



Ghana

A supplement to Mining Journal



Message from the Minister of Lands and Natural Resources

WISH to welcome you on behalf of His Excellency Professor John Evans Atta-Mills, President of the Republic of Ghana, the government and the friendly people of Ghana to the investment gateway to the West Africa sub-region.

Ghana remains an attractive destination of mining and related investment in Africa for the following reasons:

■ **Political stability:** Ghana boasts almost two decades of multi-party democracy. This has been lauded internationally, and the country continues to mature in its democratic principles. The result has been major national economic gains over the years.

■ **Availability of geological data:** For the first time in the history of the country, high-resolution airborne data, made up of magnetic and radiometric information, covering the whole country is now available. Some areas have also been covered with gravity and electromagnetic (time-domain) surveys, the data of which is also available. On the basis of recent geological information on the country, an updated geological map covering the whole country has been developed.

■ **Favourable investment climate:**

Ghana operates an attractive legal and fiscal regime that is in line with international best practices. This is evident in the number of major multi-national companies investing in the country; and

■ **Improved governance:**

Government has created a stable regulatory environment that provides for transparent and even-handed treatment of all investors.

Indeed, the recently completed Mining Sector Support Programme,



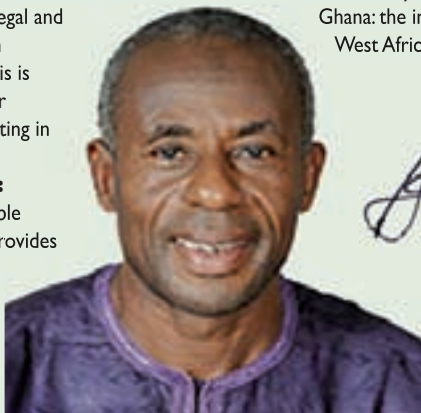
"The discovery of these new minerals heralds a new chapter in the country's mining industry"

funded by the European Commission, has led to the discovery of minerals apart from the traditional minerals (gold, diamond, manganese and bauxite) which are produced in Ghana. These new occurrences include phosphate, nickel, chromium and uranium. The discovery of these minerals heralds a new chapter in the country's mining industry.

Investment opportunities therefore abound in the fields of mineral exploration and mining (for a variety of minerals), as well as in the services and engineering support sectors. These opportunities are illustrated in this supplement.

I look forward to your early participation in the development of our enormous natural resources in an efficient, economic and environmentally-sustainable manner to ensure that mining contributes to sustainable development of our people as well as ensuring good returns to investors.

I extend to you all, a warm welcome to Ghana: the investment gateway to the West Africa sub-region.



Hon Alhaji Collins Dauda, MP
Minister of Lands and Natural Resources

Investment

GHANA, which is divided into ten administrative regions, lies along the Gulf of Guinea in West Africa, between longitudes 3°5'W and 1°10'E, and latitudes 4°35'N and 11°N. Ghana is a relatively flat country – more than half of its area is less than 200m above sea level. The highest mountains, rising to 880m (Mt. Afadjato), are in the Akwapim-Togo Mountains in the Volta Region.

Lake Volta, the world's largest artificial lake, was created in 1964 by the construction of the Akosombo Dam to provide electrical energy for industrial and domestic uses.

For most parts of the country, the climate is tropical with annual average temperatures ranging from 25 to 30°C. Except for the Western Region, the coastal areas are relatively dry, giving way inland to rain forest and, eventually, in the north to savannah. The rainy seasons are March to July, and September to October.

The first contact between natives and Europeans was with Portuguese navigators in the 15th century. In subsequent centuries, an extensive trade in gold and slaves was established with a number of European nations. In the late 19th century, after the defeat of the Ashanti Kingdom, Britain established the Gold Coast colony.

In 1957, under President Kwame Nkrumah, the colony became the first African country, south of the Sahara, to achieve independence from colonial rule and was named Ghana.

Following President Nkrumah's overthrow in 1966 there were successions of military and civilian governments. However, Ghana has been under a stable democratic dispensation since 1992. The present government is led by the National Democratic Congress (NDC), which dominates the 230-member parliament. President John Evans Atta-Mills was democratically elected in 2009.

PHYSICAL INFRASTRUCTURE

A good network of sealed all-weather roads connect all of Ghana's major towns. In addition, a rail network links Accra, Kumasi, Takoradi and Tema. The international airport at Accra supports frequent service to, and from, major American, European, Asian and African cities. Within Ghana, there are also airports at Kumasi, Tamale, Sunyani and Takoradi. Hydro-electric power is generated mainly by the Akosombo and Kpong Dams

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CONTENTS

Introduction / country overview	2-3
Mining policy and legislation	4-5
Geological maps	6-7
Geology and mineral deposits	8
Mining-sector contribution	9-10
Prospects and conclusion	11
Relevant institutions of the mining sector	back cover

Cover design: T Peters/Aspermont UK

opportunities are unearthed



Statistics	
Area	238,537km ²
Population	23.4 million (mid-2009 estimate)
Population growth rate	2.09% (2009)
Currency	cedi; US\$1 = GH¢1.47 (Nov 2009)
Inflation	14.8% (Jan 2010)
Official language	English
Main exports	Gold, cocoa, timber, bauxite, manganese, salt, diamonds
GDP	GH¢17.62 billion (2008)

and supported by thermal generation at Takoradi. A third hydro-electric dam is being built at Bui to augment the energy needs of the country. All district capitals have access to the national grid.

There are rural water supplies and sanitation schemes. The telecommunication industry is growing at a very fast rate, thanks to the advent of mobile telecommunication, which is supported currently by five networks in the country.

DIVERSE RESOURCE

Ghana has a relatively diverse and rich natural resource base. Minerals – principally gold, diamonds, manganese ore and bauxite – are produced and exported. A major oil discovery off the coast of Ghana in 2007 has led to significant international commercial interest in Ghana. According to industry experts, within five years, Ghana is likely to be the third-largest producer of oil in West Africa.

Agriculture remains a mainstay of the economy, accounting for more than one-third of GDP and about 55% of formal employment. Ghana's primary cash crop is cocoa, which typically provides about one-third of all export revenues. Other products include timber, coconuts and other palm products, shea nuts and coffee. Ghana signed a Millennium Challenge Corporation (MCC) Compact in 2006, which aims to assist in transforming Ghana's agricultural sector.

Ghana's industrial base is relatively advanced compared to many other African countries. However, additional scope exists for value-added processing of agricultural and mineral products as well as

manufacturing of inputs for the mining sector. Industries include flour milling, cocoa processing etc.

Industry, including mining, manufacturing, construction and electricity, accounts for about 30% of GDP. Currently, gold and cocoa are the top two export revenue-earning sectors in Ghana.

Thematic priorities that provided the framework for Development Partner assistance under the Growth and Poverty Reduction Strategy (GPRSII) which ended in 2009 were: macroeconomic stability; private sector competitiveness; human resource development, good governance & civic responsibility.

Under the current Medium Term Development Plan¹ (2010 – 2013), six priority policy areas have been identified. These are:

- Improvement and sustenance of macroeconomic stability;
- Expanded development of production infrastructure;
- Accelerated agriculture modernisation and agro-based industrial development;



- Developing the human resources for national development;
- Transparent and accountable governance; and
- Reducing poverty and income inequalities.

Population

In a 2004 census, the population of Ghana was estimated at 21 million. The Ghana Statistical Service estimates that the current population is 23.4 million. There are many different ethnic groups in Ghana speaking over 50 different languages and dialects. The major ethnic groups are the Akan (44%), Moshi-Dagomba (16%), Ewe (13%) and Ga (8%).

The capital, Accra, is situated on the coast and has over 4 million inhabitants. Other major centres are:

- Kumasi, capital of the Ashanti region;
- Sekondi-Takoradi, a twin port city and capital of the Western region;
- Tema, a major industrial city; location of an oil refinery as well as an aluminium and steel smelter; and
- Tamale, the capital of the Northern region.

¹ – Draft. Finalisation in progress



Mining activities aim to bridge gaps to fulfil national development agenda

POLICY INITIATIVES

The focus of policies on mining that the government has adopted is to ensure that the activity contributes its quota to the country's development. Policy objectives have recently been to:

- Ensure that Ghana's mineral endowment is managed on a sustainable, economic, social and environmental basis, and that there is an equitable sharing of the financial and developmental benefits of mining between investors and all Ghanaian stakeholders.
- Encourage local and foreign private-sector participation in the exploration for, and commercial exploitation of, mineral resources, consistent with the government's commitment to a free-market enterprise economy. The government recognises that private-sector investors need to be able to operate profitably, be internationally competitive and satisfy their shareholders' and employees expectations. To this end, the government will establish and maintain:
 - Conducive macro-economic environment for mining investment;
 - Stable regulatory environment that provides for the transparent and even-handed treatment of investors; and a
 - Stable, competitive and fair fiscal regime.
- Achieve a socially-acceptable balance between mining and the physical and human environment, and to ensure that internationally accepted standards of health, mining safety and environ-

mental protection are observed by all participants in the mining sector.

- Encourage and facilitate orderly and sustainable development of small-scale mining. There is considerable potential for small-scale minerals exploitation in Ghana, and the government recognises that small-scale mining can provide additional or alternative livelihoods in rural areas and can help to foster the development of Ghanaian mining skills, entrepreneurship and capital.
- Empower Ghanaians to become professional miners, mine managers and owners by maximising opportunities for minerals-related education, training, career development and other support.
- Ensure respect for employee, gender and human rights in mining. The government wishes also to remove obstacles to participation in the mining sector on the basis of gender or marital status.
- Encourage mining companies to develop a participatory and collaborative approach to mine planning, development and decommissioning, taking into account the needs of local communities, thereby fulfilling their role as socially responsible corporate citizens.
- Develop streamlined and effective institutional arrangements for the mining sector, together with adequate capacity to promote, authorise, monitor and regulate mining operations.
- Apply modern principles of transparency and accountability to the administration of mining laws and regulations, and to facilitate community participation in such processes. To this end, the government recognises that there is a need for

proper co-ordination between government departments and agencies, and that there is a need for dissemination of information to the public on all aspects of mining as a basis for informed participation.

- Endow Ghanaian mining authorities with the capacities to gather, analyse and disseminate geo-data necessary for the promotion of minerals sector investment.
- Act in harmony with regional and international partners and, to this end, to endorse and implement principles that are established in regional and international conventions. Also to endorse other instruments and undertakings that are relevant to mining, and to which Ghana is a party or signatory.
- Foster the development of a mining sector that is integrated with other elements of the national economy, which will contribute to the economic empowerment of Ghanaians by generating opportunities for local entrepreneurship, increase demand for local goods and services, and create employment for Ghanaians.
- Ensure value addition to minerals produced in the country prior to export.

MINERAL LEGISLATION

Between 1986 and 2006, the Mineral and Mining Law 1986, PNDCL 153 was the basic mining legislation in Ghana. While it was regarded as a trailblazer in terms of mining legislation in sub-Saharan Africa, changes in the international mining scene necessitated its revision. After a protracted review from the early 2000s, the governing legislation for Ghana's minerals and mining sector was updated in 2006 by enacting Act 703.

Table 1: Types of Mineral Rights

Licence Type	Reconnaissance Licence (RL)	Prospecting Licence (PL)	Mining Lease (ML)	Restricted Lease/Licence	Small-Scale Mining ²
Purpose	Regional exploration not including drilling and excavation	Search for minerals and evaluation	Extraction of minerals	Building and industrial minerals	Extraction of minerals on small-scale basis
Area	Blocks of 21 ha, not exceeding 5,000 contiguous blocks	Not exceeding 750 contiguous blocks	Not exceeding 300 contiguous blocks	Provisions relating to minerals rights apply	In accordance with the number of blocks prescribed
Maximum duration	12 months, renewable	3 years, renewable, with reduction of area to not less than half	30 years or less depending on mine life. Renewable	15 years or less depending on mine life. Renewable	5 years, renewable

² – Granted to Ghanaians only but foreigners can participate by way of service companies

A key feature of the process for drafting and passing this Act was the participation of relevant stakeholders, including mining sector regulators, Civil Society Organisations (CSOs), Non-Governmental Organisations (NGOs), traditional authorities, local government authorities, labour unions, mining investors, academia and government revenue agencies. The new Act was intended to reflect contemporary trends in minerals and mining legislation, and thereby position Ghana to continue to attract and retain mining investment.

Also section 110 of Act 703 clearly indicates that subsidiary legislation is to be enacted to expand and give full meaning to a number of provisions of the Act – Act 703. The work on drafting the regulation has advanced significantly and it is hoped to be laid in Parliament by year-end 2010. The draft regulations are:

- Minerals (Royalties)
- Mines (Support Services)
- Mines (Compensation and Resettlement)
- Explosives (Mining and Civil)
- Regulations on Health and Safety
- Mineral Licensing Regulations, and
- Mining (General).

The key features of the new Act are:

I. All minerals are owned by the state

The Minister of Lands and Natural Resources (MLNR) is exclusively mandated to grant mineral rights on the advice of a technical committee constituted at the Minerals Commission.

II. Application of the mineral legislation

The legislation is applied equally to investors, Ghanaians and foreigners alike, except for the provisions relating to:

- a) Small-scale mining, reserved for Ghanaians, and

Table 2: Summary of Fiscal Regime	
Imposts/Benefits	Provision
Mineral Royalty Rates	3-6%. Based on gross market value of minerals sold
Royalty Base	
Application Fees	As prescribed in the regulations
Surface Rentals	
Annual Ground Rent	Payable to landowner as prescribed
Annual Mineral Rights Fees	Payable to Minerals Commission as prescribed
Income Tax:	
Tax Rate	25% now, prescribed in the law and 22.5% for listed companies on the GSE
Capital Allowances	Generous allowances
Allowable Losses	5 years carry forward
Dividend Withholding Tax	8%
Import Duty	Plant, machinery, equipment specifically and exclusively for mining operations exempted
Value Added Tax:	
	Mining Stage – Refundable
	Exploration Stage – Capitalised on making find

- b) Restricted mining rights, which are reserved for Ghanaians, but in which foreigners can participate where the investment involved is not less than US\$10 million.

III. Governance improvement

The Act stipulates definite periods within which the Minerals Commission and the Minister responsible for Mines must act in the grant or otherwise of applications in respect of mineral rights³. The Minister is required to give written reasons for not acting within the stipulated period⁴. Similarly, the Minister's discretion is limited under Act 703. For instance, the Minister is required to provide written reasons for rejecting applications. Currently, dispute resolution mechanisms

are available to applicants or holders of mineral rights in respect of any dispute that arises under the Act⁵.

IV. Cadastral system

By this, the country is divided into geographical blocks of 21 hectares each. Applications for mineral rights can be made in multiples of blocks which should be contiguous. Fractions of blocks are not acceptable except for blocks part of which lie outside the country, which are considered full blocks. However, fractions of blocks as may be prescribed shall be acceptable in the case of a licence granted for small-scale mining.

V. Types of mineral rights

A summary of the types of mineral rights that can be granted under Act 703 are indicated in Table 1.

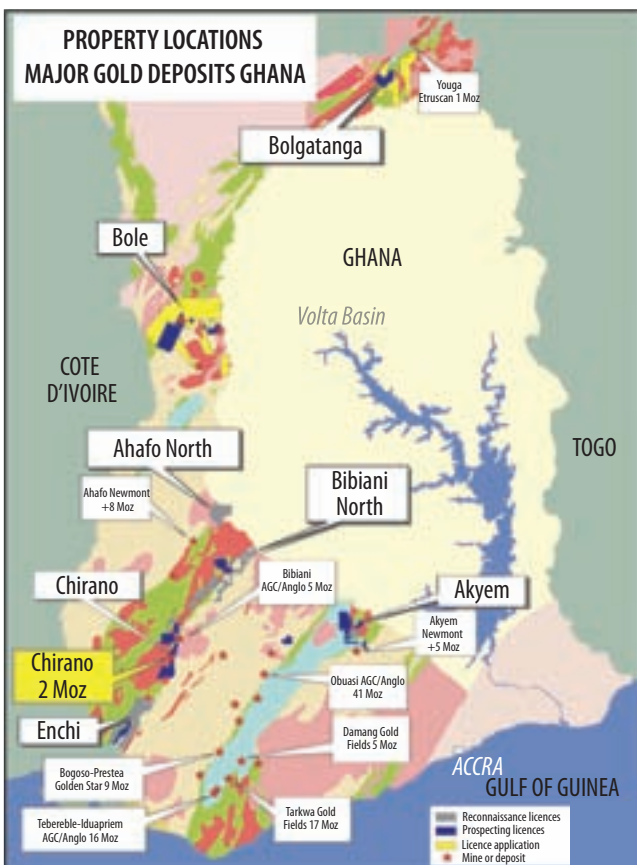
VI. Compensation principles

The Act establishes principles to be taken into account in the payment of compensation, including:

- a) Deprivation of the use of the natural surface of the land;
- b) Loss of, or damage to, immovable property;
- c) Loss of earnings or sustenance suffered by owner or lawful occupier for land under cultivation; and
- d) Loss of expected income, depending on the nature of crops and their life expectancy.

FISCAL REGIME

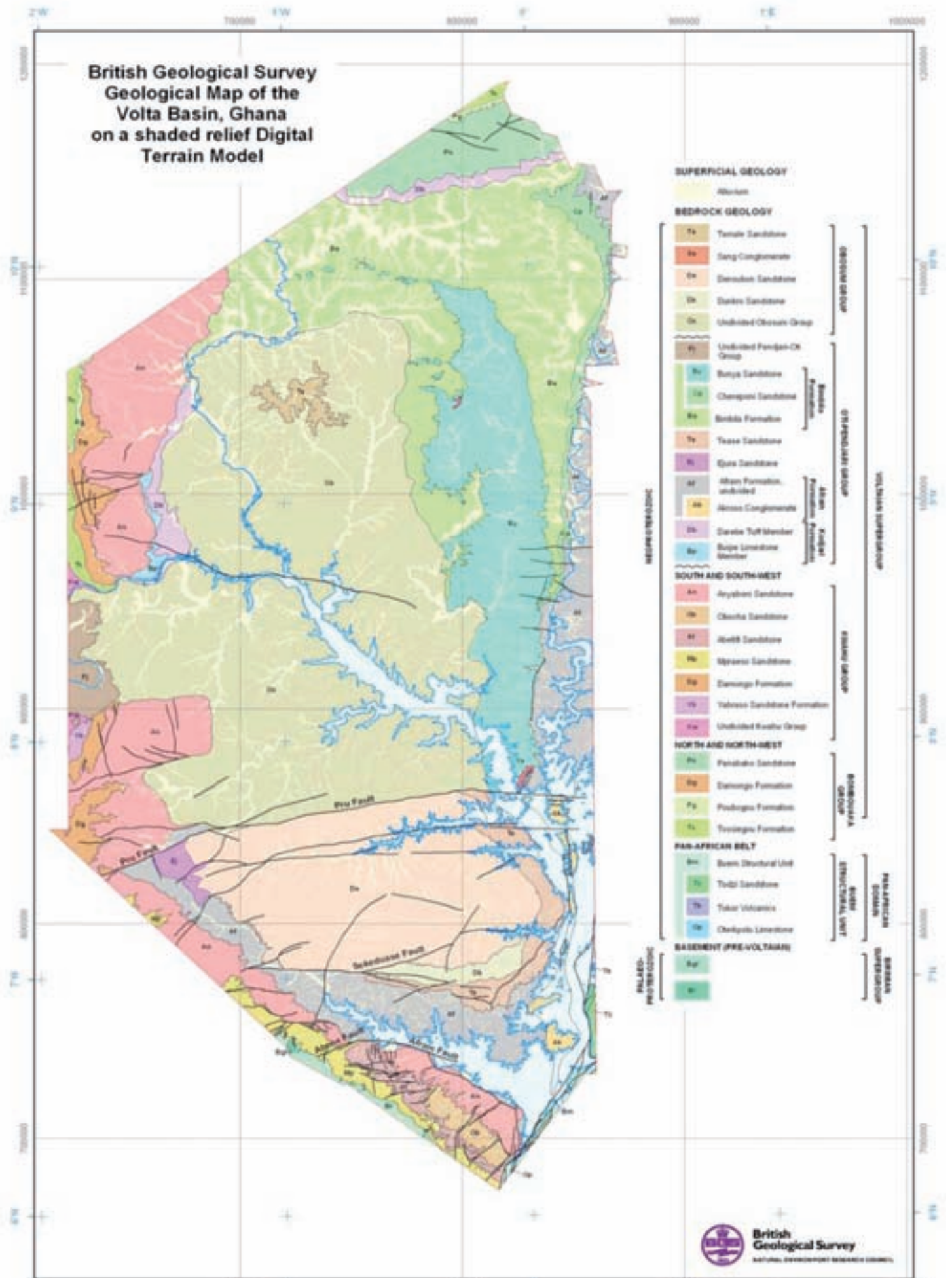
The fiscal regime as summarised in Table 2 is partly provided for under Act 703 and partly under the Internal Revenue Act 2000, (Act 592) and as amended.

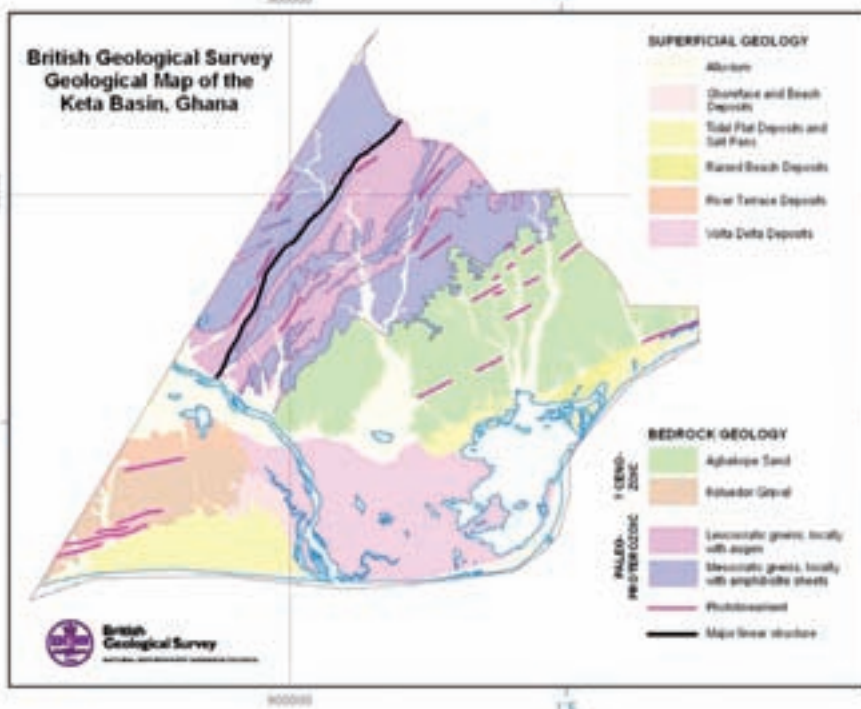
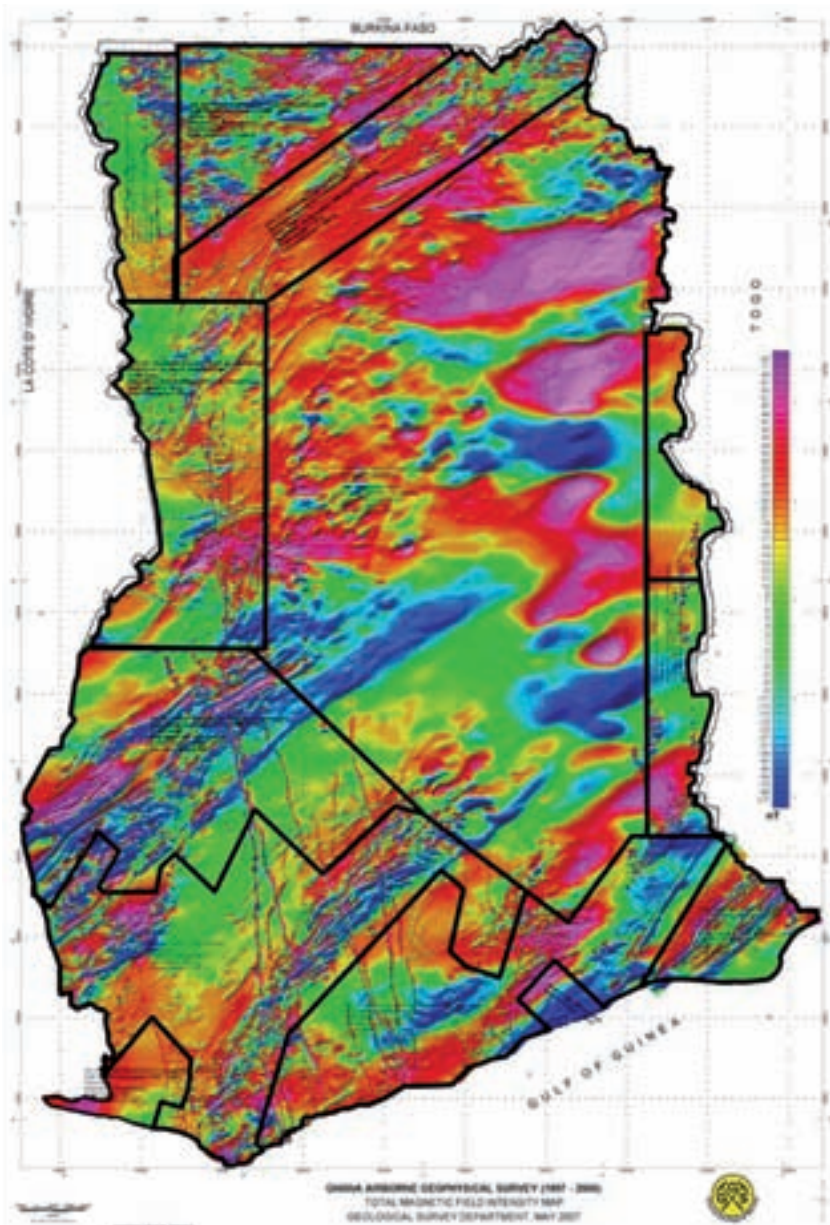


“The Minister of Lands and Natural Resources is exclusively mandated to grant mineral rights on the advice of a technical committee”



Small-scale gold mining





A nation abounding in minerals

GHANA falls within the Precambrian Guinea Shield of West Africa. The main Precambrian rock units in Ghana are the metamorphosed and folded Birimian, Tarkwaian and Dahomeyan Systems, the Togo Series and the Buem Formation. Intruded into the Birimian rocks are large masses of granite and granodiorite. The Precambrian rocks are overlain by Late Proterozoic to Paleozoic rocks of the Voltaian System, which consists of sandstones, mudstones, conglomerates, limestones and tillites.

The most striking feature of the geology of Ghana is the parallel disposition of evenly-spaced belts of folded Birimian metalavas. The width of each belt is 40-50km, the distance between individual belts is approximately 90km and the belts generally trend northeasterly.

The Birimian system in Ghana is part of the Birimian supracrustal sequence of West Africa, which extends from Ghana westwards to Senegal and Mauritania and northwards into Burkina Faso (Wright, 1985). The Birimian gold deposits and occurrences are set in five parallel volcanic belts several hundred kilometres long and trending in a northeasterly direction. These belts are the Ashanti, Sefwi, Kibi-Winneba, Bui and Bole-Nangodi. They consist of tholeiitic lava flows and are separated by basins containing metasedimentary rocks and granitoids in different proportions.

Sediments between belts consist of volcanoclastic rocks (pyroclastics and epiclastics) and volcanogenic argillites, which are derived from volcanoes of the belts (Leube and Hirdes, 1986).

Auriferous quartz-pebble conglomerates within the Tarkwaian System are exposed in the Tarkwa area. The Tarkwaian is a clastic sequence deposited in an elongate basin and is the second largest source of gold in Ghana. The gold deposits are fossil placer deposits and the mineralisation, somewhat remobilised, may represent detrital gold weathered out of the mineralised Birimian rocks.

Similar to the South Africa 'banket reefs' of the Witwatersrand and Transvaal, the Tarkwaian rocks occur in two well defined and one smaller northeasterly aligned belts. The main belt, lying immediately east of the main Prestea-Obuasi Birimian zone, extends from near the coast to the south of Tarkwa about 250km to the northeast where it terminates at the edge of the Voltaian Basin.

The main Tarkwaian belt has an average width of 16km. It is believed that the Tarkwaian Banket Series was deposited in a braided stream channel environ-

ment beyond the mid-fan area with the gold derived from the primary vein and lode-type deposits in the underlying Birimian. Another belt of similar rocks occurs in the north western part of Ghana.

Alluvial gold deposit in Ghana can be found in most rivers draining the Birimian rocks. They occur in gravels of streams, river flats and old valleys on terraces and in beach and gravel sand. The placers are derived mainly from the primary vein and lode type deposit in the Birimian. Alluvial gold prospecting has been concentrated in the Birim, Pra, Jimi, Ankobra, Offin and Fura rivers.

MINERAL OCCURRENCE AND ALLIED DATA

Ghana abounds in minerals; the major ones currently being mined on a large scale are gold, diamonds, bauxite and manganese. These minerals have been exploited over centuries. Since minerals are depletable resources, conscious efforts are being made in finding new deposits as well as identifying other minerals in demand.

Specifically, under the Mining Sector Support Programme (MSSP), being implemented with support of the European Union, the rest of the country (equating to one-third of total surface area) not covered previously with airborne geophysical survey have been flown.

Also, some selected field sheets have been covered with geological mapping to generate up-to-date, investor friendly geo-scientific maps. Results of the airborne and geological surveys have been analysed and plotted in the form of mineral occurrence and prospectivity maps for gold, phosphate, uranium and diamonds.

Currently, the country has an updated geological map and other mineral-related information in the form of publications, concession maps, spatial geophysical and geological data (airborne geophysical coverage maps, etc), which serve as ready information to investors.

In order to provide timely mineral information in the manner desired by investors, a component of the project has developed an Information Management System, which includes databases, an enhanced website and an intranet linking the various mining sector institutions to facilitate information flow.

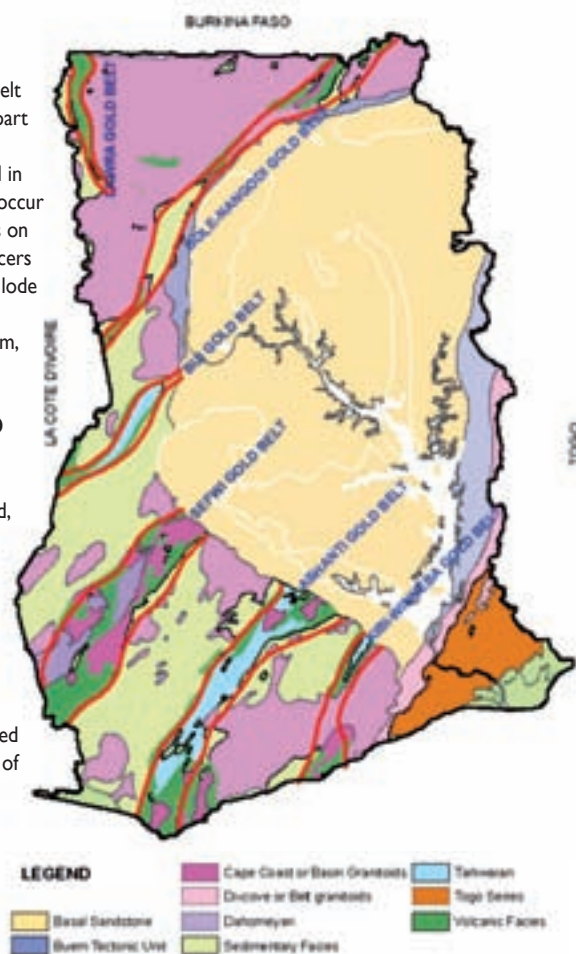
STATE OF EXPLORATION ACTIVITY

As of December 2009, 128 local and 51 foreign companies held prospecting/reconnaissance licences. Additionally, 37 companies had been granted mining leases. Many of the companies holding exploration licences are focusing on gold exploration.

Companies currently engaged in exploration in Ghana can be divided into three groups:

- Major international mining companies,
- Junior international mining companies, and
- Local companies.

Major international (transnational) mining companies with interests in Ghana include Gold Fields of South Africa, Newmont (US), Golden Star



Resources (US) and AngloGold Ashanti (South Africa). The junior international companies are mainly from Canada, South Africa and Australia. These companies usually conduct exploration with the objective of quickly blocking out enough ore reserves to support a bankable feasibility study to raise funds for production, as in the case of Redback Mining Inc, or for disposal of the upgraded property to major companies.

The local companies usually lack the capital and technical expertise to conduct modern exploration work. They are usually unable to finance exploration beyond the reconnaissance stage; they then look for foreign partners in order to continue with the exploration work. Therefore, most concessions held by the local companies and some foreign junior companies are possible joint-venture opportunities for major or junior international companies.



Minerals output making progress

Table 3: Trends in Traditional Minerals

Year	Gold ('000oz)	Diamonds ('000ct)	Bauxite ('000t)	Manganese ('000t)
1984	282	346	44	268
1990	541	637	369	245
1995	1,716	632	530	188
2000	2,457	878	504	896
2005	2,139	1,065	973	1,720
2008	2,797	599	574	1,261

Fig 1: Total mining sector investment versus average gold price (1990 – 2008)



GHANA is endowed with substantial mineral resources and has a relatively well-established mining sector, which has grown considerably in recent years to represent an important pillar of the Ghanaian economy.

This is a result of a generally stable political environment, the pursuit of liberal macroeconomic policies (including deregulation of the foreign-exchange regime) and, more specifically for the minerals and mining sector, the putting in place of comprehensive and attractive legal, fiscal and institutional frameworks by the government. These measures have helped in no small way to attract investments into the economy at large but particularly the mining industry, especially the gold sector.

This section reviews the comparative trends in the contribution of the mining sector vis-à-vis other main sectors to the key economic indices of especially:

- 1) Investment inflows,
- 2) Production and export earnings,
- 3) Gross Domestic Product (GDP), and
- 4) Government revenue.

SECTOR INVESTMENT

The favourable investment climate created by successive governments since 1983 has contributed to the development of mining in Ghana over the past two and a half decades.

Investment into the mining sector has been more than all the other sectors combined. Total investment into the minerals and mining sector from 1994 to 2008 amounted to about US\$6.7 billion. This has led to corollary benefits of expansion in the economy. Out of this, Foreign Direct Investment represents about 95%. Figure 1 shows the trend in total investments into the mining sector from 1994 to 2008.

Comparatively, investment into other sectors of

the economy as captured by the Ghana Investment Promotion Centre (GIPC) for Agriculture, Manufacturing, Service, Tourism, Export Trade and Building & Construction over the same period amounted to about US\$4.5 billion.

Again FDI accounted for about 94% of this figure, and is largely attributable to the high 2008 inflow that was due mainly to investment from Vodafone (US\$1.29 billion) in the country's telecommunication sector.

Figure 2 shows investments into mining as against other sectors from 1994 to 2008.

PRODUCTION INCREASES

With investment inflows came increases in production of virtually all minerals, as shown in Table 3. This table shows the trend in the traditional minerals: gold, diamonds, bauxite and manganese.

From 2000 to 2008, small-scale gold miners contributed an average of just over 10% of Ghana's total gold production and 12% of revenue. For diamonds, small-scale miners contributed an average of 88% and 87% of production and revenue, respectively, within the same period. However in 2008, small-scale miners produced all the country's diamonds because of the suspension of operations at Ghana Consolidated Diamonds Ltd (GCD).

MINERALS CONTRIBUTION

In terms of total merchandise exports, the proportion accounted for by minerals rose from under 20% in the mid-1980s through 35% in 1991 to 45% in 2008.

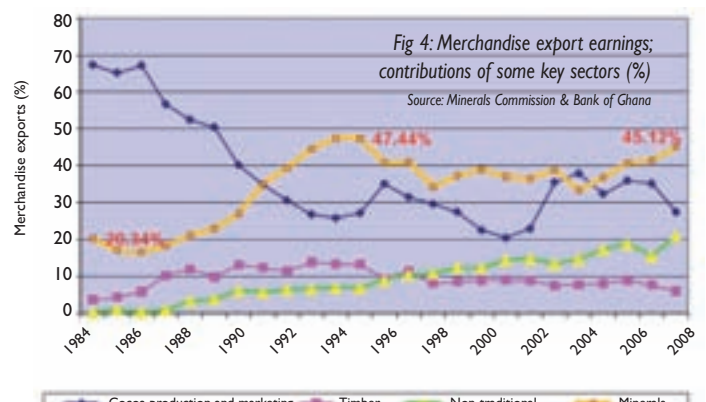
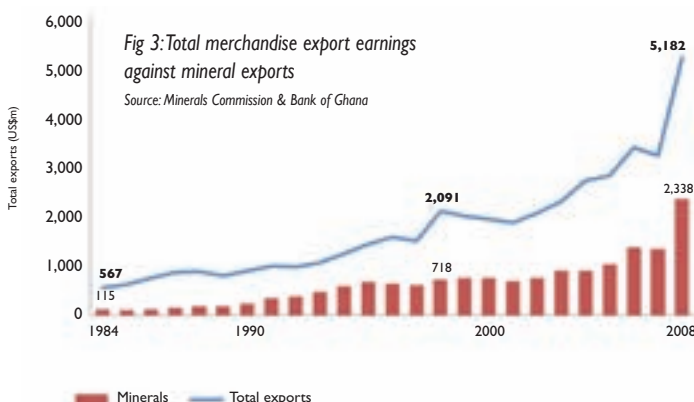


Since 1991 the mining sector has been the single largest contributor to total merchandise exports, excepting 2004, when it was overtaken by the cocoa sector. However, mining took over the lead again from 2005. Over the period, it has provided an average of about 42% of the total merchandise exports.

Gold accounts for some 95% of the total mining contribution. Ghana's gold exports totalled US\$2.2 billion in 2008, up from US\$1.8 billion in the previous year. Merchandise exports from the mining sector amounted to US\$2.34 billion (out of a total of US\$5.2 billion in 2008). With the current and anticipated future investments (Newmont's Akyem, Adamus Resources and other projects) into the mining sector and the gold price remaining favourable, the future of the industry looks positive.

Figure 3 shows trends in contribution to total merchandise exports by minerals.

While the minerals and timber sectors have increased their low contributions of 16% and 4%, respectively, in the 1980s to about 45% and 9% in recent years, cocoa has significantly declined from its glorious 68% in the 1980s to about 27% now. In the



context of rising export earnings (US\$567million in 1984 to US\$5.18 billion in 2008), the significance of minerals as a contributor to the foreign exchange resources of the country is therefore material. This is especially so with gold as the flagship of the sector, typically accounting for some 95% of all mineral earnings. It is therefore evident that the minerals sectors contribution to total merchandise is significant.

Figure 4 shows trends in merchandise export earnings of some key sectors.

FOREIGN EXCHANGE EARNINGS

Mining does not just generate significant foreign exchange. As shown in Table 4, at least 40% of the annual export revenue generated by mining over the past five years has been repatriated back to Ghana. Indeed, during the first half of 2009 alone, over 60% of the US\$1.14 billion in mining export revenues were returned. Thus, from 2005 to 2009, an average of 54% of mineral export revenues has been repatriated to Ghana. This is no small contribution to the economy.

GROSS DOMESTIC PRODUCT

As Figure 5 depicts, Ghana's GDP has seen marked growth. The mining sector contributed an average of 5.5% GDP from year 2000 to 2008. This is an improvement upon the sector's contribution in the mid-1980s, when contribution was as low as 1%.

Indeed, the sector's contribution began to rise to contemporary levels especially after government initiated a policy to develop the Mine Support Service sub-sector (through the activities of assay laboratories, drilling and contract mining companies, explosive manufacturers, etc) to support the industry and establish linkages with the rest of the economy.

The contribution of the sector has been about 6% in recent times and, as graphically depicted in Figure 6 (US\$1=GH¢1.45, December 2009 rate), has outstripped other key sectors like cocoa and forestry.

Dependence on a mono-sector like mining for the improvement in GDP could have exposed Ghana to the 'Dutch' disease; namely an over-dependence on a booming single sector. A corollary feature is that such a booming sector overshadows other sectors, thereby reducing their competitiveness. Thus, while the sectors contribution to GDP can be improved, the rather diverse range of contributors to the country's GDP is positive.

Table 4: Repatriation of Mineral Export Revenues (2005-09)				
Year	Total exports (US\$bn)	Repatriation (%)		
		Mandatory	Voluntary	Total ¹
2005	0.864	24.7	38.0	62.6
2006	1.239	22.7	35.3	58.0
2007	1.575	19.6	26.6	46.2
2008	2.089	19.3	21.7	41.1
2009	1.143	19.3	41.0	60.3
Total	6.911	21.1	32.5	53.6

¹ - Rounded Source: Bank of Ghana



GOVERNMENT REVENUE

Revenue collected by the Internal Revenue Service (IRS) accounts for 40% of government revenue.

Between 1990 and 2008,

Table 5 shows that the mining sector contributed an average of over 12% of such government revenue annually, especially in the form of corporate and personal income taxes and royalties. Notably, the sector continued to be the single largest contributor of royalty. On the average for the past 10 years, the sector contributed an average annual 98% (GH¢59 million in 2008) of the total royalties paid to government.

"The mining sector contributed an average of 5.5% GDP from year 2000 to 2008. This is an improvement upon the sector's contribution in the mid-1980s, when contribution was as low as 1%"

precious and industrial minerals subsectors. However, the sector has potential to employ more if it is fully integrated with the rest of the economy.

The sector is also implementing various socio-economic programmes by way of corporate social responsibility (CSR) including: provision of potable water, electricity,

health care, education, roads and some alternative livelihood projects. For example, in 2007, producing member companies of the Chamber of Mines spent GH¢13.1 million as socio-economic contributions to host communities. If properly co-ordinated within the development programmes of the District/Municipal Assemblies, the net benefits could be greatly enhanced.

OTHER INDICATORS

Apart from these conspicuous ones, there are several other ways in which mining contributes to the economy. In terms of employment, the mining sector generates 24,000 jobs in the large-scale sector and an estimated more than 500,000 jobs in the small-scale

Table 5: Contribution of Mining to Government Revenue						
Year	Corporate tax (GH¢'000)	Mineral royalties (GH¢'000)	PAYE (GH¢'000)	Other (GH¢'000)	Total IRS collection (GH¢ million)	Mining / total IRS (%)
2004	10,033	21,574	13,436	5,318	533.3	9.4
2005	26,989	23,595	15,437	14,462	644.6	12.5
2006	21,566	31,625	18,271	1,583	734.1	10.0
2007	47,416	40,882	34,587	137	910.2	13.5
2008	73,555	59,006	47,139	278	1,222.5	14.7
Total	179,559	176,682	128,870	21,778	4,044.8	12.0

Source: Internal Revenue Service

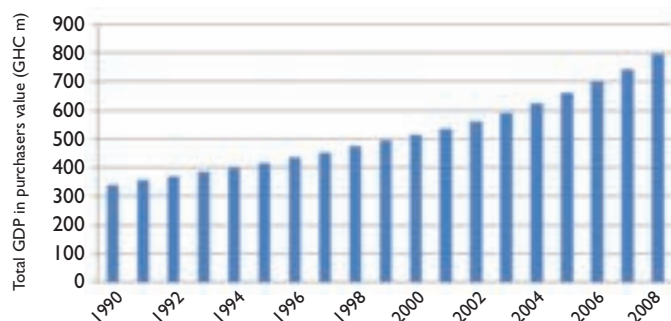


Fig 5: Total GDP by purchaser value at 1993 constant prices

Source: Ghana Statistical Service

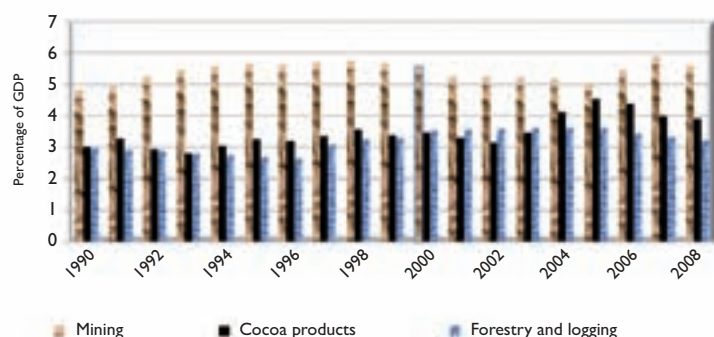


Fig 6: Contribution of some key sectors to GDP

Source: Ghana Statistical Service

Investment opportunities improving

Besides investing in exploration and exploitation of minerals, other opportunities exist in the mining and allied industries

GOLD REFINERY AND VALUE ADDED PRODUCTS

Ghana is already producing over 2.0Moz/y of gold. In spite of this level of production, there is no refinery in the country and the bullion is exported for final refining. Feasibility studies have confirmed the viability of refining gold in Ghana. Such a facility will serve other gold-producing countries within the sub-region. This is a project that investors with the technical know-how would wish to consider.

SOLAR SALT

Ghana possesses one of the largest proven renewable solar salt production potential along the entire coastline (stretching for a distance of over 500km). Effective exploitation would enable the country to supply the needs of the entire sub-region. Govern-



ment is carrying out a study to identify and demarcate areas that will be suitable for salt winning. Such salt land banks will be made available for investors.

CHLOR-ALKALI INDUSTRY

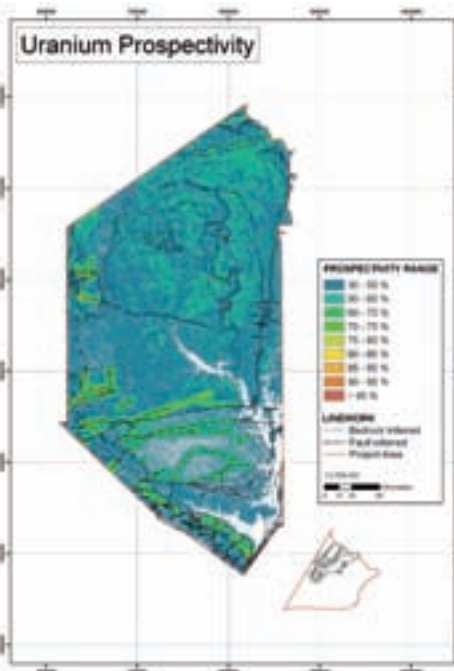
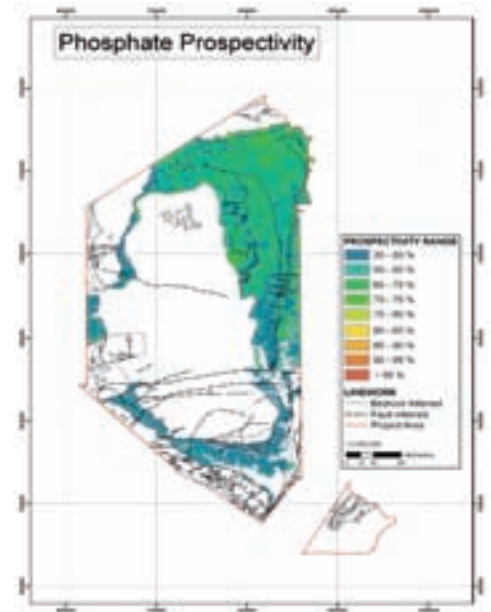
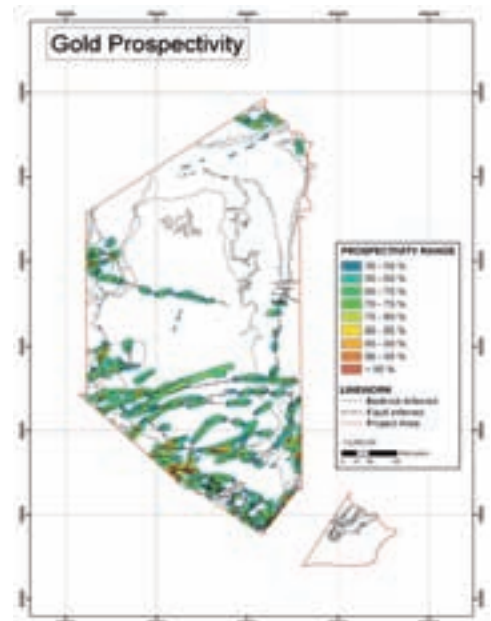
Potential exist for the utilisation of part of the salt to produce caustic soda (a raw material for the soap and detergent industry) and for bauxite/alumina production. The chlorine co-product can also be used as water-treatment chemical and also serve as raw materials for the production of various health and sanitation chemicals.

SERVICE AND ENGINEERING SECTOR

There are several service companies in Ghana who are providing support services including, contract drilling, assay laboratories, contract mining and geological consultancies to mining companies. Using Ghana as a base, these companies have ventured and expanded their activities into the West African sub-region. Government has through incentives encouraged such companies. Investment opportunities exist for investors to set up manufacturing plants and machinery for the mining industry.

OUTLOOK

The general improvement in the country's macro-economic conditions, coupled with Ghana's ever-improving infrastructure, will increase investor confidence in the country.



Sandvik drill rig at Tarkwapan



"The general improvement in the country's macro-economic conditions, coupled with Ghana's ever-improving infrastructure, will increase investor confidence"

On the mining front, the significant projects being undertaken by the European Commission under the Mining Sector Support Programme (MSSP) are expected to lead to the discovery of new mineral deposits. This will strengthen mining sector agencies in the performance of their duties, resulting in improved service delivery and monitoring while enhancing environmental protection. The completion of this programme should also lead to a diversification of the mineral production base of the economy.

With the attraction of major international companies into the mining sector, which are at various stages of mine development and expansions, coupled with efforts by the government to improve the investment climate for mining, contribution from the mining sector should increase in the coming years. In particular, the development of new projects, such as those operated by Newmont and Adamus Resources, should contribute to rising gold production in the years ahead.

Relevant Institutions of the Mining Sector

Ministry of Lands and Natural Resources

The mission of the Ministry is to ensure efficient management of the nation's mineral resources and promote their judicious exploration, exploitation and processing with minimal harm to the environment, for optimum benefit to society.

Ministry of Lands and Natural Resources
Minister's Office
Hon Alhaji Collins Dauda MP
Minister of Lands and Natural Resources
PO Box M212 Ministries, Accra
Tel: +233 21 666801/687314
Fax: +233 21 666801
Website: www.ghana-mining.org

Minerals Commission

The Commission is responsible for the regulation and management of the development of the mineral resources of Ghana and the co-ordination and implementation of policies related to mining.

Minerals Commission
Mr Benjamin N.A. Aryee, Chief Executive Officer
PO Box M248 Accra.
#12 Switchback Road,
Cantonments Residential Area, Cantonments, Accra.
Tel: +233 21 771318 / 773053 / 772783
Fax: +233 21 773324
E-mail: mincom@mc.ghanamining.org;
mincomhq@gmail.com
Website: www.ghana-mining.org

Geological Survey Department

The Department is responsible for the provision of reliable and up-to-date geological information for national development through geological mapping, research and investigations.

Geological Survey Department
J Agyei Doudu, director
Ministries Branch Post Office
PO Box M 80, Accra, Ghana
Tel: +233 21 679239/679236
Fax: +233 21 679238
E-mail: info@gsd.ghanamining.org
Website: www.ghana-mining.org

Precious Minerals Marketing Co

Precious Minerals Marketing Co Ltd (PMMC) provides official marketing services for small-scale gold and diamond miners. It also promotes the development of precious minerals and jewellery industries in Ghana, and is responsible for handling the export of all diamonds produced in Ghana.

Precious Minerals Marketing Co Ltd
Rueben D Dampsey, managing director
Diamond House, Kimbu Road
PO Box M 108, Accra, Ghana
Tel: +233 21 664931 3
Fax: +233 21 662586
E-mail: pmmc@pmmcghana.com
Website: www.pmmcghana.com

The Chamber of Mines

The Chamber of Mines is the peak minerals industry association in Ghana. The Chamber represents the collective interests of companies involved in mineral exploration, production and processing in Ghana. Its activities are entirely funded by its member companies, which produce over 90% of the Ghana's mineral output. The Chamber has represented the industry's interests since 1928.

The Ghana Chamber of Mines
Joyce R. Aryee, Chief Executive Officer
PO Box 991, Accra
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Fax: +233 21 760653
E-mail: chamber@ghanachamberofmines.org
Website: www.ghanachamberofmines.org

Lands Commission

The Lands Commission is the body charged with the responsibility to ensure the judicious management of the country's land.

Environmental Protection Agency

The Mission of the EPA is to co-manage, protect and enhance the country's environment in particular as well as seek common solutions to global environmental problems.

Forestry Commission

The Forestry Commission of Ghana is responsible for regulating the utilisation of forest and wildlife resources, the conservation and managing those resources and the co-ordination of policies related to them.

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