effort from the entire industry. International companies especially have shown a willingness to capitalize on their global network when training Ghanaian employees. SGS, for example, brings in their experts from around the world.

"SGS is focused to set up a training program where experienced expatriates from global offices will embark on a three to six month training period to share and transfer knowledge to local employees who have the capabilities and qualifications to work in the industry," says Michael Savage, manager of SGS in Ghana.

Expro has invested heavily in their Graduate Development Program in Ghana. "Expro developed our Graduate Development Program because we needed to get our local content up to a point where they would be able to become senior operators within two years. In many West African countries, particularly Ghana, the educational system is very strong, and Expro can afford top-quality graduates with a few years of experience," explains Alan Sutherland, country manager of Expro in Ghana. "The program is divided into four years of six-month stages; the training begins locally and moves to Expro's offices in South Africa, as well as international training in London, Calgary and Houston. Trainees get assessed after every stage, and gradually the assessment becomes more challenging. At the end, there is a commitment on the part of our Sub-Saharan country managers that they will give preferential positioning to these graduates. Globally there are 32 participants, and the two Ghanaians in the program are currently entering the second stage."

"Foreign companies that come to Ghana must demonstrate that they are making a long-term commitment to operations in the country and are not here just to make short-term gains," says Phyllis Christian, CEO and managing consultant of ShawbellConsulting, who provide legal and business advisory services to companies in Ghana. "This is particularly relevant to the oil and gas sector as we have seen many countries that have discovered oil and been exploited by multinational companies who have at best limited interest in benefiting the local population. A company that becomes a trusted brand will be more successful than one that is not." •

Interview with
Anura Kaluarachi

GENERAL MANAGER, TAKORADI GAS LIMITED

Could you give a brief overview of Takoradi Gas?

Takoradi Gas was incorporated in 1995 and began operations in the same year. We started with small machines producing oxygen and acetylene gases for industries and then over a period of time, we expanded our production to almost all industrial gases. We both produce and import industrial gases to cater to the demand here. We manufacture industrial gases and also sell welding consumables such as electrodes. Takoradi Gas also carry a lot of specialty products for the oil and gas industry such as pipe welding and some welding gases. We also supply to the refrigerant gas market that used to be known as Freon gases, through imports from Spain, Italy and China. We have also diversified in to other areas; we want to create a one-stop-shop for the whole building industry. We have depots around the country, especially mining areas to do this. Over a period of time we have come to share the market in Ghana with Air Liquide. There are more players but on a smaller scale. Right now the mining industry is the biggest segment for Takoradi Gas. It has been forecast that in time there will be huge investments into the oil and gas industries however. At present the country is getting a lot of revenue from the gold industry. We are based right in the heart of 'Oil City' so we expect our relationship to evolve here.

What is your current relationship to the oil and gas industry? Which clients do you work with?

We work with almost all the players in Ghana right now such as Tullow, who contracts out to us. Takoradi Gas also works with all the drilling and rigging companies who also have subcontractors; it is not just upstream, but also the services sector. We work closely with Dominion Oil and Gas who work mainly in the oil fields. For example we supply acetylene gases to almost all the contractors and subcontractors.

How much of an emphasis does Takoradi Gas put on health and safety and how do you transfer that knowledge to your clients?

Health and safety is our prime concern because we are working in a dangerous environment. The mining industry introduced health and safety in to the country, bringing a lot of standards, which their suppliers had to comply with. Takoradi Gas is very strict; we have a Health and Safety Officer who makes sure all the products leaving the country complies with regulations, codes and practices. The oil industry has European and UN standards to adhere to and also introduced new safety standards in the country. This helped us to raise our standards, as we had to comply with their regulations in order to do business with them.

Does the boom in the market make the supply industry more competitive?

There has been increased competition in both Takoradi and throughout Ghana. Air Liquide was all over the country and then Dominion came in; however, with their entry, the oil and gas industry came in to Ghana and we have been able to take a share of the market. Now other companies are setting up their operations, which creates more opportunities and space to help our business. Also, we are meeting new suppliers from overseas and other African countries. When Takoradi Gas set up our operations we began aggressively marketing on our services. We provide a 24/7 operation and never close this factory so we can always deliver to our customers. Takoradi Gas started gaining more market share and we were able to prove that as a local player we can operate to international standards as we have foreign experts within the company.

Does Takoradi Gas intend to diversify into different lines of business in the future?

The company will continue to look for expansion into related products. We have built up our facilities, such as recently a new warehouse. Takoradi Gas hopes to do more business and bring more new products. We would also like to see what the oil and gas industry need and meet their demand for new products.

Where would you like to see Takoradi Gas in the next five years?

Takoradi Gas would like to be number one, as opposed to sharing the market. At the same time, our vision is to maintain first choice of customers, improve our services and bring more industrial standards. We would also like to look in to locally producing some products instead of importing them, such as oven gases like carbon dioxide.

Do you have a final message about Takoradi Gas?

Takoradi Gas can be relied upon to provide industrial gases; we capitalize on our service and we are available 24/7. We would like to offer a one-stop shop to all building or gas needs. Though we are a local company, we are a local-international company so we make ourselves available for anything at anytime. •

Interview with **Stephane Sole**

COUNTRY MANAGER, TECHNIP GHANA

Could you provide us with a brief introduction to Technip Ghana?

Technip first established a presence in Africa in 2009 and today has offices based in Egypt, Ghana, Algeria, Nigeria and Angola. In 2010 Technip completed projects for LPC, Kosmos and Anadarko and we are currently working on four projects.

In February 2011, Technip was awarded a contract from GNPC for a gas export plant and the engineering and design of an oil and gas processing plant that is near completion. In addition, we have been awarded a contract from Tullow for the Jubilee Fields.

What suite of services does Technip provide to its clients in the oil and gas industry?

Technip provides standard EPC contracts, using our construction expertise. Technip has been successful in the sub-sea sector where we are currently are involved in three EPC projects. Our strategy is to capitalize on the business activity within the subsea sector. In addition, Technip provides engineering and design services for onshore processing plants.

Can you provide us with an overview of your deal with Tullow? What innovative solutions did you use on the project?

Technip was awarded the contract for Phase One of the Jubilee Field project by Tullow. An IPC project team was created which gave Tullow responsibility of the operation and Kosmos was responsible for the CAPEX, which meant that all of our technical exchanges were with Kosmos.

We experienced some technical challenges whilst working on the project, and needed to find innovative solutions.

Is Technip focused on training a Ghanaian workforce?

Technip is proud of the training that has been completed in Ghana and we have successfully trained 15 local engineers out of our engineering centers. The Jubilee Fields project was completed with 45,000 Ghanaian man hours without one incident onsite or one lost time injury. We have developed an in-house HSC program called Perls.

We have created a partnership with Kumasi University that offers scholarship programs and specific oil and gas training for Ghanaians. In addition, we place emphasis on employing Ghanaian employees to work on our projects and we are creating an engineering company that will transfer more technology and increase man hours for local people.

How is Technip involved in the GNPC project?

Technip was awarded a contract by the Ghana National Petroleum Corporation, which was successfully installed and completed on time. Technip is particularly proud of the successful integration of GNPC engineers within the Technip team. The GNPC project advanced the further development of Technip's local capacity.

What are Technip's competitive advantages?

Technip is a leader and has a strong position in the deep-water market and we focus on projects that maximize local content. Furthermore, Technip has the expertise to plan and execute efficiently, whilst being able to create and maintain strong relationships with our clients.

Where do you expect to see Technip in Ghana in five years time?

The new engineering company that we will have established will be in a strong position and Technip will have completed all projects on time and on budget.

What is your final message for our readers?

There is a lot of potential in Africa and we are interested in opening offices in other countries. •

Interview with Roy Aboku

BUSINESS DEVELOPMENT MANAGER, MENERGY INTERNATIONAL

Could you provide us with a brief overview of the services that Menergy International offers to the oil and gas sector?

Menergy International is a proudly African oilfield services company that was established in 1989. We started our operations in Gabon and initially were a staffing agency; providing oil and gas companies with the personnel they required. We expanded into Cameroon and Equatorial Guinea before establishing Menergy Ghana in 1994. As the company has grown so has the portfolio of services that we offer. Today we provide travel support; arranging accommodation, transportation and catering for companies that choose to locate in Ghana. We act as a logistics support company for several of our clients and are looking to expand our equipment rental capabilities in the future. Human resourcing remains at the core of our business but we are responsive to the direction of the market's growth and are always interested in diversifying the range of services that we offer.

What are the major challenges that the Ghanaian oil and gas sector presents and what strategies do Menergy International employ to cope with them?

The Ghanaian petroleum sector has experienced dynamic growth but is still at an early stage of evolution. Menergy and other local companies can see the potential but do not necessarily have the capacity to capitalize. This is why we believe that collaboration is so important; sharing expertise creates new opportunities and expands companies' capabilities. Partnerships can also be a way around the financial demands that large-scale projects in the sector implicate. Currently in Ghana there simply is not the financial capacity to finance exploration and production projects so assistance is needed from further afield. The unreliable nature of oil production is another primary obstacle as this is an industry in which downtime costs millions of dollars. To combat this issue Menergy has emphasized broadening the range of services we offer and growing the company in a sustainable manner.

How important is the Ghanaian market to Menergy International's business?

Ghana is of great importance to our business; the corporate headquarters are now located in Accra and we see the country as a hub from which we can serve the African continent. Our goal is to become one of the largest logistics companies in Africa and Ghana is the fulcrum of our strategy for expansion and growth. We view the country as an attractive place to do business; economically and politically it is a stable location and is ideally placed geographically for our operations. Additionally many of our clients have established their regional headquarters in Ghana so it makes sense for us to be close to them. The Ghanaian petroleum sector has great potential and has experienced exponential growth in recent years. Menergy is an ambitious company and being located in Ghana gives us access not only to an exciting national market but also positions us to take advantage of wider regional opportunities.

What have growth figures been in 2011 and what projections do you have for 2012?

The year-end review for 2011 demonstrated that our growth had doubled between 2010 and 2011. This represents the most phenomenal growth in Menergy's history and sees us occupying a position of strength as the Ghanaian economy continues to expand. The key to our growth over this period was the increase in oil production caused by the rapid development of the Jubilee Fields site. Becoming a nation that produces commercial quantities of oil has put Ghana in the spotlight of the petroleum industry and has seen an influx of companies arriving to the market that require the expertise and local knowledge that we offer. We have set ourselves the target of repeating this growth and doubling our business again by the end of 2012.

Our strategy to continue growing is to diversify our services so that we can maximize the opportunities available to us. We are focusing on collaborating with strategic partners to strengthen our capabilities; working with a Dutch company in the provision of equipment rental, acting as the distributor for a Chinese company that supplies off-shore containers and considering partnerships with several UK firms as we move into the off-shore security business. The oil and gas industry is a highly technical one and our clients expect the highest standards of services. Menergy believes that by collaborating with a breadth of international partners we can meet with their demands.

Looking beyond the accomplishment of the immediate goals Menergy has set itself, are there any other areas that it is looking to expand into?

We are a dynamic company and constantly analyze the market for fresh growth areas. Oil exploration and upstream production are the areas in which ultimately the biggest profits are made. To this end we have entered into discussions with several Chinese companies with a view to establishing drilling operations. Do not be surprised if you hear that Menergy has acquired an offshore block for production. This is not one of our specific strategic objectives but is something that we would never rule out. Oil production is high-risk but also highly rewarded. Once we have established ourselves as one of the leading logistics providers in Africa we so no reason to restrict our ambitions and so upstream production would be a possibility in the future. •

Infrastructure Map

Source: World Bank

2011 GDP Growth

Actual GDP Growth:

14.4%

Without current infrastructure:

13.4%

With reliable power supplies:

14.9%

With middle-income infrastructure:

17.1%

Source: World Bank

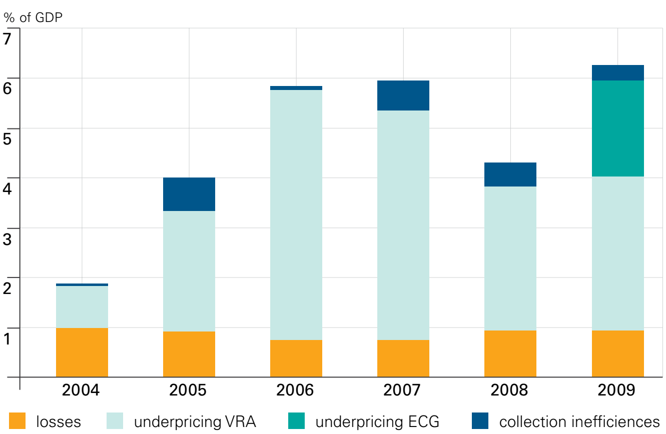
Infrastructure Spending

Source: World Bank

Current Spending	$1.2 billion
Required Spending over the Next Decade	$2.3 billion
Current Loss due to Inefficiencies	$1.1 billion

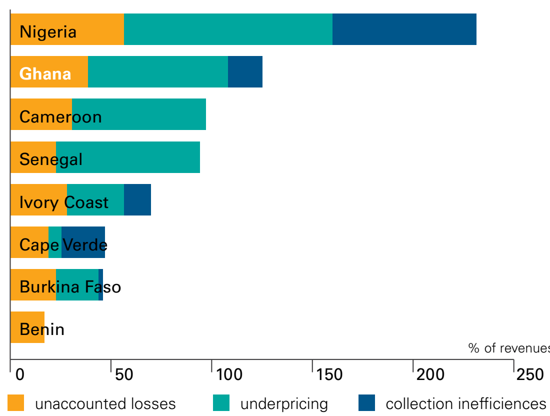
Hidden Costs in Ghana's Power Sector

Source: World Bank



Hidden Costs of Power Utilities in Selected Countries

Source: World Bank



Logistic Solutions

Imports, exports, and distribution

When Ghana remained a low-income country, its infrastructure network was impressive. Its paved road density, at 158.1 km per 1,000 square km of arable land, is almost double that of the low-income average. Its unpaved road density is also significantly higher and it spends enough on maintenance and rehabilitation to sustain this position, unlike its regional peers such as Nigeria, Senegal, or Cote d'Ivoire.

Its railway, although not extensive, has tariffs equal to those of the region and significantly lower than the average of Central and Southern Africa. Its two ports, Takoradi and Tema, have a general cargo handling capacity of 5.5 million tonnes per year and 8.5 million tonnes per year respectively; higher than regional peers such as Nigeria's Apapa port, at 5.0 million tonnes per year.

Yet these congratulatory figures hide two distinct problems. Firstly, Ghana is no longer a low-income country. As of 2011, Ghana is officially classified as a lower-middle income country, and in that group Ghana falls distinctly behind. The country's paved roads, unpaved roads, port capacity, and most other indicators of solid infrastructure all fall behind the average for middle-income economies. Raising the infrastructure to the level of the region's middle-income countries would boost annual GDP growth from the 1% it has contributed throughout the past decade to 2.7%.

Secondly, logistics involved in the oil industry are more complex and involve an increase in transportation volumes that the country was unprepared for. The sheer amount of imports and exports created since the oil boom has played a major role in the congestion currently afflicting Ghana's ports, which, in terms of efficiency and despite their relatively large size, rarely rise above mediocre in comparison with regional competitors.

Companies from every field see this as one of the major hurdles the country must overcome. "The obstacles Ghana faces are in developing its infrastructure at a much faster pace, establishing reliable power generation and in selling itself as a proposition to the investment community," says Nana Koranteng, head of energy at Fidelity Bank, one of Ghana's fastest growing financial institutions. "The challenge is in bridging the gap between the potential and the actual and this is where the opportunities for investors lie."

Nonetheless, it is the oil and gas industry for which this lack of adequate infrastructure causes the most concern. This is, essentially down to three factors: the size and complexity of the equipment needed for this industry; the lack of knowledge still surrounding many of the more technical aspects of the industry; and the lack of domestic manufacturers. "Imported equipment can cause logistical challenges because of the lack of knowledge in Ghana about oil and gas equipment, so it is important for Global Energy Ventures to forward plan and invest more resources into spare equipment and tools. As the Ghanaian oil and gas sector develops, knowledge will improve and local vendors will establish that will manufacture equipment locally," says Darren Last, country manager of Global Energy Ventures, a fabrication and inspection company.

To solve this problem will require substantial finance and effort. The government already spends roughly $1.2 billion a year on infrastructure, equating to around 7.5% of GDP. Yet it is estimated that a further $0.4 billion to $1.1 billion a year would be required to fully address the issues that currently exist. While the benefits of this may be obvious (the same amount is lost to inefficiencies in the infrastructure and utilities system, and opportunity exists for Ghana's ports to take on the role of a regional hub), this is nonetheless a substantial sum of money.

Fortunately, the Ghanaian government has shown signs of commitment to the country's infrastructure. Both the Petroleum Revenue Management Act and the 2012 Budget place a large emphasis on investing in both oil and gas infrastructure and general infrastructure for the country as a whole. Indeed, the theme of the 2012 Budget was "Infrastructure Development for Accelerated Growth and Job Creation".

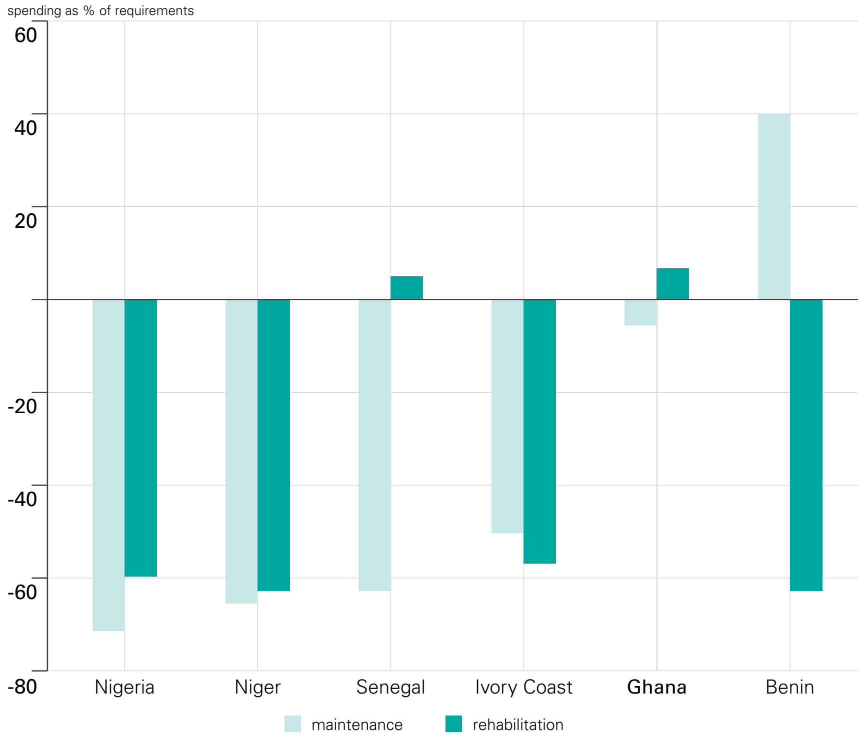
Specific provisions in the budget account for more detailed aspects. For example, there are plans to introduce a Ghana Integrated Cargo Clearance System in the country's ports and broaden the coverage of the database of goods imported into the country. Inland, six major highways currently being constructed are due to be completed this year and the Kotoka International airport is being rehabilitated and expanded.

Ghana's infrastructure cannot rely solely on investment. Issues such as a weighted tariff rate of 8.6%, which is fairly high, and numerous non-tariff barriers to trade, must be dealt with by policy rather than money. Yet for the most part, the key aims of Ghana with regards its infrastructure should be more and more modern.

The oil and gas industry, as a catalyst of growth, an importer of equipment, and an exporter of crude product, has played a significant role in hastening the inadequacy of the country's current infrastructure network. This is not a bad thing. Rather, the industry is playing a classic role as an enabling industry; not only highlighting the need for increased infrastructure investment, but providing the money and motivation to carry it out. •

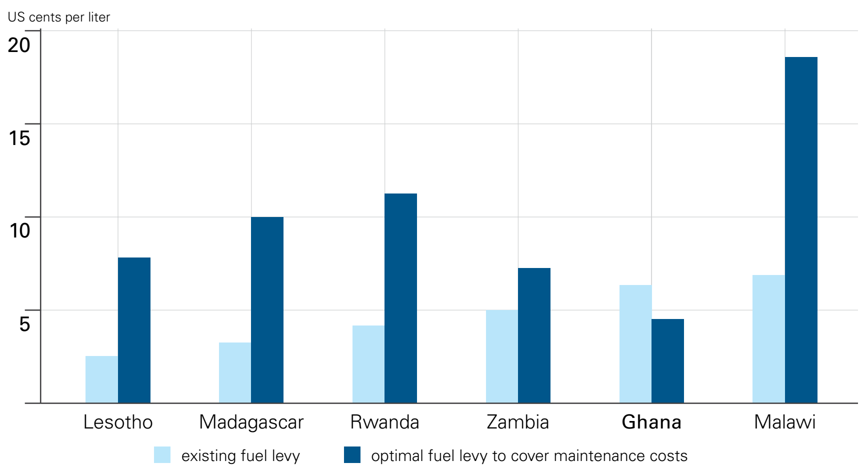
Maintenance and Rehabilitation Needs

Source: World Bank



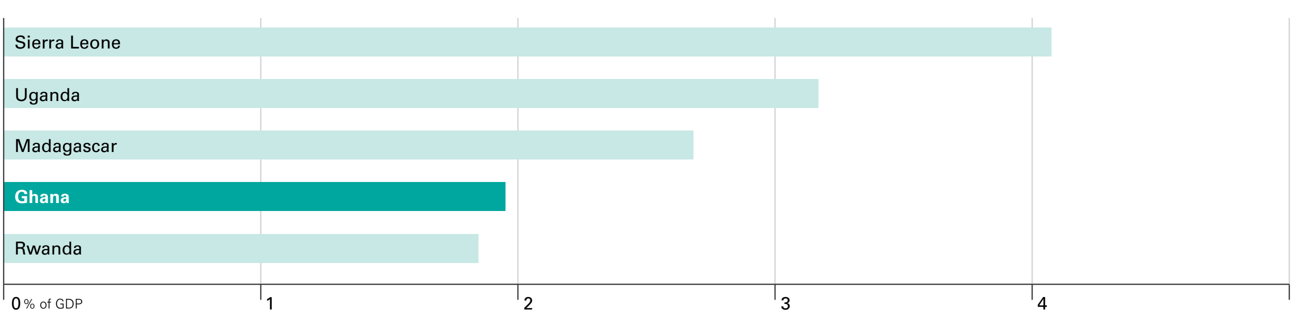
Fuel Levy and Maintenance Needs

Source: World Bank



Economic Cost of Power Outages in Selected Countries

Source: World Bank



Interview with Ernest Poku

COUNTRY GENERAL MANAGER, AOS ORWELL

How has last year's merger between African Oilfield Services and Orwell International aided your development in West Africa?

The merger brought two different sets of skills together. Orwell was a Nigerian company; African Oilfields Services, while operating in Nigeria, had a lot of exposure to Europe through its staff and investor base. The combination of highly experienced indigenous Nigerian staff and access to international financing enabled the company to move more internationally. In Ghana, we have some Nigerians bringing local staff up to speed; and we hope to bring that model into a number of other countries. Having acquired Emerson late last year, we are no longer just an upstream company. More than 90% of our staff, including the head, are Ghanaian; one of the things that differentiates us in Nigeria is our strong focus on local content, and we believe in the importance here of reducing the number of ex-pats on our books. Because of our size, we have been able to enjoy relationships with major service providers, some of them the best in the world, and bring more services to the industry. We offer around 15, now. We also acquired ANC last September.

What are your core capabilities in Accra?

So far, we have brought what we consider the most desperately required services from Nigeria into Ghana, allowing companies to do as much as possible without having to get things in from outside. We started with a machine shop, for oilfield equipment repairs and manufacture of small pieces. The most important asset now is the license to manufacture Vam, a type of oilfield casing made by Vala in France and very commonly used in-country by people like Tullow; we are the only company west of Nigeria with this ability, and have a similar license with a company called Grant Pryco. Building from there, we set up a remedial drilling service. This basically means the ability to fish for tools – we have one of the largest fishing inventories outside of Nigeria. We are now bringing additional rental and manufacturing services, expanding our machine shop, and offering a pressure testing facility.

You are looking at putting around $5 million into the company here. What is the specific nature of those investments?

Firstly, we had to purchase a lot of machine shop, fishing and rental equipment overseas. That made up the majority of our cap-ex; our op-ex consists of training, staff, the scope to manufacture and import, and potentially the acquisition of more assets in the country. As we expand our service line, the need to bring in additional equipment will drive our investment. It is worth bearing in mind that Ghana is becoming the regional hub, and we might be able to serve the whole coast.
The industry, and its good opportunities, will determine exactly how we invest.

How much of a cost advantage will manufacturing in the country bring you?

The key cost advantage is not actually for us, but the operator. If something happens on a million-dollar-a-day rig, they could be looking at four days to bring replacements from Aberdeen, even in airfreight; with in-country manufacturing, it will take a maximum of 48 hours. That two-day saving could be, literally, a million dollars. It is also very close to my personal heart to increase the amount of indigenous manufacturing we do here. The skills are here to make a lot of the things used in oilfields, so it is more about making investments in technology and time.

What pressure is placed on service companies to keep up with the pace of the Jubilee oilfields?

It was great that Tullow found them because, without a rulebook, they were able to break the world record. This requires us to tear up our own rulebook and invest more and faster than we would normally. It can be a challenge to convince investors because, sitting in another part of the world, they do not view Ghana as the special place it is.

What are your strategic goals for the next year?

Over time, we expect to bring into Ghana all the major services that are run in Nigeria, based on market need. We have started as a third tier supplier, supplying a lot of services into the main service companies, but where we have succeeded in Nigeria is as an indigenous company operating at that same level: with training, we aim to get there in Ghana over the next 18 to 24 months.
Anyone will tell you that AOS Orwell is different from the other companies. Rather than just aiming for one five year $20 million contract with, say, Shell, we want to be spread amongst all the operators.

Will the company continue making acquisitions?

In Nigeria, we want to acquire every six months. The companies we buy often have a footprint overseas. AOS now have a base in Uganda; our ambition is to an indigenous pan-African operator.

Do you have a final message?

We do not mind how much the government ratchets up local content laws. We will comply with them, and pull more Ghanaians in to do the work that they can do. •

Interview with Frank Tony Eshun

MANAGING DIRECTOR, DAMCO

Could you provide us with a brief introduction to Damco in Ghana and West Africa?

Damco first established in Ghana in 1997 and has developed local offices in many West African countries. Damco is one of the leading global players in the freight forwarding industry and does not operate through agencies. Damco is involved in supply chain management and is able to provide key turn solutions for clients. Other services that we provide include trucking and warehouse management, housing and accommodation services and crew changes for the oil and gas industry in Ghana.

How important is the oil and gas industry for Damco in Ghana?

Oil and gas has become a critical part of our business, although oil and gas clients require more specific and complex services than traditional logistics customers. As more oil is found in Liberia and Sierra Leone it is becoming increasingly important to co-ordinate our logistic activities within Ghana and West Africa. A major focus for our Head Office in Denmark is to grow our logistical capabilities for the oil and gas sector.

What are the main services that you provide for the oil and gas industry?

Damco is required to co-ordinate and manage offshore crew members, provide housing facilities in addition to solving any immigration issues and obtaining clearance of cargo for rigs. Damco provides open and closed spaced warehouse facilities and agency services to oil and gas companies who require additional staff.

A vital service that Damco provides is reliable transportation to oil and gas companies through chartering by plane or ship or through our partner, who is a leading crane provider in the industry.

How reliable is Damco in terms of transportation and delivery time?

All of our customers expect good service, although the logistics involved in the oil industry are more complex and delays can have huge financial impacts on companies. It is vital that Damco selects reliable partners to collaborate with and chooses partners using our global standards. Damco has a strong reputation within the oil and gas industry as a reliable company that is able to delivery on schedule.

What innovative solutions does Damco use in Ghana in order to remain competitive?

It is important that our customers have access to as much information as possible. Damco has introduced a new application that is available on Blackberry and Android to allow our customers to track and trace their cargo, which enables companies to plan and prepare in advance. This is a unique service that Damco offers and it is one of our competitive advantages.

How does Damco insure cargo? What challenges do you experience whilst transporting inland in Ghana?

Freight forwarding cargo is insured before it arrives in Ghana, in addition to local insurance.

Traffic is an issue in Ghana and roads are narrow, which is a challenge when transporting cargo in trucks. However, our facilities are located close to the Takoradi port, which is where large oil companies like Kosmos are based.

How competitive is the logistics market in Ghana? What is the main challenge that Damco faces in the oil and gas industry?

The market is competitive and our main competitor is Savannah Logistics in addition to Ghanaian owned players in the market like (17.05). However, Damco has competitive advantages because of our global network, the reliability of our services and our ability to transfer experienced staff from other countries to different projects.

The industry is still evolving in Ghana, which means that processes are constantly changing and still have to improve which is an overall challenge for the industry.

What is your future growth strategy in Ghana and West Africa?

Our growth strategy is to utilize the trained employees that we have to enable Damco to obtain more tenders. In addition, we want to increase the number of partners that we have to enable us to meet our growth goals. Damco will expand into mining logistics and freight forwarding by using our oil and gas logistical expertise.

The western African region is managed from Senegal but Ghana is the largest African office and plays a key role in Damco's operations. In 2012 we are expanding our operations by opening offices in Liberia and Sierra Leone where there is active oil and gas exploration. Damco has a 10% market share in freight forwarding in Ghana. •

Interview with
Soraya Anglow

EXECUTIVE DIRECTOR, GREENLINE LOGISTICS

Could you provide us with a brief history of Greenline Logistics' operations in Ghana, highlighting any major milestones?

Greenline Logistics is a 100% Ghanaian. We were established in 1994 to provide transport services of explosive goods to the mining sector. Since then our business has diversified; we now offer logistics management, clearing, forwarding, equipment rental, warehousing, and haulage. The Jubilee Fields discovery in 2007 brought new companies to Ghana and created a need for the accommodation of their employees. In response to this we launched Westport Realty & Management; a sister company to Greenline Logistics that is responsible for constructing and developing real estate. We began operations in Takoradi and in 2011 established a second office in Tema, counting on a workforce of 90 employees. This gives us the capabilities to service both ports and to have convenient access to Accra.

How important is the oil and gas sector to your business?

We do not currently work directly with any clients from the oil and gas sector but it is an area we are committed to expanding into. Ghana is now producing commercial quantities of oil and this has provided significant stimulus to the economy and created a boom in the petroleum sector. Our business began in Takoradi and we have seen the influx of oil companies there; the new future of the city and of the country is tied to oil. Greenline Logistics has recently registered as a service provider with the Ghana National Petroleum Commission (GNPC) as we see servicing clients from this industry as a major focus for our operations in the coming years.

In particular our real estate division is targeted to oil and gas clients and we have significant plans for growth in this part of our business. We are building a concrete factory that will give us a supply of 80,000 blocks per day; these will largely be sold to developers but will also enhance our ability to rapidly develop new sites. Equipment rental is another focus for growth and we are looking to expand our fleet to better provide for the needs of oil and gas companies.

What are the major challenges to operating in Ghana?

The level of infrastructure in Ghana is the key challenge for logistics companies, in fact for any companies with serious operations in the country. For Greenline Logistics it is important that we can guarantee the timely arrival of our equipment to our clients and this is difficult with the current state of roads and other communications links in Ghana. Delays are not the only problem that the country's road network can cause; the uneven surfaces heighten wear and tear on our machines and can lead to expenses further down the line.

The other issue when considering oil and gas is that it is an industry in which services companies have to rely to some extent on speculation. The rate of production from oil fields is not reliable and the surges and downturns have an instant impact on our business. Many companies will make large investments or diversify their services anticipating growth that never comes. There is no clear-cut plan for the future of oil production in Ghana; new sites may be discovered tomorrow that could for example shift the focus of the industry away from Takoradi. Managing our growth so that we develop sustainably but can be responsive to the fluctuations of the oil industry is a major challenge.

Will your growth strategy be to continue focusing on serving the Ghanaian market or do you have any plans for regional expansion?

Ghana will continue to be our core market; however we are interested in expanding our operations into Cóte d'Ivoire and also considering other markets. There is not a strong tradition of Ghanaian companies expanding outside of the national borders when compared with for example Nigerian companies. However at Greenline Logistics we are keen to go against this trend and see the possibilities that Ghana has for becoming a regional hub for our operations. The country is ideally placed geographically and has the advantage of political and economic stability. We would like to bring the Ghanaian angle of business to other countries in the West African region; beyond Cóte d'Ivoire, Liberia and Sierra Leone also present interesting opportunities.

In a competitive market what are Greenline Logistics' strengths?

On-time delivery is the most important criteria for our clients. We have worked extensively in the provision of explosives to the mining industry and this is a service in which delays are not accepted; we have applied this attitude to all of our operations. This can be difficult working in a country with developing infrastructure but we are willing to go the extra distance to ensure our clients receive our services on time and to the standard they expect. The expertise and experience of the staff we employ are crucial to Greenline's strength. Our ethos is that our success is their success; they are the most important factor in determining the quality of service that we provide; this core belief breeds an environment in which employees are dedicated to keeping our clients happy and are constantly striving for excellence. •

Courtesy of Technip

The Danger of Dutch Disease

Why Responsibility is Important When Developing Ghana's Industry

Growth Brings Challenges

Ghana's susceptibility to "Dutch Disease"

Estimated Petroleum Revenues 2012

Source: Ghana 2012 Budget

	Amount (GHS million)
Royalties	236.87
Carried and Participating iInterest	618.84
Corporate Taxes	384.11
Total receipts	**1,239.82**

It almost seems churlish to go on about the so-called "Dutch Disease". After all, by its very definition a sector can only be the cause of this economic malaise if it is bringing investment to a country. The oil and gas industry, for which the term was originally coined and to which it is still most commonly applied, attracts voracious criticism when things go badly. To launch an attack when things are going well seems simply spiteful.

In Ghana, things are going well. There are the inevitable complaints that occur whenever expectations of instant prosperity are not met by reality, yet oil revenue has assisted a continual decline in poverty rates and an increase in a GDP-per-capita that already outperforms any of the country's regional peers. Income inequality has risen slightly, but when faced with the massive developments in the overall economy the worries of Dutch Disease that have persisted ever since 2007 look increasingly paranoid.

This is especially true when those worries reach a fever pitch after a year of record GDP growth. Yet 2011, in the eyes of many, showed the first real symptoms of a deep malaise in the Ghanaian economy. A failure of other economic sectors to achieve targeted growth has been blamed on the rapid growth of the oil industry and the subsequent inflow of foreign currency. In a classic case of the Dutch Disease, it is claimed that this is responsible for raising costs for other sectors, making them uncompetitive.

The figures certainly appear to support this conclusion. The manufacturing sector grew by just 1.7% against a target of 7%. The slow-down here has been dramatic; up until 2008 it easily ranked among the upper quartile of fastest growing industrial production in the world. The agricultural sector grew just 2.8% in 2011, against a target of 5.3%. In contrast, the mining and quarrying sector, including and driven predominantly by petroleum, grew 225.4%. The trade deficit, driven predominantly by oil service companies, increased by 8.3% to $2.6 billion between January and November last year; a supposedly sure sign that local industries can no longer compete against foreign imports.

There are, however, reasons to dismiss this bleak picture of an afflicted nation. Lower than expected growth can be explained by a multitude of factors: while fledgling industries undoubtedly face challenges operating in a resource-dominated market, they can also accrue benefits. And while Ghana may be showing some symptoms of Dutch Disease, other trends are precisely the opposite of what one would expect.

The trade deficit, though decreasing year-on-year between 2010 and 2011, has not shown a significant long-term worsening. Indeed, the largest quarterly trade deficit of the past decade was back in 2008. The lowest quarterly deficit of the past few years was in 2011. Furthermore, the oil industry itself has a net negative impact on the balance of payments, with $2.7 billion of crude oil exports against $3.3 billion of oil product imports: this is hardly indicative of a sector flooding the market with foreign currency to the detriment of other sectors.

Neither can the problems of other industries be attributed solely to Dutch Disease. Manufacturing, for example, has suffered due to the high price of utilities and the removal of tax holidays. Indications are that this situation will improve. The electricity sector grew by 13.7% in 2011, exceeding the estimated 13.3%. A National Industrial Policy launched in June last year hardly points to a government neglecting the sector. While the volatility in prices of natural resource, and the subsequent effect on the economic health of a country reliant upon them, is thought to deter investment in other industries, the roughly 800 projects being carried out last year by Indian and Chinese investors were predominantly in the manufacturing

sector.
In the agricultural sector, the below-target growth can be attributed to a drastic decline in the forestry and logging sub-sector; every other sub-sector grew, including record production levels in cocoa production. Sectors such as construction and finance have been increasing their role in the economy over the past few years. Ghana has a long way to go before it becomes a single-industry economy.
Typically, a country suffering from Dutch Disease will show an appreciation in its currency. It is arguably this appreciation that hurts other industries more than anything else; a strong currency raises costs against foreign imports. This is what happened in Holland in the 1960s,

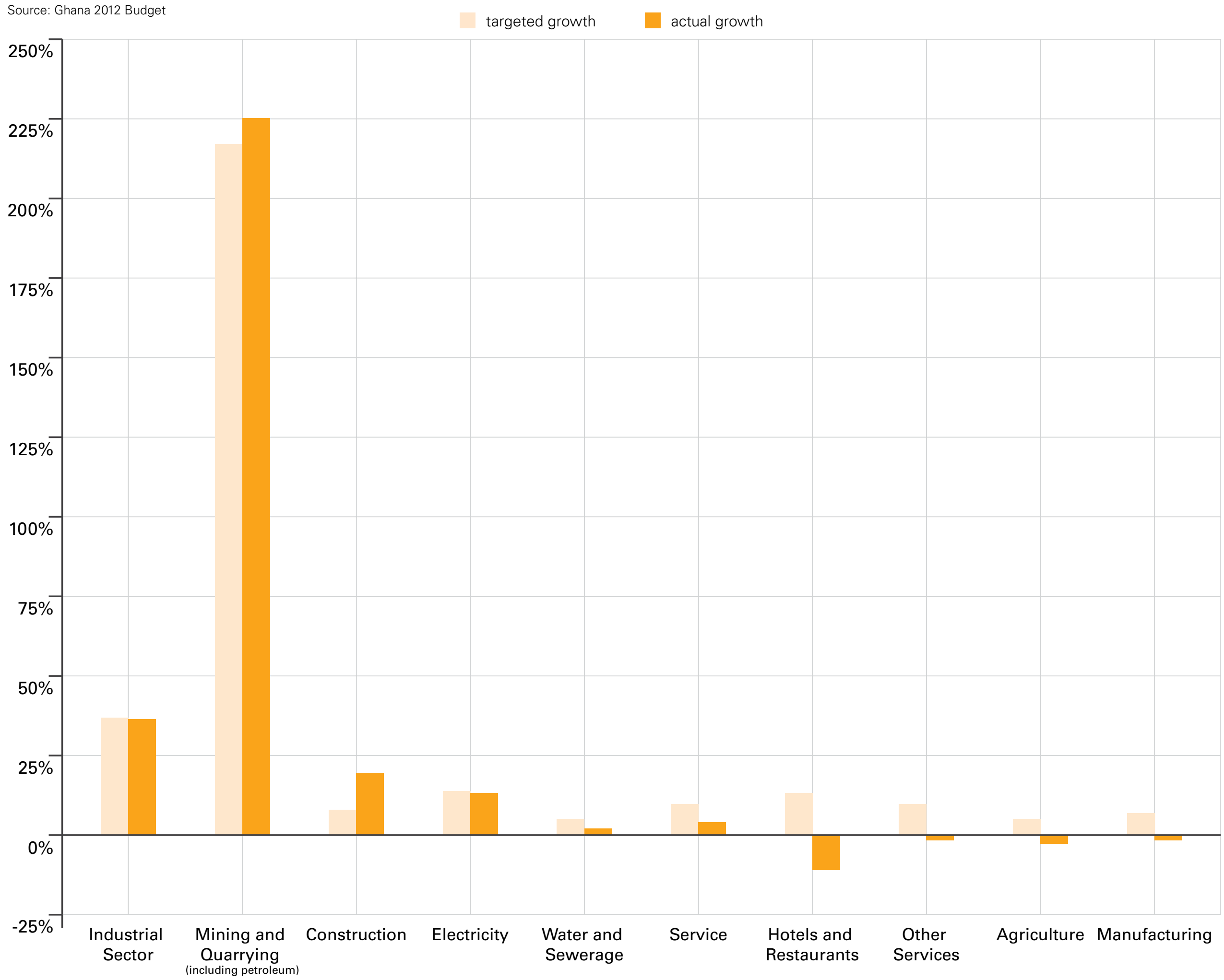
2011 Key Economic Indicators

Source: Ghana 2012 Budget

Description	Target 2011	Projected outturn to end of 2011
Real GDP growth rate (excluding oil)	7.5%	8%
Real GDP growth rate (including oil)	14.4%	13.6%
12 month CPI inflation (average)	8.7%	9%
End of period inflation	9%	8.6%
Gross international reserves	Reserves not less than three months of import cover of goods and services.	
Overall budget deficit	5.1% of GDP	4.8% of GDP

Economic Growth by Sector in 2011

Source: Ghana 2012 Budget



prompting the recognition of the problem, and this is partly what has caused speculation about Dutch Disease in Australia since 2009. The Ghanaian cedi has not shown this same trend. It has slightly appreciated against the US dollar in real terms, but has depreciated in nominal terms. Other examples of Dutch Disease (such as the two mentioned above) show a dramatic appreciation in both real and nominal exchange rates. The Ghanaian cedi simply does not.

When Nigeria's oil boom began in the 1970s, it marked the start of a long decline in for other sectors of the economy. Oil jumped from 5% of exports to 90%, and the former staples of the Nigerian economy; palm oil, cocoa, timber, tin, etc; lost their position among the world's leaders. It is only recently that Nigeria is starting to turn the corner in this regard, and is once again regarded as an exciting destination for investment in all industries, rather than simply the petroleum sector.

It is too early to discount the possibility of the same happening in Ghana. Previous examples would indicate that the true effects of Dutch Disease are not obvious until at least five years after the initial resource boom. Yet with the awareness of the danger there now is, and the amount of scrutiny from media and analysts around the world, one would have thought that by now there would be more obvious symptoms.

We may well see an increase in Ghana's government expenditure this year. The salaries of public sector workers may well increase. The most probable explanation is that this will be caused by spending leading up to the December election; there are few governments in the world willing to tighten the purse-strings before an election. However, by some this will be claimed as evidence of Dutch Disease, enabled, as it is, by oil revenue and causing, as it may, an appreciation in real exchange rate. Yet to claim this, to say that any problems are a symptom of a deeper and more dangerous affliction unintentionally caused by a successful oil industry, simply cannot be done with the evidence we currently have. •

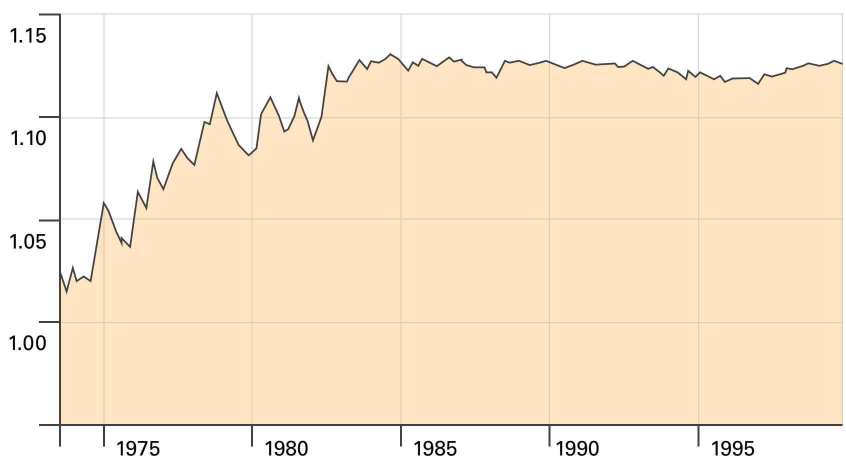
Currency Exchange Rates

Source: xe.com, Bundesbank

AUSTRALIA: AUD to USD

GHANA: GHS to USD

HOLLAND: Dutch florin to German mark



Examples of Dutch Disease: Nigeria

Non-oil Export Performance

Source: Shepherd University

	1973	1974	1975	1976	1977	1978	1979	1980	1981
Volume									
Cocoa	214	194	175	219	168	192	218	187	108
Palm kernels	138	186	171	272	186	57	51	50	92
Rubber	49	61	61	34	28	31	34	31	24
Groundnuts	199	30	5	2	0	0	0	0	0
Total Non-Oil Exports (mil. of 1975 naira)	549	578	350	343	366	375	360	270	141

Basic Development Indicators

Source: Shepherd University

	1970	1980	1990	**Last year** (in parentheses)
PPP GDP per Capita	$255.96	$893.92	$983.04	$826.47 (2000)
Life Expectancy at Birth		46	52	45 (2002)
Male Adult Literacy Rate		59		74 (2002)
Female Adult Literacy Rate		38	39	59 (2002)
Gross primary school enrollment rate	37	104	75	96 (2002)
Gross secondary school enrollment rate	27	22	19	

Agricultural Performance

Source: Shepherd University

	Index of Output per Capita			
	1969-72	1974-78	1979-81	1982-83
Nigeria				
Agriculture	100	91	91	84
Food	100	92	92	85
Developing World				
Agriculture	100	103	105	104
Food	100	104	106	106

The Business Environment: **An Economy Breaking Down its Investment Barriers**

"One piece of advice we always impart to foreign companies that come to Ghana is to demonstrate that they are making a long-term commitment to operations in the country and are not here just to make short-term gains. This is particularly relevant to the oil and gas sector as we have seen many countries that have discovered oil and been exploited by multinational companies who have at best limited interest in benefiting the local population."

- Phyllis Christian,
CEO, ShawbellConsulting

Doing Business

Ghana as a destination for foreign investment

In macroeconomic terms, Ghana is attractive. Strong policies and exploitation of the country's natural resources led to a steady rise in the economic growth rate from 2000 to 2008, peaking at 8.4% in 2008 before the global economic crisis caused growth to fall to 4.7% in 2009, rising then to 7% in 2010 and a remarkable 14.4% in 2011. GDP growth is forecast at 11% for 2012.

Slight concerns remain, including high inflation (19.3% in 2009 and 10.7% in 2010) that so often accompanies rapid economic growth. However, inflation fell to a two-decade low of 8.4% year-on-year in July 2011 and the overall rate for 2011 was 8.8%, achieving the Bank of Ghana's 9% inflation target for the year.

Ghana's economic freedom (2012)

60.7

Source: Heritage Foundation 2012 Index of Economic Freedom

Ghana has the resources to immobilize four-month reserves for import cover and the GDP of the country has shown the true nature of the economy, according to George Aboagye, CEO of the Ghana Investment Promotion Center. "In addition, the profit margin in Ghana tends to be high, so investors are able to make money. However, local investors who borrow within Ghana have high interest rates of 22%, which is a challenge for smaller companies," he says.

Other factors also contribute to Ghana's attractiveness. "We have experienced greater political stability in the last 20 years than most other countries in the region," says Benjamin Dabrah, managing director at Barclays Bank Ghana. "The rule of law is solid, so companies know they will not wake up one day to find their assets confiscated by the government. Ghana is a peaceful country with no terrorist activity or civil strife. Power is handed from the ruling party to the opposition party every eight years, and our democracy is much stronger as a result. Additionally, we have one of the most diversified economies in Africa, relying not solely on diamonds or copper, but a combination of gold, oil, cocoa, and agriculture. All of these factors combine to make Ghana a robust nation and a haven for investment in West Africa."

Indeed, the relative turmoil that has affected Ghana recently, with the untimely death of President John Atta Mills just a few months before the planned December election, did more to confirm this political stability than undermine it. Power was handed to Vice President John Dramani Mahama, and the December elections are expected by analysts to go forward without problem.

Yet Ghana's stability has been established for longer than Ghana's oil industry. As a result, there are arguably more concerns for investors in exploration and production than there are for investors in other sectors of the economy.

The regulatory framework governing Ghana's offshore petroleum industry is both extensive and complicated, falling under a variety of domestic laws and international maritime treaties. This is compounded by the fact that "Ghana was not prepared in advance for the discovery of oil, so the country is still trying to develop its resources to meet the demand," says Hon. Joe Oteng-Adjei, Ghana's Minister of Energy.

The primary administrative responsibility for Ghana's offshore fields lies with GNPC, who hold both commercial and regulatory responsibility. The GNPC

Ease of Doing Business

Source: Doing Business database

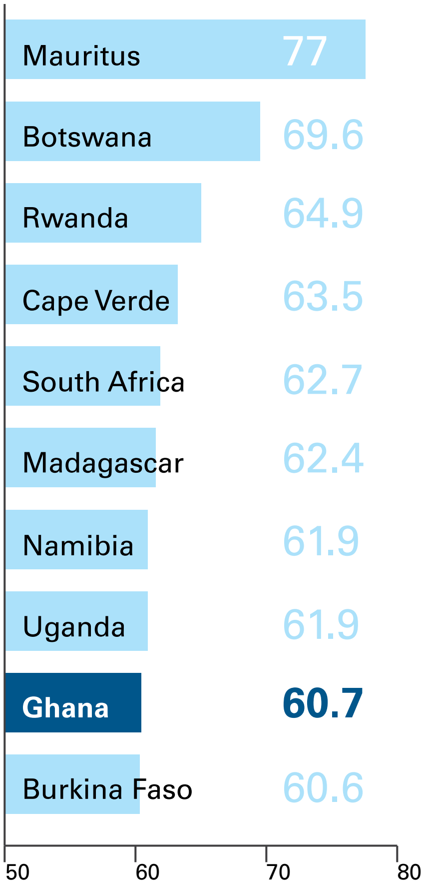
Sub-Saharan ranking		World ranking
1	Mauritus	23
2	South Africa	35
3	Rwanda	45
4	Botswana	54
5	**Ghana**	**63**
6	Namibia	78
7	Zambia	84
8	Seychelles	103
9	Kenya	109
10	Ethiopia	111

acts as a commercial, or private, entity with whom IOCs must enter into a Petroleum Agreement. Under a typical agreement, GNPC takes a 10% initial interest; with an additional 5% interest should the project become commercial. Exploration periods last up to 7 years, at which point the contract can be renegotiated.

The government takes their royalties in the form of oil, which the GNPC then sells on the market. For example, the overall total output for the first year of operation was 24,451,452 barrels. Ghana's share made up of royalties, carried and participation interests was 3,930,189 barrels representing 16.08%. Progress in streamlining the process and providing transparency has been rapid. It achieved compliant status with the Extractive Industries Transparency Initiative in December 2010. In the last quarter of 2011, the Ghanaian government set up the National Petroleum Commission. At the beginning of 2012, a World Bank grant of $100 million required the Ghanaian government to establish an independent petroleum regulatory commission; it is believed this will take the form of developing the regulations governing the National Petroleum Commission. •

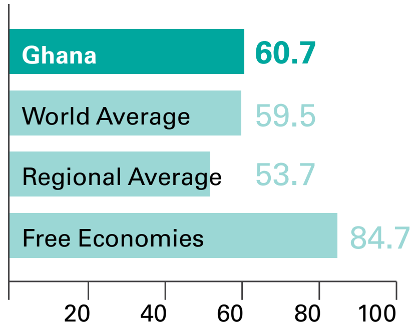
Regional Ranking

Source: Heritage Foundation 2012 Index of Economic Freedom



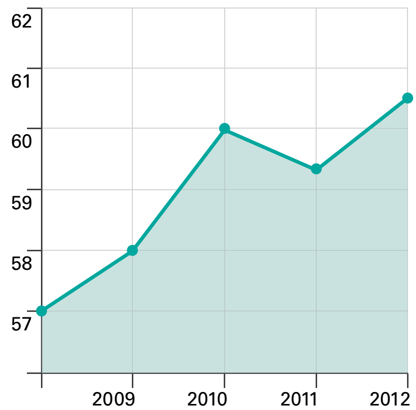
Ghana's Economic Freedom

Source: Heritage Foundation 2012 Index of Economic Freedom



Country's score over time

Source: Heritage Institute 2012 Institute of Economic Freedom



Interview with Anthony Matthews

MANAGING PARTNER, MATTHEWS CONSULT

Could you give us an overview of Matthews Consult?

In Matthews Consult we provide support and advisory services to companies looking to invest in Ghana's oil industry. We guide our clients throughout the whole process – from the acquisition of land to arranging their accommodation and transportation. The industry is still very immature and this is one of the reasons for the low demand of our services at this moment. The other reason is that most international companies which are interested in operating in Ghana normally have everything set up for them before they get here and they do not need a local representative. Our practices are designed to serve corporate needs and we do not work with individual investors.

What is your opinion of the regulatory framework in Ghana?

There is not a regulatory framework regarding foreign companies in Ghana. Many companies come here, work offshore and two weeks later leave the country with our resources. These companies do not give anything back to the society or the government and, in my opinion, the average Ghanaian does not benefit at all from these operations. The government is not taking any reasonable actions to stop this process. Nigeria experienced a similar situation and even after the society started expressing its discontent explicitly there were only a few small changes that took place.

Ghana has had a very stable political history over the past four years. What do you think will be the outcome of the upcoming elections?

Ghana has been and will always be a very democratic country. This, however, is not entirely due to the government – the mindset of the Ghanaian society is very peaceful and democratic. There are many people expecting drastic economical changes, however, in my opinion, this will not happen. The Ghanaian society's culture is very specific and straight forward. We are very peaceful people, we never fight physically. On the other hand, we are very self conscience and we know what is right and what is wrong. I know for a fact that if somebody commits a crime in Ghana they will immediately go to jail simply because nobody – even their closest friends – will cover for them. Our culture and mindset make Ghana a safer country than most of the developed European countries. As a nation we are supportive of each other and this is the basis of our culture. Many people see South Africa as the most developed country on the continent but I think that Ghana is far ahead of South Africa in terms of democracy. We have passed through many difficult periods and we have learned valuable lessons which help us in the development of the industry and the economy overall.

What do you think would be the effect that the development of the oil industry will have on Ghana?

The discovery of oil in Ghana has been a true blessing for the country. The industry is still very young and, although it will take some time before the country starts benefiting from this newly discovered resource, I am certain that the effect will be beyond positive. Given that we use this discovery correctly, we could once for all build a stable electricity network, improve schools and build new ones, put money into the health system etc. All of these improvements are real possibilities and they could have a direct effect on the Ghana's economy while making it more attractive for foreign investors. In my opinion the oil industry here has a lot of potential and it will grow above the estimates of the experts.

Where do you see Matthews Consult in five years?

As the industry evolves I expect the demand for our services to increase. I predict a very bright future for the oil industry in Ghana and I would advise any company looking to invest here to do it now because in five years it might be too late. •

Interview with Phyllis Christian

CEO, SHAWBELLCONSULTING

Could you provide us with a brief overview of the services ShawbellConsulting offers to the oil and gas industry?

ShawbellConsulting was established in 2002 with a focus on providing management consultancy and legal services to government and private sector institutions. Today the business is split into three divisions: ShawbellConsulting Limited is the principal operation and offers management consultancy and institutional reform services, ShawbellConsulting Lex focuses on legal advisory and the Ghana Institute of Consulting provides capacity-building support to professionals. Additionally we organize the Skills Resource Network which is a non-profit enterprise to help Ghanaian graduates and young professionals encounter employment opportunities. ShawbellConsulting has a core group of clients that are doing business in the petroleum sector currently. Of note is a consortium exploration group which we have served since 2008 and whom we successfully supported through the process of securing a license to operate in Ghana. We were proud of that achievement as it was no mean feat. Our legal division has advised clients that offer support services to the industry and we have consulted on organizational development programs for various multinational companies in both the upstream and downstream petroleum sectors. We receive regular enquiries from companies considering entrance into the Ghanaian market and have worked with them in an advisory capacity. There is a real breadth to the capabilities that we can offer to the oil and gas sector and we can only see our business in this area growing.

What are some of the growth strategies you employ to attract new clients and develop your business?

The foundation for future growth is to ensure that our existing clients receive the high quality of service that they expect from us. We want our clients to succeed and for their businesses to grow; the role we can play in that is to ensure we keep them informed as regulatory frameworks develop and to provide expertise and professional services they can rely on. Establishing lasting relationships with our clients builds our reputation and wins us future business. The secondary strategy we are employing is to promote ShawbellConsulting and the services we offer through networking and other marketing opportunities. Our aim is to reach out to any companies who are considering Ghana as a destination for expansion or investment to have them recognize us as their first stop for consulting, advisory or legal services.

What are some of the obstacles for companies looking to move into the Ghanaian market and how can ShawbellConsulting help to overcome them?

The first thing we can do is to advise companies on the registration process for businesses in Ghana. It is important that they understand what their options are and what requirements they will need to comply with. There are different conditions that apply to the process of registering as an external company to that of a local company. The registration procedure depends also upon the function of the company. A support services company which cannot be categorized as a petroleum enterprise has specific obligations with the Ghana Investment Promotion Centre, whilst petroleum enterprises in the upstream sector for example, have to contact the Petroleum Commission. This can be one of the primary obstacles for petroleum companies; defining exactly what their business is and then being able to understand which laws will apply to that. Another issue relates to taxation; some companies are allowed to self-assess but others require direct assessment by the Ghana Revenue Authority and must adhere to specific rules. The difficulty is that the rules and procedures for enterprises are not consolidated because they cut across various agencies. While the global players tend to be more practiced in relation to entry procedures, not all investors or newly-established enterprises know where to turn in matters such as these. ShawbellConsulting offers the expertise and local knowledge that is needed to navigate these processes.

What are some of the difficulties that service companies operating in the oil and gas sector face?

The principal problem is that it is notoriously difficult to predict when the next major surge or downturn will occur in the oil and gas sector. As a company offering services in this sector we have to manage our growth to anticipate these fluctuations. We find ourselves caught in a catch-22 situation in which if we do not invest in the recruitment and training of more staff we would not be able to cope with rapid growth. However if we do and growth stagnates, then we face major losses. At ShawbellConsulting we have the advantage of being a company that offers diverse services to a variety of sectors. This somewhat lessens our reliance on predicting market changes in the oil and gas sector. This is important as it guarantees our future and allows us some scope to dictate our own growth strategies.

What are some of the lessons that Ghana can learn from the experiences of other oil-producing nations?

One piece of advice we always impart to foreign companies that come to Ghana is to demonstrate that they are making a long term commitment to operations in the country and are not here just to make short term gains. This is particularly relevant to the oil and gas sector as we have seen many countries that have discovered oil and been exploited by multinational companies who have at best limited interest in benefitting the local population. When ShawbellConsulting works with clients we encourage them to engage with local communities and to take corporate social responsibility seriously. This is not only because we want to see Ghana's economy continue grow but also because it makes commercial sense for our clients. A company that becomes a trusted brand will be more successful than one that is not. Ghana must ensure that the oil and gas sector continues to grow sustainably and is regulated thoroughly. •

Ghanaian Support for Foreign Investors

George Aboagye, CEO, Ghana Investment Promotion Centre (GIPC)

The primary focus of the GIPC is to promote, encourage and facilitate investment in Ghana for both foreign and local investors. Incentives have been created under the GIPC Act to encourage companies to register with the Registrar General and then with the GIPC as a solely Ghanaian company, foreign company or joint venture.

The success of the GIPC can be measured by the length of time that it takes to register a company that is fully compliant with registration requirements. It is the role of the GIPC to enable companies to establish projects and to provide them with the necessary support and services to facilitate production.

The number of jobs that are created, the value of projects and volume of established companies are indicators of our success at the macro-level. The GIPC promotes different districts and regions by working with District Assemblies and Municipalities to secure land for investors in addition to the GIPC Land Bank, which has the same focus.

Some of the major successes of the GIPC have been our ability to aid the development of projects to achieve value and create jobs. It is important for the GIPC to grow sustainably and to encourage the investment of international banks into Ghana; this has been successful as there is interest from American and Chinese banks.

With regards the oil and gas industry, the 1994 GIPC Act does not facilitate investment into the mining and petroleum sectors. However, the Act was reviewed and the GIPC has now set limited constraints for the exploration and extraction of mining and oil and gas. The GIPC participates in the registration of oil and gas service companies that provide recruitment, training, transport and equipment to oil and gas rigs. While the GNPC is the primary player involved in upstream activity, the GIPC is expected to promote investment into downstream activities.

One example of this is the power sector. Ghana currently produces 1,000 MW, although the government has a target for 5,000 MW of power supply to be generated in Ghana. The GIPC is looking to attract independent power producers to ensure that Ghana will be able to export cheaper gas power as a commodity to neighboring countries like Nigeria that will have an increased demand for power in the near future. The West African Pipeline currently imports gas from Nigeria to Ghana, although we believe that this will reverse and Ghana will be the net exporter of power to Nigeria by 2020.

Since the Jubilee Fields discoveries in 2007, the number of companies that have registered with the GIPC has increased; currently 534 companies have registered with the GIPC, which is a clear indication that the international investor community has become increasingly interested in Ghana as an investment destination.

The value of investment by registered companies in Ghana almost doubled from $300 million in 2008 to $550 million in 2009 and increased to $2.18 billion in 2011. Registration does not guarantee that a company will perform, although the response from investors to Ghana's economic performance has been positive.

This success is not solely due to the presence of oil and gas in the country. There has been a stable political environment in Ghana for over 20 years and political dispensation has been improved, which are factors that the international business community has recognized. Ghana has maintained low inflation levels and is looking at initiatives to decrease interest and lending rates in order to encourage further investment.

Ghana has the resources to immobilize four-month reserves for import cover and the GDP of the country has shown the true nature of the economy. In addition, the profit margin in Ghana is 30%, so investors are able to make money. However, local investors who borrow within Ghana have high interest rates of 22%, which is a challenge for smaller companies.

Ghana has demonstrated that it is an attractive investment destination through continued political stability and the country's commitment to improve macroeconomic conditions. The institutions that aid the development and promotion of investment in Ghana are maintaining and continuing to develop a high level of service to the investment community. •

Paying for Progress

The Ghanaian financial sector

Ghana's financial sector is developing rapidly. From contributing of 7.8% of GDP (including real estate and business services) in 2005, it has risen to 9.3% in 2010. Alongside the telecommunications industry, this growth spearheaded the 6.1% service sector growth in 2010, although did not meet expected targets in 2011.

Ghana's financial sector comprises 28 banks (split roughly equally between foreign and local ownership), 44 non-banking financial institutions and 17 insurance companies, alongside a number of rural banks and insurance brokers. It is encouragingly diversified; the share of sector concentrated in the top five banks has declined from 70% in 2005 to 45.3% in 2011.

However, although Ghanaian banks are generally profitable, with an assts-to-GDP ratio that has seen consistent growth over the past few years and increasing financing of private sector projects, high cost-to-income ratios and growing numbers of non-performing loans continue to be challenges.

These issues are, however, being addressed by the government. Extensive reforms have been underway frequently since the early 1990s. The Financial Sector Adjustment Programme (FINSAP I and II) and the Financial Sector Strategic Plan I (FINSSP I) led to the privatisation of the banking sector and the development of a capital market. The second phase of the Financial Sector Strategic Plan II (FINSSP II) was launched in 2011 aims to further develop the sector, increasing access to finance and competition.

The oil and gas developments have been both a challenge and an opportunity for the financial sector. The Ghanaian Stock Exchange (GSE), for example, saw market turnover increase 224% in 2010, partly spurred by investment in the oil and gas sector, and was ranked the most innovative African Stock Exchange for 2010 in the Africa Investor annual Index Series Awards, held at the New York Stock Exchange. In 2011, in a sure sign of investor confidence, the GSE saw the listing of its first international oil company, Tullow Oil. Yet at the beginning of 2012 the exchange was ranked third worst in Africa in terms of investor returns, largely due to the depreciation of the Ghanaian cedi against the US dollar: not everything in the path to prosperity is straightforward.

Again, the government is aware of these issues and striving to correct them. The GSE, as an entity, had a tax holiday that expired in 2010. That was extended by another five years in the 2012 budget, as well as a Capital Gains Tax exemption on gains made on the GSE. This is expected to encourage investment in the exchange.

The banking system, despite its reforms, still struggles to fully finance a rapidly developing oil and gas industry. Especially for local service companies wanting to partake in the boom their country is experiencing, business loans remain difficult to obtain. For larger projects, it must still be remembered that roughly half of Ghana's 28 banks are very young; established less than a decade ago. They often remain under-capitalised and unable to coordinate large-scale projects.

The country's central bank, the Bank of Ghana, requires all banks to increase their capital to $41 million by this year. Foreign banks have already been asked to do so. While this requirement will affect short-term earnings of the banks, it is expected to spur innovation and therefore long-term health of the banks.

The Bank of Ghana has also issued guidelines on risk management, aimed at improving risk management at banks, and intervention in troubled institutions, laying out criteria for intervening in weak banks. High inflation, which has affected the ease of lending in the past, is now being brought down by sensible government policies, hitting single digits (8.8%) in 2011.

The Ghanaian financial sector, as a whole, is not quite at the level required to support a fully developed oil and gas industry. However it is growing rapidly and, despite not reaching its growth targets in 2011, the Ghanaian government has proved their ability to sensibly manage and encourage its increasing role in the country's economy. It can certainly contribute to the oil boom; the extent of its contribution will only grow. •

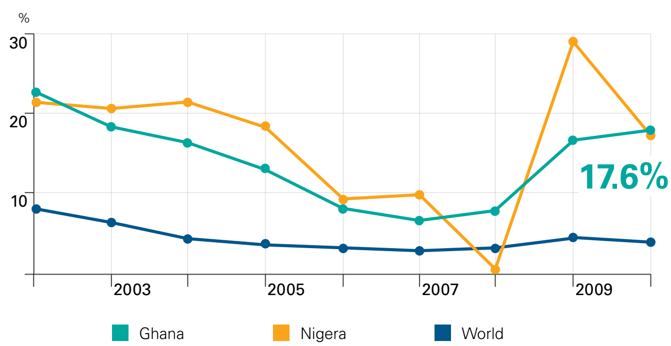
Bank Capital to Assets Ratio (2011)

7.8%

Source: World Bank

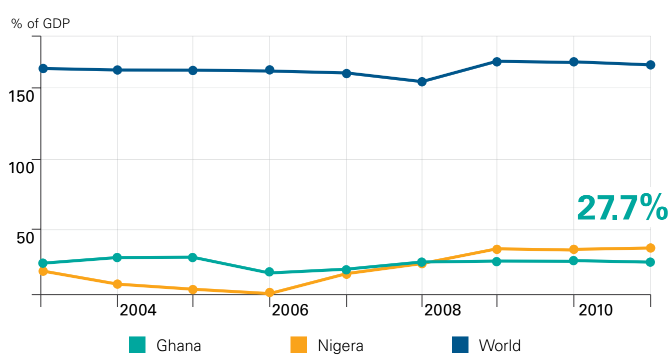
Bank Nonperforming Loans to Total Gross Loans

Source: World Bank



Domestic Credit Provided by Banking Sector

Source: World Bank



Interview with James Wood

PARTNER AT EDWARD MENSAH, WOOD AND ASSOCIATES LIMITED

Could you provide us with a brief introduction to Edward Mensah, Wood and Associated Limited?

Edward Mensah, Wood and Associated Limited is a Ghanaian broking company with a global reach and well reputed locally and internationally. The firm is the local correspondent for Marsh & McLennan, the world's leading broking firm and other major brokers worldwide, making technical resources and specialized expertise available to use. Edward Mensah, Wood and Associated Limited works with a number of multi-national clients who are coming into Ghana or who are already operating in the country.

What suite of services does Edward Mensah, Wood and Associated Limited provide to its clients?

Edward Mensah, Wood and Associated Limited provides insurance Broking/Consultancy services to its clients whatever their insurance needs might be.

The firm is involved in all classes of insurance in Ghana, although we prefer to work with major insurance companies. We have a wide range of clients, ranging from oil and gas companies to clients who are involved in manufacturing and commercial activities.

The oil and gas industry has expanded in Ghana and Edward Mensah, Wood and Associated Limited is responsible for exploration equipment for oil and gas companies. We have worked on the insurance for the construction of the Jubilee Fields and we will shortly be handling the insurance for the development of Phase 1A of the Jubilee Project.

What specific services do you provide to oil and gas companies?

We provide all aspects of insurance that oil companies in Ghana are required to take out by law. However, the local insurance market is not technically capable to handle the risks so certain risks have to be placed overseas. Oil companies nominate insurance brokers, in order to arrange the insurance programs that are normally placed on the London market. However, the Ghanian Law requires that insurance has to go through a local insurance company registered in Ghana so local insurance companies collaborate with overseas insurance companies. Insurance companies in Ghana have formed an oil and gas pool that is managed by the State Insurance Company who write all oil and gas papers.

Wood and Associates support any claim through a local process and we work with clients directly for any claims to be finance approved.

What clients do you work with in the oil and gas industry?

We work with major players like Kosmos and occasionally we work with service and equipment providers, although we do not class those companies as oil and gas clients.

The top five insurance companies that we work with in Ghana are the SIC, Enterprise Insurance Company, Metropolitan Insurance Company, Star Insurance and Vangad Insurance. The pool in Ghana has been created to include the entire market, which includes Africare and Ghanari who make up a substantial amount of the current policies that we have. Africare, Ghanari and SIC are the major players in the market in Ghana and account for 90% of business.

How can you describe the challenges of the insurance market in Ghana?

The market is very competitive and there is a high number of insurance companies and brokerage companies competing against each other. There is a lack of control from regulators who allow companies to use unorthodox methods to yield results, which is an issue in Ghana and many other western African countries. The next topic for discussion at the WYKA conference in Gambia will be unethical practices within the insurance industry. Edward Mensah, Wood and Associates Limited has tried to acquire business by relying on the quality of the professional service that we provide as our portfolio mainly consists of multi-national companies. However, there are some insurance companies who work by undercutting other companies, which is something that has come to the attention of the regulators.

What is your growth strategy related to the oil and gas industry?

Our expectations for the future is that many more oil companies will come into the market and we will use our global leverage to become the best brokerage company in terms of expertise and experience. We want to be able to offer the same quality of services to new clients that we offer our existing customers. Wood and Associates has the knowledge and expertise, in addition to international connections that enable us to handle a number of target risks in the market that other brokers are not able to.

We think that the development of the oil and gas industry in Ghana will impact our operations specifically by allowing the company to grow directly and indirectly through the oil and gas service sector. There will be more oil discoveries made in Ghana.

What is your final message for our readers?

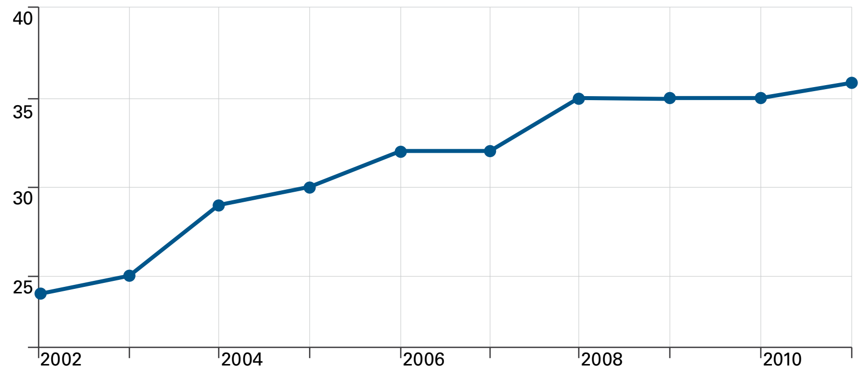
The new players that are entering into Ghana should have a long-term strategy to grow their operations in Ghana. The insurance industry is here to support new companies and we want to work together with new players to grow and develop the insurance industry in Ghana to the same high standards that are expected overseas. Local brokers currently have limited knowledge about oil and gas insurance, which needs to be developed to enable the insurance industry to have a better future. •

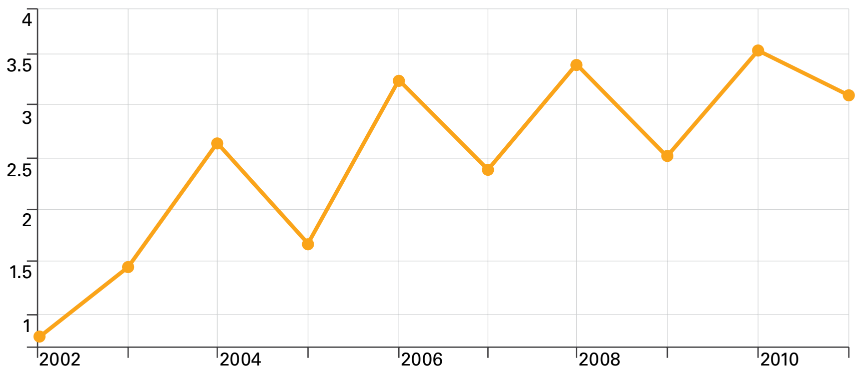
The Ghana Stock Exchange

Listed Domestic Companies (2011)

36

Source: World Bank





Market Capitalization of Listed Companies (2011)

3.09

billion dollars

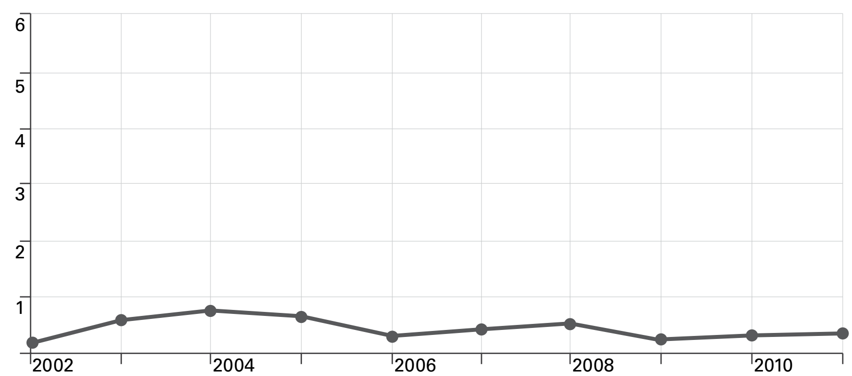
Source: World Bank

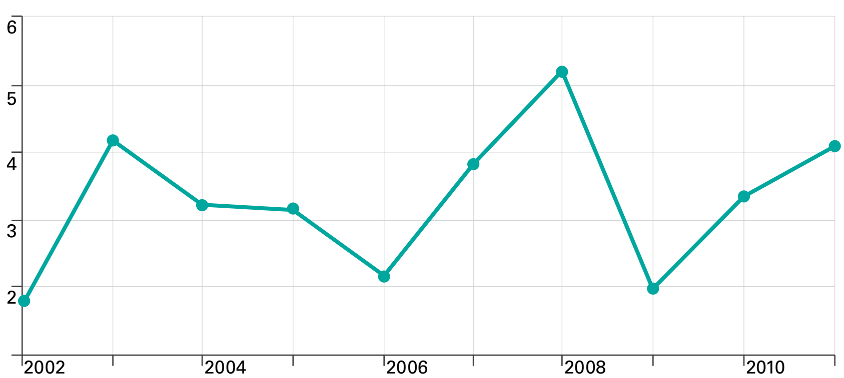
Stocks Traded, Total Value (2011)

0.3%

of total GDP

Source: World Bank





Stocks Traded, Turnover Ratio (2011)

4.1%

Source: World Bank

Interview with
Edward Nana Yaw Koranteng

HEAD OF ENERGY, OIL & GAS AND MINING - FIDELITY BANK LIMITED

Fidelity Bank is currently the sixth largest bank in Ghana and has the aim of being the largest by 2020. How important is the oil and gas sector to your ambitious plans for growth?

The oil and gas sector in Ghana is of great importance to the Bank due to the cascade effect it is going to have on the entire economy. With the flow of crude and utilization of associated gas, the economy is due to expand tremendously. This will be seen in the supply of vessels to pipelines, construction of storage tanks, refineries, power stations, transmission grids, public utilities, airports, construction and real estate, manufacturing and hospitality services. With an estimated contribution of GDP being in excess of 40%, this sector shall also bring about lifestyle changes seen in expansion of the middle and upper income class and a corresponding increase in consumerism and spending patterns which shall also provides immeasurable opportunities to the Consumer and Retail division of the Bank.

These sectors will also require financing which raises the need for the bank to quickly adapt to the needs of the industry as a whole and position itself for the anticipated sectoral changes. The Oil and Gas sector shall therefore inform our strategy or strategies across the various segments. In my opinion, the growth of the oil and gas sector and especially the gas industrialization policy which will drive the country's growth is the cornerstone of our business and critical to us achieving our goal of becoming Ghana's leading bank.

Could you provide us with an overview of the services and products that Fidelity Bank offers to the oil and gas sector?

Currently our client base in the Oil and Gas sector is largely drawn from mid to downstream companies although we are making significant forays in the upstream. We offer tailor made solutions to our clients due to the complexity of their operations. However on a broader scale, our offerings consist of Project Financing, Cash Call Financing, Contract Financing, Trade Financing, Term Loans, Overdrafts and Treasury Operations. With the midstream, our focus has been on project financing with emphasis on Tank farms and major Power projects in Ghana. We are currently one of the leading banks in project financing, notably power projects in Ghana. In the Downstream sector, Fidelity controls approximately 15% of the BDC market vis-à-vis a total of 26 banks. We seek to finance through trade lines and club arrangements an average of USD$530 million for this year.

How can Fidelity Bank compete with multinational banks for a market share of upstream clients?

For Fidelity and other local banks the biggest challenge is having a significant foothold in the upstream sector which is dominated by multinational banks. One of the principal obstacles is that, the parent companies of the major oil producers issue directives to the effect that they must only operate with specific banks based on their balance sheets, geographical locations and brand reputations. Furthermore, the scale of transactions and financing that the upstream companies require often goes beyond the capacity of local banks.

However changing trends, local knowledge of the local banks, multilateral associations, global club arrangements and syndications coupled with the efficiency and timeliness of the local banks is making this less of an obstacle. Apart from this, Fidelity's strategy in this vein has also centered on genuine partnerships with the upstream majors through tailor made solutions and support in community social responsibility initiatives which is key in our part of the world where oil companies can be viewed with suspicion. This gives us the advantage of being able to act as a partner with upstream clients and help them to feel comfortable with and anticipate the specific conditions of operating in Ghana.

Considering Ghana as a destination for foreign investment, what is the current financial climate and what are some of the growth prospects that should encourage investors?

There are some key indices which every investor looks at: political stability, security of contracts, efficient financial sector, educated and literate populace and an efficient infrastructure system. Ghana is arguably the most democratic and politically stable country in Africa at the moment, it has an effective financial infrastructure and relative investor friendly laws and a legal system that is effective and guarantees the sanctity of contracts. Focusing on the oil and gas sector, although we have only very recently begun to extract commercial quantities of oil we are already doing what our neighbours did not do. We have learnt lessons from the experiences of other oil producing nations and have emphasized the importance of a robust regulatory framework and the establishment of a local content policy. This not only protects investment but ensures transparency across the industry and builds local capacity.

Ghana is also the fastest growing economy, according to the World Bank with FDI into the country increasing by approximately 300 per cent within the past three years. This has seen major financial institutions zeroing down on Ghana, for example HSBC and Citibank have recently established offices here. There are lifestyle changes that are occurring; the increase in disposable income of Ghanaians with its domino impact on consumer spending and the real estate sectors. Ghana has the fastest growth rate (88 percent) of vehicle and motor purchase in Africa and has recently overtaken Nigeria as a hub for air transport with 36 airlines now operating here. These are all indexes which demonstrate Ghana's continued growth. The obstacles Ghana faces are in developing its infrastructure at a much faster pace, establishing reliable power generation and in selling itself as a proposition to the investment community. We however see these infrastructural deficiencies, economic growth and indicated factors as opportunities which should attract investors. •

Interview with Ekow Afedzie

DEPUTY MANAGING DIRECTOR, GHANA STOCK EXCHANGE

Could you give us a brief history of the Ghana Stock Exchange, highlighting the major milestones?

The GSE began operations in November 1990. It is a company limited by guarantee so we do not have owners but we have members: associate members and license dealing members. The license dealing members are the brokerage firms and they have license to trade. The associate members have no license to trade. We have 20 licensed members and 34 associate members. All our processes are electronic so we tend to have a seamless flow of trading processes. That is one of our biggest achievements, and won us an award last year as the most innovative stock market in Africa in a NYSE program.

What are the requirements for companies to list with the GSE?

We have two requirements; firstly they must be a public company that can go to the vested public areas' capital. Secondly, they need to meet certain requirements in terms of publication of their prospectus, disclosure of information about the company etc. When a company wants to list, the key aspect is they must have a capital minimum that flows 25% of the company to the public. They must also file audit accounts of three years to be on the first list. For the second list, there must still be a capital minimum of 25% but you must file audit accounts for only one year. We are trying to create an alternative market meant for small- to medium-sized companies; companies with good prospects but without a track record. We will make simple requirements easier to meet to encourage companies to enter the market.

Since Tullow Oil listed on the GSE in July 2011, have any other foreign multinational corporations followed suit?

Not yet, however Tullow's partner Kosmos have announced that they will list this year. Since Tullow's listing, our market capital more than doubled and it brought along some foreign investors looking at Ghana. Ghana was already attractive because of its political and economic stability, but Tullow Oil has now created opportunity for companies to go to the market to raise money and they are likely to get foreign investors participating.

How important is the small-medium sized business sector for the growth of the Ghanaian economy?

Small- to medium-sized companies are very important because most of the companies in Ghana belong to that category and lack of finance has been one of the main issues when it comes to sponsoring the growth of these companies. So for them to be able to grow and aspire to contribute to the economy positively, they need to have access to long-term capital. Creating an avenue for them to have long-term capital is key and that is why we are trying to create the alternative market for them to raise finance.

What are the challenges for the GSE for helping the small domestic companies?

So far with our original market we have not had many of these companies coming on to the market. Therefore, we want to create an environment that enables us to convince the owners of these companies and promote the whole idea of sharing with others and the worth of the GSE. We have encountered a few challenges with companies affected by liquidity issues; the majority of portfolio investors do not buy and sell all the time so there are liquidity issues. So going forward we need to have more companies and more shares for them and the liquidity will improve.

Are there any other reasons why small Ghanaian companies and foreign companies should be attracted to the Ghana Stock Exchange?

For the domestic companies, access to capital is the key issue. We have pension funds reforms taking place in Ghana now and so there will be a lot of finance will be released for financiers to invest. So it is time to go and raise the capital and the GSE can provide these opportunities. So this is the main benefit for domestic companies. And by being listed, companies are looked at differently to other listed companies because of the credibility associated with the GSE.

What are your projections for market growth over the next 18 months?

We are likely to get about four to five companies listing on our market. Liquidity is likely to improve depending on the kind of companies that come on to the market. In terms of returns, I suspect these will remain good on the market. We will also see an alternative market in Ghana and new features introduced into trading. These would include margin trading and new products, for example. We are looking at products that should go onto the market and we are looking at the corporate market more carefully to make it a more vibrant environment that gives flexibility; opportunities for domestic companies to improve liquidity and the number of shares of the market.

How can the GSE be a barometer of the financial climate in Ghana when foreign investors are thinking of investing in Ghana?

For the GSE to be a barometer of Ghana's financial climate going forward, we would need to have all the sectors of the economy represented; agriculture, mining, telecommunications etc. We are trying to persuade more representatives of some of these industries to participate. We are also trying to get policy makers to understand and facilitate that process of getting companies to be a part of the market and so that we can enjoy the fortunes of these companies locally. For now, the market is doing well and as a result we are always on the radar when it comes to the financial market. •

Interview with
Benjamin Dabrah

MANAGING DIRECTOR, BARCLAYS BANK GHANA

Can you give an overview of Barclays in Ghana?

Barclays has been in Ghana for 95 years now, and has been the preeminent bank in the country for much of that time. During 2006 to 2007 we underwent a period of rapid expansion; unfortunately, the controls did not keep up with the rate of growth, and we suffered losses in 2008 and 2009. However, we learned our lesson and restructured, dropping from 154 outlets in 2008 to only 82 today. As a result, we have become more efficient, and were the most profitable bank in Ghana last year.

What is Barclays Ghana's relationship with the oil and gas industry?

Having been in the country for so long, Barclays has a significant history with the oil and gas industries. Laws here limit the exposure of small banks, preventing them from lending too much money to one party, meaning that large banks must get involved for funding big-ticket transactions. Since the liberalization of oil imports, we have also supported oil distribution companies here. As one of the biggest global banks, Barclays has a significant oil and gas franchise that is run out of Houston. Some of the financing is done there, but we complete many transactions independently as Barclays Ghana; it depends on the size and economics of the deal at hand, as different parts of the Barclays group have different funding structures and appetites for pricing. One way or another, we have an existing relationship with almost every major player in the industry.

How do you think the influx of other large international banks into the Ghanaian financial space affect Barclays' development targets?

Competition will always have some kind of impact, but when it comes to the oil and gas sector, there are very few banks that can actually compete with Barclays. We have a very strong local presence that is backed up by nearly a century of experience in the country, as well as the global reach of Barclays; this is a set of unique qualities that sets us apart from the rest.

Foreign investors have been quite concerned about the depreciation of the Ghanaian cedi, which has lost nearly 23% of its value in the past few years. Does this trend reflect the overall health of the country's economy?

In the end, investors are after returns, and they only care about the exchange rate to the extent that it dilutes or affects their return. The rate of depreciation is not an issue in itself; if the currency is depreciating at a predictable rate, but the yields are higher than the rate of depreciation, there is still a net gain. As long as the yields stay ahead of the rate of depreciation, we will be able to attract investors.

While foreign investment in Africa as a whole is down, it continues to rise in Ghana; why is this?

Ghana is in a unique position that makes it particularly attractive. We have experienced greater political stability in the last 20 years than most other countries in the region. The rule of law is solid, so companies know they will not wake up one day to find their assets confiscated by the government. Ghana is a peaceful country with no terrorist activity or civil strife. Power is handed from the ruling party to the opposition party every eight years, and our democracy is much stronger as a result. Additionally, we have one of the most diversified economies in Africa, relying not solely on diamonds or copper, but a combination of gold, oil, cocoa, and agriculture. All of these factors combine to make Ghana a robust nation and a haven for investment in West Africa.

What is the financial outlook for Ghana in 2012?

The depression of the cedi has been an issue, but the government has taken aggressive steps to combat this. The worst is over, but right now we see the situation as stabilizing, not strengthening. We expect interest rates to increase, which should bolster investor confidence that actual yields are higher than the rate of depreciation. Inflation will obviously follow because a lot of goods here are imported, and when the cedi devalues, things become more expensive locally. The government has declared its intention to invest a great deal in infrastructure, which should lead to a surge of activity that will hopefully translate into higher economic activity in the larger Ghanaian economy. The election this year will come and go without the country blinking, so there should be no resulting economic hiccups. Overall, we believe it will be another strong year for GDP growth.

What role will Barclays play in the further development of Ghana's economy?

Barclays feel it is our responsibility to continue to invest in Ghana's future. One of the values that Barclays is passionate about on a global scale is the idea of citizenship. Other companies call this corporate responsibility, but we see it as being a citizen of the country where you are operating. Our fortunes are inextricably linked with those of Ghana, and we see our role as a financial intermediary that actually facilitates growth. Our actions speak for themselves that if we have the expertise, we will provide support for the country in any way we can. •


Gha

Into the Future

Final Thoughts, Company Guide, and Index

"Ghana welcomes all investors into our country, providing that they respect our laws and our people. It is vital to create employment for the growth of Ghana's economy and it is important for investors coming into Ghana to use the same environmental standards and regulations as they would in their own countries. Ghana is prepared to set the pace for the whole of Africa."

- Dr. Joe Adjei,
Minister of Energy, Ghana Ministry of Energy

"Ghana has not experienced any major disruption of petroleum products. If you look at many countries in West Africa that have oil they have had that problem, yet Ghana has been extremely stable in this regard. Whenever there has been a crisis in the electricity sector, the government has always come to BOST; they rely on us to supply diesel and crude oil for electricity generation."

Kweku Boateng,
Programmes Officer, Bulk Oil Storage and Transportation Company Limited (BOST)

"The industry has grown so fast that it has put a lot of pressure on the local companies. Because of the swiftness of how things have gone the local players were not well positioned for growth. The equipment that explorers and producers need, for example, are things that no local company had ever considered in their business. Those companies that had foresight have partnered with international companies to allow them to compete."

Abigail A. Harlley,
Chief Executive Officer, AI Energy Group

"Global Energy Ventures was the first fabrication and inspection company in Ghana when it established a presence in 2008. The company currently has 60 employees in Ghana and an additional 60 employees in Abidjan. Ghana is becoming increasingly important for West Africa as a whole, so it has been an important focus for Global Energy Ventures to develop local content and establish a structure within the country from the very beginning."

Darren Last,
Operations Manager Ghana, Global Energy Ventures

"Ghana has had a 20% growth rate without oil and gas, but this will increase tremendously over the next two to three years with oil and gas investment. Ghana has a lot of potential and the longer companies wait to invest, the harder it will be."

Toufic Haroun,
Director, AA Horizon Limited

"Eventually, we would like to see every oil rig in Ghana staffed with Expro personnel, and delivering safely and sustainably. Another goal is to increase Expro's local content; we are already at 95% on the operations support side, and are increasing the ratio on the operations side through initiatives such as the Graduate Development Program. Expro's long-term vision is to have a 100% Ghanaian operation; we are committed to the country and will be here for many years to come."

Allan Sutherland,
Ghana Country Manager, Expro

"There has been increased competition in both Takoradi and throughout Ghana. Air Liquide was all over the country and then Dominion came in; however, with their entry, the oil and gas industry came in to Ghana and we have been able to take a share of the market. Now other companies are setting up their operations, which creates more opportunities and space to help our business."

Anura Kaluarachi,
General Manager, Takoradi Gas Limited

"Ghana is of great importance to our business; the corporate headquarters are now located in Accra and we see the country as a hub from which we can serve the African continent. Our goal is to become one of the largest logistics companies in Africa and Ghana is the fulcrum of our strategy for expansion and growth."

Roy Aboku,
Business Development Manager, Menergy International

"When ShawbellConsulting works with clients we encourage them to engage with local communities and to take corporate social responsibility seriously. This is not only because we want to see Ghana's economy continue grow but also because it makes commercial sense for our clients. A company that becomes a trusted brand will be more successful than one that is not."

Phyllis Christian,
CEO, ShawbellConsulting

This list represents a selection of the companies operating in the Ghanaian oil and gas industry and should not be considered a comprehensive guide. GBR holds an exclusive and extensive oil and gas database for Ghana and the wider region. For further information on database access packages, please contact info@gbreports.com or call +44 20 7612 4511

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THANK YOU

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Ministry of Energy
www.energymin.gov.gh

Ghana Energy Commission
www.energycom.gov.gh

Ghanaian National Chamber of Commerce & Industry
www.ghanachamber.org

Ghana Investment Promotion Centre (GIPC)
www.gipcghana.com

Petroleum Commission

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