AN ECONOMIC HISTORY OF THE ASHANTI GOLDFIELDS CORPORATION, 1895-2004: LAND, LABOUR, CAPITAL AND ENTERPRISE

Thesis submitted in accordance with the requirements of the University of London
for the degree of Doctor of Philosophy

By

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August 2006

Signed Declaration

The work presented in this thesis is my own.

Signed ....

Dated .... 26.08.06 ....

ABSTRACT

No comprehensive history of the Ashanti Goldfields Corporation (AGC) has been written yet. While this doctorate thesis, due to time and word limit constraints, cannot claim to have achieved this level of completeness it does provide a major contribution towards such a comprehensive history by providing for the first time an academic account of this African-based gold mining firm from 1895 to 2004. The thesis has chronological range: from the firm's incorporation to its demise as an autonomous company. Depth of analysis is reserved for the consideration of important aspects of the four factors of production and how these resources affected the company's fortunes. The thesis will contribute to the business historiography of Africa as well as to our understanding of the history of Ghana with respect to British foreign investment and the development of the gold mining industry.

The main question under investigation is how the Ashanti Goldfields Corporation managed to survive for so long: how the company evolved, what accounted for its longevity, and what assessment can be made of its business performance over time.

It is found that AGC's business performance in terms of output experienced five distinct phases: steady growth between1898 and1939, decline between1939 and 1956; strong growth between 1957 and 1974; near-terminal decline between 1975 and 1986; and rapid growth between 1987 and 2004. A different and more erratic pattern emerges on profitability notably with a sharp decline in the company's last decade of existence, contributing to its loss of independence. The firm's longevity cannot solely be explained by the geological uniqueness of the Ashanti mines, although this gave the firm a critical advantage. In the face of challenging political and economic changes, managerial decisions and the manner in which the factors of production were employed help us to understand the firm's successes and failures.

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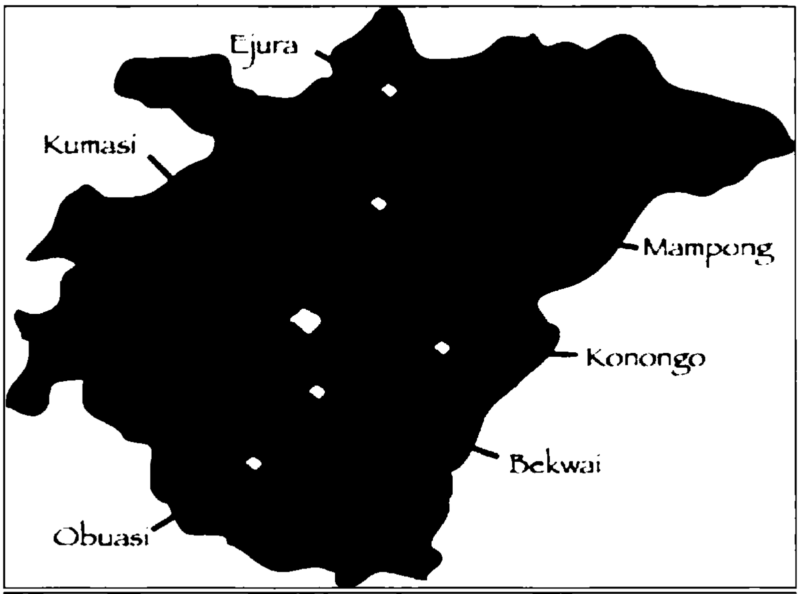

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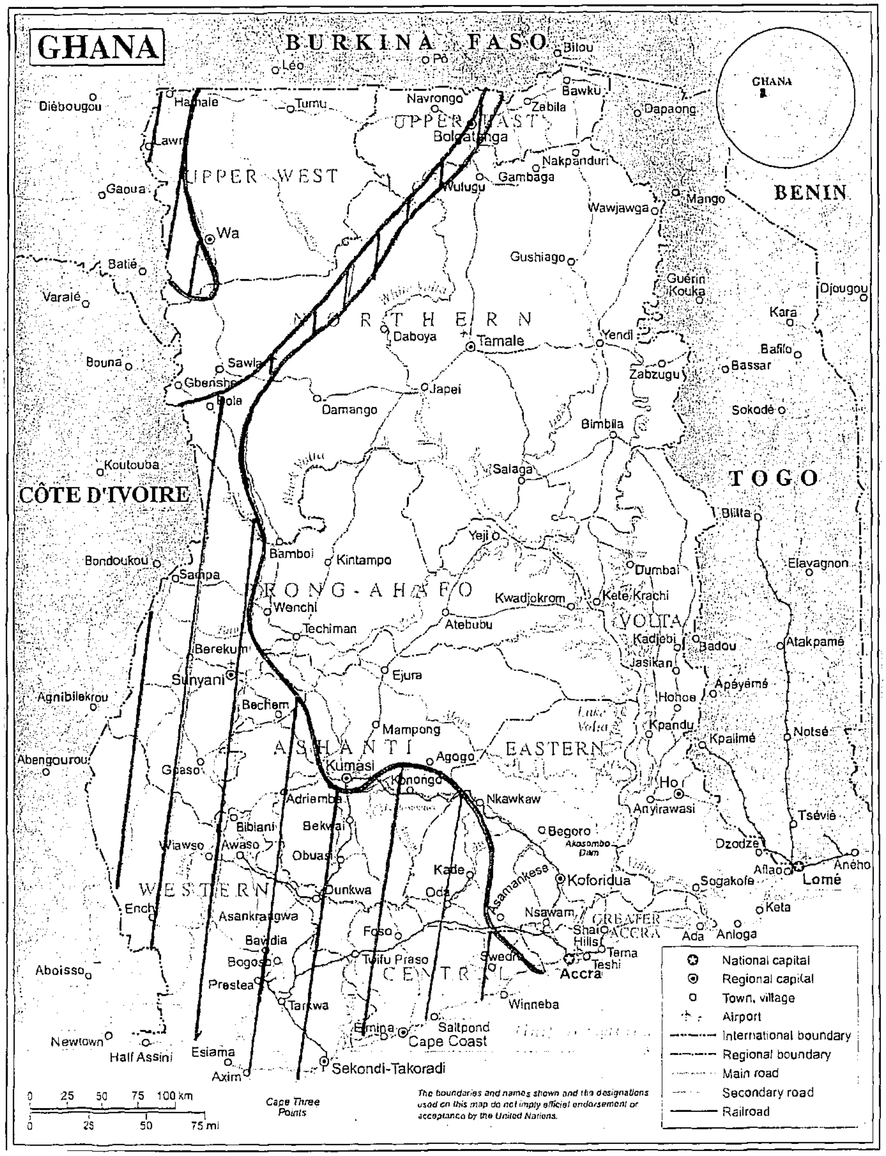

[1] Geological information adapted from E. Dumett, *El Dorado in West Africa: The Gold-mining Frontier, African Labour, and Colonial Capitalism in the Gold Coast, 1875-1900,* Athens: Ohio University Press, 1998, p. 30.

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Source: MS 24666/1 Final Report of W.R. Feldtmann, 15 July 1905.

Each square = 1 square mile

N↑			Suhensu	
			Korkortaswia	
		Mt Cade	Insintsiam Obuasi	
Nyansu		Ayeinm	Cote d'Or	
	Sansu			
			Caria Brusu Jimsu	

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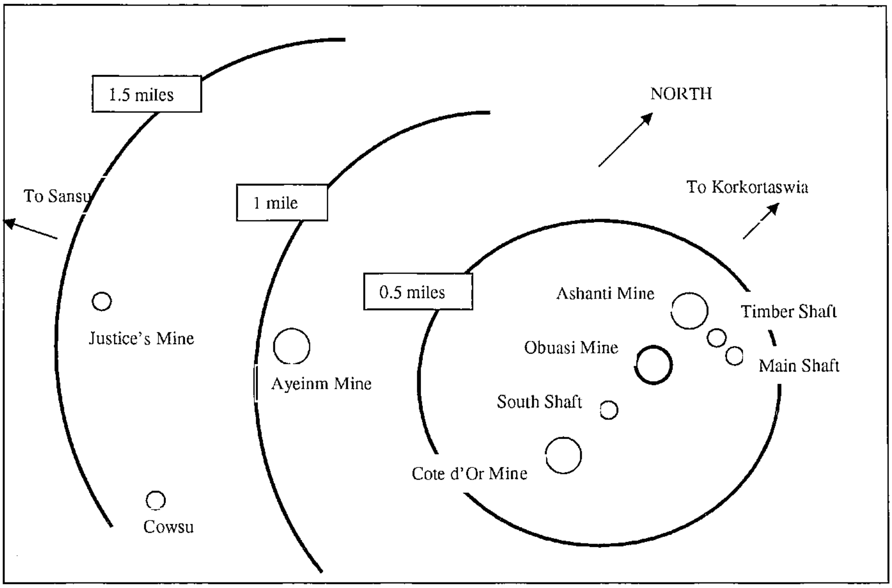

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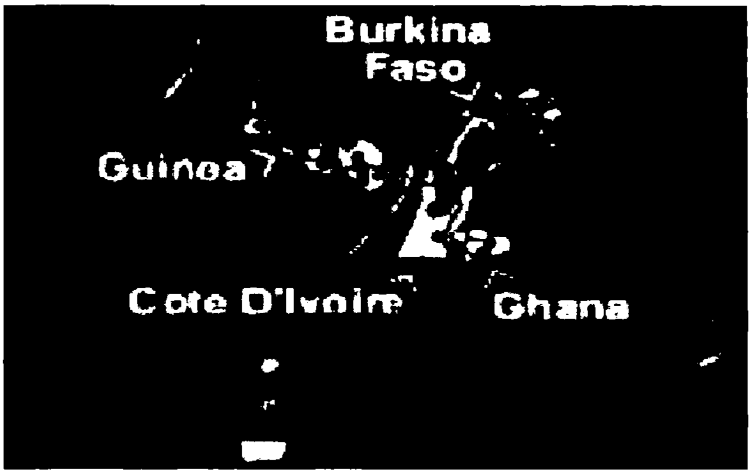

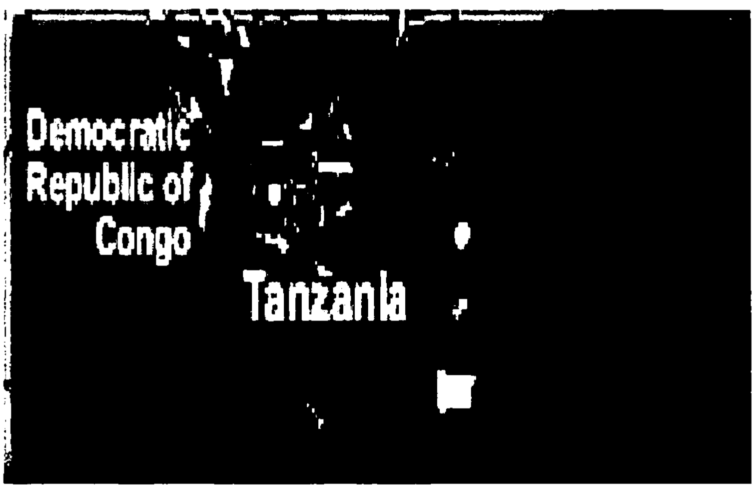

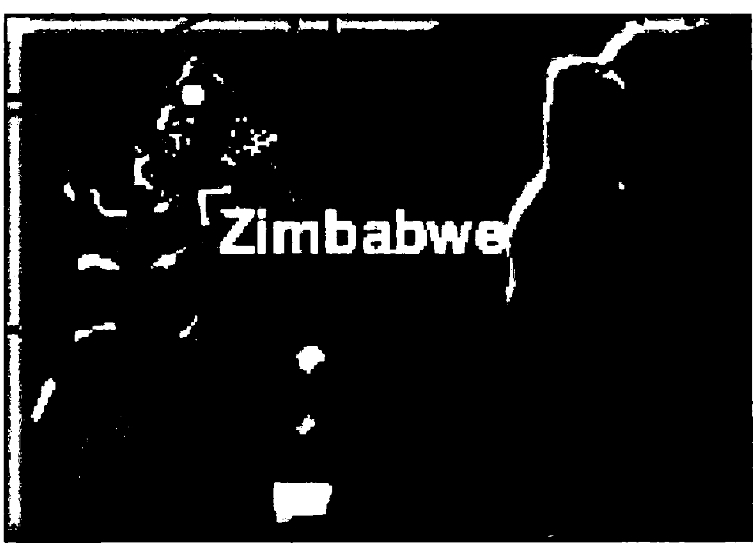

ABBREVIATIONS*

AFRC	Armed Forces Revolutionary Council
AGC	Ashanti Goldfields Corporation
AGM	Annual general meeting
AMEP	Ashanti mine expansion project
ARPS	Aborigines Rights Protection Society
BBWA	British Bank of West Africa
CAST	Consolidated African Selection Trust
CEO	Chief Executive Officer
CFO	Chief Financial Officer
COO	Chief Operating Officer
CTP	Central treatment plant
CPP	Convention People's Party
DC	District Commissioner
EGM	Extraordinary general meeting
ERP	Economic recovery programme
ETS	Eaton Turner Shaft
FDI	Foreign direct investment
GCS	George Cappendell Shaft
GCST	Gold Coast Selection Trust
GDRs	Global depository receipts
GM	General mines manager
GSM	Golden Shamrock Mines
IFC	International Finance Corporation
IPO	Initial public offering
KMS	Kwesi Mensah Shaft
LDC	Less developed country
Libor	London interbank offer rate
Lonrho	London and Rhodesia Mining and Land Company
MD	Managing director
MEU	Mine Employees Union
MNE	Multinational enterprise
MOU	Memorandum of understanding
MS	Guildhall Library London manuscript

MWU	Mine Workers Union
NDC	National Democratic Congress
NLC	National Liberation Council
NLM	National Liberation Movement
NPP	New Patriotic Party
NPV	Net present value
NRC	National Redemption Council
NRCD	National Redemption Council Decree
NYSE	New York Stock Exchange
OTC	Over-the-counter
PNDC	Provisional National Defence Council
PP	Progress Party
PTP	Pampora treatment plant
RCF	Revolving credit facility
SCOA	Société Commerciale de L'Ouest Africain
SGMC	State Gold Mining Corporation
SMC	Supreme Military Council
STP	Sulphur treatment plant
UAC	United Africa Company
UGCC	United Gold Coast Convention
WAGC	West African Gold Corporation

* Archival abbreviations are listed in the Bibliography

GLOSSARY OF GHANAIAN TERMS

Abusa A system of sharing output (or income) derived from the land into thirds between a landowner, management and labour.

Adansihene The king of the Adansis, a polity of second tier importance in the Ashanti kingdom. The Adansis sought British protection from 1874.

Akan A large ethnic group found in West Africa, predominantly in the coastal and central forest belt of Ghana, where they make up the single largest ethnic group. The Akan consist of several subgroups including the Asante and Fante.

Asante The kingdom which enjoyed the peak of its geographic expansion in the early nineteenth century when it covered much of present day Ghana. The administrative capital of the kingdom was Kumasi. The anglicised spelling, Ashanti, is used in reference to the smaller geographic area following the kingdom's demise at the hands of the British. Asante also refers to a sub-group of the larger Akan ethnic group predominantly occupying the forest zone of central Ghana.

Asantehene King of the Asante.

Bekwaihene Chief of the Bekwai; this chieftaincy was one of five core polities of the Asante kingdom.

Cedi The Ghanaian currency since 1965.

Fante A sub-group of the larger Akan ethnic group occupying the central coastal area of present-day Ghana. The Fante were conquered by Asante in 1807. The Fante aligned themselves with the British against Asante.

Omanhene The ruler of a polity or state.

GLOSSARY OF GOLD MINING AND FINANCIAL TERMS[2]

Adit A tunnel driven into the side of a mountain to access ore deposits.

Amalgamation Addition of mercury to gold-bearing material. The mercury and gold combine to form an alloy called amalgam from which the mercury can be separated later by dissolving in acid or with heat. The process is most effective on coarse, visible free gold.

Doré bars Unrefined gold bars containing small amounts of impurities such as silver.

BIOX Bio-oxidation, a patented process where bacteria are used to breakdown ores containing sulphides.

Bond issue The sale of a corporate debt instrument. Issuing bonds is one way for companies to borrow money. The company promises to repay the amount borrowed (the principal) with interest by a specified date.

Bullion Precious metals in the form of bars or ingots.

Call options Derivative contracts giving the holder the right, without obligation, to buy an underlying asset at a fixed price at a future date.

Capital gains The increase in the price of an asset between the time it is sold and when it was originally bought.

Cash cost An indication of the average cost of producing one troy ounce of gold. It is calculated by dividing the direct costs associated with mine production – mine labour, extraction costs and processing costs – by the troy ounces produced in a given period.

Convertible bonds A corporate debt instrument used by companies to borrow money. Interest is usually paid, but the holder, rather than receiving repayment of the principal, has the right within a certain time frame to convert the bond into equity shares in the borrowing company.

Crosscut A tunnel driven through an ore-bearing reef.

Cyanidation A method of extracting gold developed in 1887 by J. S. MacArthur. A solution of sodium or calcium cyanide is added to finely ground ore (which may or may not have been roasted) to release the gold from the ore complex. Cyanidation is followed by separation processes to recover the gold.

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[2] Some of the gold mining and financial terms are derived from AGC's 1997 annual report and www.investorwords.com.

Derivatives Financial instruments whose behaviour and value are determined by the behaviour and value of an underlying asset such as a commodity or currency. Options are a type of derivative.

Discount rate The rate used to adjust future expected income streams to a present value. Discounting reflects the effects of inflation on the value of money as well as borrowing rates. The higher the discount rate used the lower the present value of the future cash flows.

Downside protection Protection from falling prices.

Drawdowns Disbursements from an agreed loan.

Due diligence The investigation of a company before making an investment.

EBITDA Earnings before interest, tax, depreciation and amortisation. EBITDA reflects a company's operating cash flow.

Escrow accounts A limited access account set up in a borrower's name to provide a lender with greater confidence and access to the repayment of the obligation.

Flotation (1) An initial public offer, see 'IPO'.

Flotation (2) A metallurgical process where ore is concentrated by first grinding it, then water and frothing chemicals are added. Air is blown through the mixture attracting the desired mineral to the bubbles, this causes the mineral to float. The froth is skimmed off for further refinement.

Forward selling market A market where the price of goods are fixed today even though the goods will not be delivered until some point in the future. Forward selling attempts to avoid the adverse effects of price movements in the future.

Gearing The proportion of a company's capital that is made up of debt as opposed to equity. Gross gearing is calculated by dividing total borrowings by shareholders' funds, whereas net gearing subtracts from the total borrowings figure the amount of cash and other liquid assets the company may hold.

Grade In the case of gold mining, the relative gold content found in ore.

Hedge book/hedge portfolio A collection of investments in derivatives.

Hostile takeover A takeover that proceeds without the support of the target company's board of directors.

Interest cover The calculation of a company's pre-tax income divided by its total interest expense. It shows how many times over income can service debt payments.

IPO Initial public offering; the first sale of a company's stock to the public.

Level An underground storey accessed via a shaft. Each level at the Obuasi mine is approximately 100 feet apart.

Libor London interbank offer rate. The rate charged by banks when they lend to other banks.

Liquidity risk The risk of being unable to raise cash quickly, or dispose of assets quickly.

Margin call A demand for a collateral payment from a counterparty, usually in the form of cash, to cover an adverse movement in the price of a financial instrument.

Mark-to-market The price of a security at the close of trading each day to calculate profits and losses to determine if margin requirements are satisfactory.

Market capitalization The value of a company as measured by the share price multiplied by the number of shares in issue at a given time.

Net present value (NPV) calculation Net present value is one way of assessing investment opportunities. The calculation looks at future cash flows from an investment and based on the cost of borrowing and inflation adjusts these income streams to a current value. See also 'discount rate'.

Ore Rock containing at least one mineral of commercial value that can be economically extracted.

Ounce Troy ounce. A troy ounce is approximately 10% heavier than an avoirdupois ounce. One troy ounce equals 31.1g, see table on page 23.

Proven reserves The existence of ore where the physical character, continuity, size, shape, quality, mineral content as well as tonnage have been defined, and detailed technical and economic studies justify extraction.

Probable reserves Mineral resources of sufficient quantity have been indicated but no detailed, technical and economic studies have been completed to justify extraction.

Put options Derivative contracts giving the holder the right, without obligation, to sell an underlying asset at a fixed price at a future date.

Refractory ores Ores whose mineral composition make the gold extraction process more difficult. Intermediary processes are required to deal with the refractory elements before satisfactory levels of gold can be recovered.

Revolving credit facility A form of flexible corporate borrowing whereby the company can draw on funds as and when needed within a certain limit and time frame.

Roasting Heat is applied to crushed ore (but not to a temperature high enough to melt the gold) in order to separate the gold from other minerals. In the heating process unwanted minerals, such as sulphur, combine with oxygen and escape in gaseous form, leaving behind more concentrated ore for further treatment.

Scheme of arrangement An agreement between a company and a group of shareholders or creditors arrived at by majority vote but which is then endorsed by a court.

Scrip dividends Dividends paid in new shares rather than in cash.

Shaft A vertical excavation used to transport miners, equipment, waste and ore to and from underground mine faces.

Share dilution The fall in a shareholder's percentage ownership of a firm caused by the increase in the number of new shares issued to others.

Shareholders' equity Company funding attributable to shareholders, equal to the value of the company's net assets.

Spot price The cash price for a financial product if traded immediately rather than in the future.

Stope The mining face; an underground area that has been blasted and from which ore is taken.

Strike The horizontal direction in a geological structure.

Tailings The residue following ore processing. Tailings are stored in hope of future technological processes allowing re-treatment and economic recovery of the remaining ore content.

NOTE ON NOMENCLATURE

'Asante' is used throughout the text to refer to the people of that ethnic group, or to refer to the kingdom and its geographic location prior to British subjugation. After British 'conquest', the anglicised version, 'Ashanti', is used to refer to the much reduced geographic area under British administration.

Ashanti Goldfields Corporation is sometimes shortened in the text to 'Ashanti Goldfields' or abbreviated to 'AGC'.

The 'Gold Coast' is used to refer exclusively to the coastal British protectorate. 'Colonial Ghana' is the term chosen to describe the British colony comprising the Gold Coast, Ashanti, the Northern Territories and British Mandated Togoland. 'Ghana' is used to refer to the country post-1957; however, if the period under discussion spans both pre- and post-Independence then 'Ghana' may also be used.

USEFUL MEASUREMENT CONVERSIONS

1 tonne =	1.10231 short tons (2,000 pounds)
1 gramme =	0.03215 troy ounces
1 gramme per tonne (g/t) =	0.02917 ounces per short ton
1 pennyweight (dwt) =	1.56g
1 troy ounce =	31.10g = 20 dwt
1 short ton =	29,166 troy ounces

PART ONE

CHAPTER 1:
INTRODUCTION

This chapter discusses the thesis aim, theme, scope, sources, methodology, organization and key theoretical concepts.

Aim

The thesis aims to analyse the evolution of the Ashanti Goldfields Corporation (AGC) from a nineteenth century stand-alone British investment in pre-colonial Ashanti into a twenty-first century African multinational. This is achieved in Part One by providing a detailed chronological narrative and in Part Two by exploring the four factors of production – land, labour, capital and enterprise - in relation to specific questions from specific periods in AGC's history. The thesis covers the firm's entire existence as an autonomous corporate entity from 1897 to 2004. In April 2004, AGC was taken over by the South African gold producer, Anglogold, creating a new company, Anglogold Ashanti.

AGC merits investigation for several reasons. Business historians traditionally use longevity and size as measures of success. In these respects AGC was a success for 107 years. Despite ownership changes in 1968 and 1972, the firm operated independently from 1897 until 2004. In 2002 market capitalisation exceeded a billion US dollars, turnover was over half a billion US dollars and more than 10,000 staff were employed.[1] An investigation into how the firm grew for over a century is merited.

Business success must also be measured by profitability and efficiency. The thesis therefore tracks the firm's performance over time. Assessments are made as to whether the firm's fortunes were largely self-determined or whether and to what extent external influences, institutions and events shaped its financial results.

AGC played an important role in the colonial and post-colonial economy of Ghana. Throughout the period the company was one of the largest private

[1] AGC annual report, 2002.

employers.[2] AGC quickly became Ghana's single largest gold producer, producing between 1912 and 1993 just over 50% of the gross revenue of all gold mines in Ghana.[3] The gold industry was, after cocoa, the second (for a few years, the first) biggest earner of foreign exchange.[4] Between 1994 and 2004 AGC stocks made up 70% of the total equity capitalisation on the Ghana Stock Exchange. In 2004 the firm was listed on four international stock exchanges and it was the first operating sub-Saharan African company to be listed on the London Stock Exchange in 1994 and on the New York Stock Exchange in 1996.[5]

AGC operated in an environment of uncertainty uncommon to most firms due to the frequent and often acute changes in the political and economic environment of Ghana. In 1895 when an Englishman, Edwin Arthur Cade, bought from three indigenous entrepreneurs the 100 square mile mining concession that would belong to AGC, the area was under the suzerainty of the Asante Kingdom. By 1897, when AGC was incorporated, the British had subjugated Asante (although Kumasi would revolt in 1900). In 1957 Ghana gained its independence from Britain. The next twenty-five years were characterised by eight changes in government, mostly through coups d'état. This political upheaval was coupled with economic policies that proved unsuccessful, such as persistent currency overvaluation, over-taxing of cocoa producers and ill-disciplined recourse to money supply increases.[6] As a result, there was a drain of foreign investment and the near-collapse of the Ghanaian economy, which is evident in the following statistics: GDP per capita declined from (cedis) ¢230 in 1957 to ¢180 in 1982 (in 1970 prices); the ratio of investment to GDP declined from 22.6% in 1960 to 6.9% in 1982.[7] AGC, however, remained. Obviously, as an extractive firm AGC did not have the locational flexibility that others, such as expatriate manufacturers, had. Nevertheless, for a company heavily reliant on foreign exchange for supplies

[2] By way of comparison, UAC employed at its peak 14,400 in 1956 (S. Decker, 'Building up Goodwill: British Business and Economic Development in Ghana and Nigeria, 1945-1977', PhD Thesis, University of Liverpool, 2006, p. 293). That year AGC employed 5,028, rising to a peak of 12,860 in 1998, see Appendix 3.
[3] Ghana Chamber of Mines annual report 1993, table of the estimated value of gold produced by the largest individual mines since 1912, p. 35; see also Appendix 1.
[4] See Appendix 2.
[5] AGC annual reports 1994 and 1996; Dow Jones and Company, 'Emerging Markets Report', 21 February 1996.
[6] M. Huq, *The Economy of Ghana: the First 25 Years Since Independence*, Basingstoke: Macmillan, 1988, pp. 1-32, 112-6, 215-7; D. Rimmer, *Staying Poor: Ghana's Political Economy 1950-1990*, Oxford: Pergamon Press, 1992, pp. 144, 148-9,157; J. Herbst, *The Politics of Reform in Ghana, 1982-1991*,Berkley: University of California Press, 1993, pp. 20-1, 39-40.
[7] Huq (1988) p. 2.

to remain viable throughout the economic crisis years of 1975-1983 was an achievement, bearing in mind that other gold mines ceased production.[8] Furthermore, the fact that AGC's history extends from pre- colonial through to colonial and post-colonial times provides an opportunity to assess the relevance of these political discontinuities to the firm's performance. Whether these political junctures form useful units of analysis in business terms is revealed, and the degree of economic continuities surviving political changes is examined.

It is surprising that a comprehensive history of the firm has not been written already in view of the foregoing factors. In addition, relatively good company materials covering the period 1897 to 1968 have been available at the London Guildhall Library for over fifteen years.[9] This omission may have been because there used to be an academic stigma about appearing to celebrate imperialism by studying successful expatriate firms.[10] In 2003 there was extensive media coverage about a planned takeover of AGC by a subsidiary of the Anglo-American Corporation, Anglogold. Unlike the takeover by Lonrho in 1968, following this deal AGC would cease to operate autonomously with its own corporate identity and board of directors. This corporate death signalled an appropriate time to begin to record AGC's history before it was subsumed by that of Anglo-American.

Theme

The main theme is, as stated above, that of longevity and successful business performance. The focus is on the endogenous factors that contributed towards this, although these cannot be fully appreciated without an understanding of the exogenous conditions of the gold market and the political economy. In Part Two the four factors of production provide chapter-specific themes for detailed analysis. These all contribute to explaining the main theme.

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[8] Konongo Goldfields and Dunkwa Goldfields stopped crushing operations in 1980, at two other State Gold Mining Corporation mines, Tarkwa and Prestea, gold produced had dwindled to just 25% of their all time peaks during this period - Ghana Chamber of Mines annual report 1980/81, Appendix 2 and 2B.

[9] See the section in Chapter 2 entitled 'Existing Literature on AGC'.

[10] A. G. Hopkins, 'Imperial business in Africa, part 1: sources', *Journal of African History*, 17, 1, 1976, pp. 29, 30.

Scope

This thesis is a monograph covering the time period when the mine concession was acquired in 1895 to the end of the company's autonomy in 2004. It will provide a good basis for future comparative work, most obviously with South African gold mines and other expatriate businesses in Ghana. However, the intention here is to focus on AGC's performance over time, which is an essential first step before meaningful historical and geographical comparisons can be made. (Very selective comparative data is provided where the bald company data convey little meaning in isolation.)

In view of time and funding restrictions it was impossible to investigate in equal detail all the subject areas pertinent to a business history. Subjects such as technological change and management organization are discussed in passing in Chapter 3, 'A Chronological Narrative', while greater analytical depth is reserved for important aspects of the factors of production. The intention here was to provide a usefully broad, economic-oriented exposition that, while complete in its own limited aspirations, would, at a later stage, form the heart of a comprehensive book on the history of Ashanti Goldfields.

Primary Sources

In view of the monograph status of this work great emphasis was put on primary sources from the company itself such as annual accounts, internal correspondence and reports, press releases, board minutes, and interviews with former directors, managers and staff.

Company material from 1895 to 1968 is held at the Guildhall Library in London.[11] None of the catalogued items run continuously for this period. Annual reports, for example, between 1933 to 1963 are not in this collection. Other company documents were held at Lonrho's old offices at Roman House, Wood Street, and were accessed by Raymond Dumett, Jeff Crisp and Sarah Stockwell over a decade ago. However, with Lonrho's move in 1994 to new offices at Grosvenor Place and the retirement and death of history-friendly staff such as

[11] The efforts of Anthony Hopkins and Raymond Dumett to encourage the deposit of further materials at Guildhall deserve acknowledgment.

Anthony Orchard and Tommy Rowe respectively, it is believed that a lot of data from the era before 1972 has been destroyed.[12] Lonmin, the mining company spun out of Lonrho, former owners of AGC, granted access to their board minutes between 1968 and 1972. Virtually all of the Spears Papers on AGC at the Churchill Archives which had previously been closed for a hundred years were opened up to me (although belatedly, limiting the time and scope I had to interrogate them). These provided financial and operational data for many of the years missing from the Guildhall collection, as well as invaluable personal perspectives of AGC's longest serving chairman and managing director, General Edward Spears. Fieldwork conducted in AGC's Accra office was very useful and permission was granted for me to read all the board minutes and enclosed reports from 1972 to 2004.

As Dumett observes, a business history that relies only on company sources would be superficial.[13] Additional information relating to the company and its economic and political context was consulted in the following locations: records of the commissioner's office for Obuasi and Bekwai, and records of the Chief Commissioner of Ashanti, at the Public Records and Archives Department, Kumasi; the Colonial Secretary's files at the Public Records and Archives Department, Accra; Ghana Chamber of Mines Annual Reports, Accra; Gold Coast Mines Department Annual Reports, Mines Department, Takoradi; certain categories of the Gold Coast series at the Public Record Office, Kew; the *Stock Exchange Yearbook;* various peerage directories for biographical information; gold-mining industrial reports, magazines and statistics were also available from publications such as *The Mining Manual and Mining Year Book, The Mining Magazine* and *The Mining Journal.* To capture aspects of the company's most recent history taped oral interviews were conducted.

Methodology

In the context of African economic history, and particularly African mining history, authors can broadly be categorised into two ideological groups: liberal/market and Marxist. It would be fair to say that ideology has limited the

[12] Conversations with Virginia Rigall, Company Secretary's office, Lonmin.
[13] R. E. Dumett, 'Sources for mining company history in Africa: the history and records of the Ashanti Goldfields Corporation (Ghana), Ltd.', *Business History Review,* 62, 1988, p. 509.

scope of African business research agendas.[14] This thesis, however, is not built on the foundation of any of the common ideological stances dominant in African historiography. My approach in Part Two is perhaps best described in Hopkins's words as, "a form of new empiricism which is neither antiquarian nor the slave of dogma".[15] I employ microeconomic theories where appropriate to test specific hypotheses while paying attention to the political-economic context.

The availability of data determines to a large extent which performance statistics can be analysed. I used AGC annual reports and other internal and external documents to create a spreadsheet to record data for the variables listed below.[16] The data starts from the first full financial year, which ended in June 1899, to the company's last full year of operations in 2003. This time-series is in effect AGC's history in numbers. The spreadsheet allowed several levels of quantitative analysis. It was possible to complete almost the entire time series for certain variables such as tonnage milled; the data for other variables (for example, the number of employees at the mine) was scanty.

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[14] For example the extensive radical contributions have focussed on labour and class formation: C. Perrings, *Black Mineworkers in Central Africa: Industrial Strategies and the Evolution of an African Proletariat in the Copperbelt, 1911-41*, London: Heinemann, 1979; J. Crisp, *The Story of an African Working Class: Ghanaian Miners' Struggles, 1870-1980*, London: Zed Books, 1984; B. Freund, *Capital and Labour in the Nigerian Tin Mines*, Harlow: Longman, 1981; P. Konings, *The Political Potential of Ghanaian Miners: A Case Study of the AGC Workers at Obuasi*, Leiden: African Studies Centre, 1980.

[15] A.G. Hopkins, 'Big business in African studies', *Journal of African History*, 28, 1987, p. 120.

[16] The spreadsheet is reproduced in Appendix 3.

Table 1.1: Quantitative data collected for AGC, 1899-2003

Variable	**Methodological notes and definitions where applicable. (See also Glossary p. 18)**
Tonnage milled	Mill head tonnage in short tons
Gold ounces	Gold ounces declared
Average annual grade	Average annual ore quality measured in pennyweights per ton
Recovery rate	Percentage of gold content recovered
Proved and probable reserves	Ore reserves sufficiently well delineated for future economic extraction
Development footage	Annual total footage drilled or excavated for exploration and production purposes
Gross bullion revenue	Gross gold revenue plus small amounts of income from the sale of silver recovered as a by-product
Gross total turnover	Gross bullion revenue plus other sources of income such as rents received and hedging income
Operating costs	Direct production costs for mining, milling and treating ore including mine wages and salaries, mine development and metallurgical costs
Gross bullion profit	Gross bullion turnover - operating costs
Pre-tax profits	Earnings before income tax
Interest payments	Interest charges on long-term debt
Number of authorised shares	
Number of shares issued	
Fully paid-up shares	
Dividends paid	Expressed as total dividends and dividends paid as a percentage of paid-up share capital
Shareholders' equity	Company funding attributable to shareholders, equal to the value of the company's net assets
Total debt	
Long-term debt	Debt payable after one year
Annual capital expenditure	New expenditure on plant and machinery, buildings, mine and shaft development
Fixed tangible assets	Net book value of plant and machinery, buildings, shafts and mine development
Number of mine employees	Ideally the average daily number; sometimes the average for a particular month or the number working on a given date is provided
Royalty and minerals duty	
Export/Gold duty	
Other African-based direct taxes	Such as corporation tax, compulsory savings and excess profits tax
Ghana government's share of dividends	Applicable from 1969
Peak share price	Annual peak closing price on the London Stock Exchange

Ratios such as earnings per share, return on capital employed, gross gearing and labour productivity were computable from the above data. Attention had to be paid to definitions and changes in accounting policies over time. For example, in 1911 AGC changed from using the long ton (2,240 lbs) to the short ton (2,000 lbs) so all tonnage has been converted to short tons.

My approach outlined above will address the criticisms often justifiably hurled at business history for being too narrative and insufficiently analytical.[17] My methodology has been influenced by the following African and mining business histories which are notable for their high degree of analysis: R. J. Southall's PhD thesis 'Cadbury on the Gold Coast, 1908-1937',[18] C. E. Harvey's *The Rio Tinto Company: An Economic History of a Leading International Mining Concern 1873-1954*, and Peter Greenhalgh's *West African Diamonds 1919-1973: an Economic History*. Southall's work is largely qualitative but where possible he makes use of the fragmentary quantitative data available on wages and prices to inform his analysis. The thesis challenges Cadbury's claim to be "a model firm"; the firm's actions are analysed in light of this single issue, the thesis is therefore very focused. Harvey uses appropriate theories to structure his arguments, for example in Chapter 3 he uses invention and innovation theories to explain Rio Tinto's technological development. The author assesses the direct impact of the firm on the Spanish economy for the years 1906-1908 using quantitative evidence from company accounts and national accounts. Even where quantitative data is absent Harvey's discussion of indirect costs and benefits to the national economy is detailed and nuanced. Rio Tinto is discussed in the context of the changing economic, social and political environment and the firm's contribution to developments in Spain's general history is made clear. Harvey analyses the growth of the international market for pyrites, capturing the evolutionary nature of metallurgical research and development, thus enabling Rio Tinto to be judged in its global industrial context. Greenhalgh's book is impressive in its geographic and thematic scope. Both European and indigenous diamond miners are investigated. By using the neoclassical concept of marginal revenue product as one method of determining whether labour was exploited or not, Greenhalgh successfully replaces traditionally emotional arguments of labour exploitation

[17] Hopkins (1976 a) pp. 29-48; 'Imperial business in Africa, part II: interpretations', *Journal of African History*, 17, 1976, pp. 267-290; B.E. Supple, 'The uses of business history', *Business History*, 4, 1962, pp. 81-90.
[18] Unpublished PhD thesis, Birmingham University, 1975.

with theoretical considerations. These authors are precise with their definitions and concepts. They attempt to assess the firms' relative financial performance and make use of available financial records.

My thesis hopes to build on these aforementioned exemplars by providing a greater degree of quantitative analysis thanks to the greater availability of numerical data.

Methodological Problems

Three types of methodological problems were encountered: those pertaining to writing an African history, those to writing a business history, and others which are specific to AGC.

The discontinuity, and sometimes total absence of documents, for the post-colonial period is a problem with which many African historians grapple. The frustration is amplified because there is often evidence that the data was collected and probably still exists but trying to locate it proves impossible. For example, I was only able to find two full sets of annual company accounts for the 1980s. I have made the most of the data that I did manage to find and relied more on oral evidence for this later period of AGC's history. The breaks in data demand that caution is applied to certain conclusions.

The principal methodological problem specific to the choice of company under investigation relates to the variety of locations where primary data on AGC can be found. Due to the company's ownership changes I conducted research in the UK, Ghana and South Africa. In the UK I obtained data from London and Cambridge, and in Ghana from Accra, Obuasi, Kumasi, and Takoradi. Research expenditure was high because of the disparate location of the data. Due to time and financial constraints I had to prioritise the treatment of sources starting with those where I felt my efforts would garner the broadest and most directly relevant results.

Another drawback of my approach is the absence of a neat framework, which is often attained when working within a single, chosen paradigm. Restricting oneself to a particular paradigm, however, can lead to over-simplification of reality. I think that the complexity of AGC's operations and relationships are better captured by a variety of theories provided that they are appropriate to the issue under discussion and augment our understanding. Care has been taken not to lose the primary focus of the historical evidence and to maintain the theories merely as explanatory tools. With these drawbacks an attempt has been made to present a thorough and nuanced account of change over AGC's 107 years.

Thesis Organization and Key Theoretical Concepts

Part One consists of three chapters: Chapter 1, 'An Introduction', Chapter 2, 'The Research and Historical Context', and Chapter 3, 'A Chronological Narrative'. The purpose of Part One is to provide relevant background information as well as fundamental historical facts about AGC. This is achieved by reviewing the existing literature on AGC and gold mining in Ghana, by detailing the political and economic context of AGC's operations and by describing the historical developments at the firm from 1895 to 2004.

Part Two is devoted to greater analysis of specific themes in specific time periods in the firm's history. Chapter 4 on Land uses the concept of property rights to investigate the changing institutional framework to land ownership in Asante, the security of AGC's title to land, the company's attempts to re-define and enforce its original lease rights into landlord rights, and how the historical evidence fits the predictions of property rights theory.

The concept of property rights has been central in the new institutional economics literature. In a world of limited resources ownership is a prime determinant of the nature and form of economic behaviour. The importance of this concept is apparent when factors of production are themselves defined as *rights* to "perform certain (physical) actions." [19] There are three broad categories of property rights: private, communal and state. These categories of ownership often coexist. Even with a specific asset such as a plot of land, it is possible for property rights to be partitioned, that is, several people, or groups of people, may have different use rights over the single plot.[20] For an economic agent to maximise his personal gains from a resource he would endeavour to secure exclusive rights to it. The better defined those rights the easier it is to enforce and protect exclusivity. Property rights are not static and they are not only defined by law. They can also

[19] R.H. Coase, 'The problem of social cost', *Journal of Law and Economics*, 3, 1960, p. 44.
[20] T. Eggertsson, *Economic Behavior and Institutions,* Cambridge: Cambridge University Press, 1990, p. 39.

be delineated by custom, politics, and the discovery of new technologies or markets.[21] A significant body of empirical work has shown how differences in the structure of property rights – private, communal or state - leads to predictable choices in economic and social organization.[22] The theory is therefore tested in AGC's case using historical evidence from 1895 to 1969.

Chapter 5 focuses on labour. African mine labour has been investigated in connection to class formation, labour unrest and unionisation.[23] Lentz and Erlmann investigated the social profile of a large section of AGC's workforce and their levels of cohesion.[24] Their findings contradict Crisp's thesis that a self-producing proletariat had sufficiently evolved in the mine community.[25] Like Crisp, class consciousness and union activity are the focus of Peter Koning's case study on AGC.[26] Instead of revisiting the well-worked class theme, Chapter 5 employs principal-agent theory to explore the relationship between European management and the African labour force during the post –World War II period. This was a time of extreme labour unrest. The causes of the strife and AGC's attempts to solve the labour problems are explained in principal-agent terms. The advantages of this approach are that it dissects the contract between the firm and its workers, traces the evolution of internal institutions in an attempt to align manager and worker interests, and integrates into the analysis the changing state of the external contractual environment which imposed itself on management's behaviour. The agency problems and attempted solutions are related to the firm's operational performance.

Principal-agent theory is concerned with the costs associated with formal and informal contracts in hierarchical economic relationships. The principal can be defined as the party in the relationship with ownership or control rights. The agent can be defined as the party owing some contractual duty or performance to the principal. Due to bounded rationality, asymmetric information and differences

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[21] H. Demsetz, 'Toward a theory of property rights', *The American Economic Review,* 57, 2, 1967, p. 350; A.A. Alchian, *Economic Forces at Work,* Indianapolis: Liberty Press, 1977, p. 129; Eggertsson (1990), p. 34.

[22] L. De Alessi, 'The economics of property rights: a review of the evidence', *Research in Law and Economics,* 2, 1980, pp.1-47; O. Hart, *Firms, Contracts, and Financial Structure,* Oxford: Clarendon Press, 1995; P. Milgrom and J. Roberts, *Economics, Organization and Management,* Englewood Cliffs: Prentice-Hall, 1992.

[23] See fn.14 above.

[24] C. Lentz and V. Erlmann, 'A working class in formation: economic crisis and strategies of survival among Dagara mine workers in Ghana', *Cahier d' Etudes Africaines,* vol. 29, 113, 1989, pp. 69-111.

[25] Crisp (1984).

[26] Konings (1980).

in risk appetite the agent may not always act in the principal's interest.[27] Lack of observability, information and commitment from the agent creates costs for the principal as the agent is able to behave opportunistically. The agent usually has more knowledge than the principal but less incentive, whereas the principal has greater incentive but less knowledge. Effort is costly for the agent, which encourages slacking. This undesirable situation leads to the imposition or evolution of control, coercion and incentive mechanisms in an attempt to align the behaviour of the agent to the principal's wishes. An array of opportunistic behaviour is possible in such conditions including moral hazard and hold-up.

Moral hazard arises post-contractually. Here, the prohibitive cost of monitoring an agent results in either the neglect of critical aspects of the principal-agent contract or the commission of acts that are outside the contract and to the detriment of the principal.[28] In a mining context, for example, the use of bonuses to encourage better employee performance in certain measured areas can, in pursuit of the bonus, increase accidents and fatalities as well encourage the neglect of other non-measured tasks.

Hold-up is a situation where an agent's property rights over an asset needed by the principal allow the agent to withhold the asset with a view to increasing his private gains. In Chapter 5 the rights concern the miners' labour, and the hold-up manifested itself in frequent strike actions. How the company mitigated principal-agent problems is the focus of Chapter 5.

Chapter 6, 'Capital', explores three different aspects of capital: company finance, the capital intensity of production and the social distribution of earnings. The section on finance looks at the changing sources and proportions of equity, debt and retained earnings, and the relationship between this and the firm's longevity. Section two examines the capital-intensity of production with respect to labour and land ratios. Section three treats the social distribution of earnings for two stakeholders – the shareholders and the government. Evidence on share values and dividend payments show how AGC shareholders fared over the years. Changes in the government's share of AGC's revenue in the form of taxation is analysed as well as the impact of this on the firm's investment decisions.

A fourth factor of production which is often neglected or undifferentiated from labour, is enterprise, or entrepreneurship. As one writer put it,

[27] Milgrom and Roberts (1992), pp. 30-34.
[28] Eggertsson (1990), p. 45.

"entrepreneurship, the most forceful, dramatic, and obvious phenomenon in all of economic life, has perforce been ignored by theoretical economists".[29] The neoclassical formulation of the firm precludes any entrepreneurial role because of the assumptions of certainty, perfect knowledge and rationality.[30] A firm's existence and growth are attributed to inanimate developments in technology and markets. Transaction costs theory has improved on the neoclassical theory of the firm to better account for the reality of uncertainty, bounded rationality and information costs; however, even here the endogenous role of the entrepreneur in initiating the internalization of market failures and coordination activities of an organization is not given prominence.[31] Changes in a firm's boundary, according to transaction costs theory, are induced by the costs of exchange and market failures. This downplay of the agency of the entrepreneur has been rectified in resource-based theories of the firm that focus on a firm's capabilities, foremost of which is entrepreneurship. The resource-based view stems from Penrose's 1959 book, *The Theory of the Growth of the Firm*.[32] In Schumpeterian fashion, Penrose places huge emphasis on entrepreneurship – with respect to individuals and to a firm's culture. A firm's internal resources comprise human skills and services as well as physical assets; this bundle of internal resources combined with the productive possibilities that the firm's entrepreneurs can see and take advantage of determine a firm's growth. Chapter 7, 'Enterprise', focuses on the transformation of AGC into an African multinational towards the end of its autonomous life. It is found that the critical role of entrepreneurship is neglected in the MNE literature, but was paramount in AGC's modern history.

Kirkpatrick and Nixson define a multinational as a firm that engages in direct investment in more than one country or which owns or controls income-generating assets in more than one country.[33] By this definition, AGC was not a multinational enterprise at its establishment in 1897. When Lonrho bought the company in 1968 it became a subsidiary of a multinational conglomerate. Between 1996 and 1998 the firm became a multinational in its own right by

[29] J.R. Hughes, *The Vital Few: The Entrepreneur and American Economic Progress,* Oxford: Oxford University Press, 1986 edition, p. x; W. J. Baumol, 'Entrepreneurship in economic theory', *American Economic Review,* 2, 58, 1968, pp. 66-7.
[30] N.M. Kay, *The Emergent Firm: Knowledge, Ignorance and Surprise in Economic Organization,* New York: Saint Martins Press, 1984, p. 57.
[31] See for example, R.H. Coase, 'The nature of the firm', *Economica,* 4, 1937, p. 388.
[32] E.T. Penrose, *The Theory of the Growth of The Firm,* Oxford: Basil Blackwell, 1966 edition.
[33] C. Kirkpatrick and F. Nixson, 'Multinational corporations and economic development', *The Journal of Modern African Studies*, 19, 1981, pp. 369-70.

acquiring five mines in four countries: Ghana, Guinea, Tanzania and Zimbabwe. At the end of AGC's corporate life, although North American and British institutions owned the majority of shares, the firm could be described as an *African* multinational. First, all its income-generating sources were in Africa. Second, the nationality of a firm is usually assigned by the location of its headquarters, which for AGC was Accra, Ghana. Third, the majority of management and staff were African. An African multinational is a rare business entity and this particular phase of the firm's history is worthy of detailed investigation, which is provided in Chapter 7, 'Enterprise'.

Finally, in the concluding chapter the historical findings and analyses are synthesised and related back to the main theme of firm survival. Associated topics arising from the thesis which are worthy of future research are also discussed in Chapter 8, 'Conclusions'.

Summary

Dumett lamented the dearth of "sophisticated and detailed monographs in African mining business history",[34] noting that too much that has been written has been Euro-centric and concerned with colonial territorial expansion rather than business performance, finance and operations – the very issues this thesis focuses on. In relation to African business history, my approach taken can be described as novel in three respects: it veers away from the simple chronological narrative, microeconomic theories are used to test specific questions related to the overall theme, and the availability of fairly good financial records has allowed a good degree of quantitative analysis.

[34] Dumett (1988), fn. 22, pp. 502-3.

CHAPTER 2:
THE RESEARCH AND HISTORICAL CONTEXT

The existing literature on the Ashanti Goldfields Corporation is reviewed in this chapter. Then, to set the context for the thesis, a brief history of the gold mining industry in Ghana is presented. This is followed by an outline of the political economy of the Gold Coast and Ghana from c.1895 to 2004, which provides an important backdrop for the company's activities.

Existing Literature on AGC

This section considers what has already been written on AGC. Detailed literature reviews pertaining to the separate themes of land, labour, capital and enterprise are treated in the relevant chapters.

AGC produced its own internally-generated corporate histories. A consulting engineer wrote one in 1916 (which was updated in 1919),[1] a general manager and future consulting engineer wrote another in 1932,[2] and again in 1947 for the firm's jubilee celebration;[3] in 1991 Tommy Rowe of Lonrho's technical department wrote an account of the firm's early history to 1905.[4] Professor Ayensu was commissioned to write a glossy publication in 1997 for the firm's centenary.[5] These works are important for understanding the key stages of development in the firm's life, production records, and the management's perspective on their own achievements. However, the public relations motivations render them of limited critical value. The in-house histories have no theoretical content nor do they provide much external comparative or contextual information.

Important academic contributions have been made by McCaskie and Wilks to our understanding of the company's establishment. These authors put a particular emphasis on the firm in the context of British imperial expansion. McCaskie exposes the firm's inflated perception of themselves as do-gooders for

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[1] MS 24661/5, W.R. Feldtmann, 'Ashanti Goldfields Corporation Limited' published in *The Mining Magazine*, May 1916, updated in 1919 as a circular to shareholders.
[2] G. W. E. Turner, 'The Ashanti Goldfields Corporation', *The Mining Magazine*, June 1932.
[3] G. W. E. Turner, *A Short History: Ashanti Goldfields Corporation Ltd., 1897-1947*, London: 1947.
[4] MS 24669, T. Rowe, 'The Early Pioneers, 1895-1905',1991.
[5] E. S. Ayensu, *Ashanti Gold: The Legacy of the World's Most Precious Metal,* London: Marshall, 1997.

the uncivilized natives, and how this attitude tied in with Chamberlain's expansionist views of empire.[6] Wilks touches on Cade's Obuasi transaction in relation to the failed George Reckless concession which was a modernisation plan by Asante ambassadors in the UK to appoint a foreign company to exploit the kingdom's resources on the model of the British South Africa Company.[7] Based on Governor Maxwell's own writing, Wilks suggests that a relationship existed between Cade and the firm of Radcliffe and Durant of Liverpool who supported Reckless,[8] but this was not so (see Chapter 3, 'A Chronological Narrative').[9] Nevertheless, placing Cade's actions in the chronology of Asante's last-gasp efforts to maintain independence was insightful. That the British government should have supported Cade's deal but rejected the Kumasi-controlled Reckless proposal demonstrates the no-compromise, aggressive stance assumed against the Asantehene from mid-1895.[10]

While the role of African entrepreneurs in the Gold Coast cocoa industry is well documented, their involvement in the gold mining industry has been less publicised and Dumett makes a valuable contribution in this respect with specific reference to the Fantes who sold the Obuasi concession to Cade.[11]

These authors' historical contributions on the firm are helpful primarily because of the focus on the British and Asante political context. However, they only cover the firm's early years. McCaskie himself states the desirability of a complete history of the firm,[12] which this thesis goes some way to provide.

Another work concerned with the firm's relationship with government is Stockwell's *The Business of Decolonization: British Business Strategies in the Gold Coast.* [13] Stockwell traces AGC's views towards nationalism and

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[6] T. C. McCaskie, 'The creation of Ashanti Goldfields Corporation, Ltd., ca. 1890-1910: an episode in the colonial impact upon Asante', *Asantesem*, 9, 1978, p. 42; Turner (1947), p. 20.
[7] I. Wilks *Asante in the Nineteenth Century: The Structure and Evolution of a Political Order*, Cambridge: Cambridge University Press, 1975, pp. 647-52.
[8] Wilks (1975), p. 646; PRO CO 879/43/490, telegram from Governor Maxwell to Marques of Ripon 18 June 1895.
[9] PRO CO 879/43/490, enclosure, E. A. Cade and R. D. Fry to Colonial Secretary, Cape Coast, 19 June 1895.
[10] I. Wilks, 'Asante at the end of the nineteenth century: setting the record straight', *Ghana Studies*, 2000, pp. 38-40.
[11] E. Dumett, *El Dorado in West Africa: The Gold-mining Frontier, African Labour, and Colonial Capitalism in the Gold Coast*, 1875-1900, Athens: Ohio University Press, 1998, pp. 280-3. As early as 1861, a Fante entrepreneur, Thomas Hughes had invested in European mining machinery only to be thwarted in its use by a chief's suspicion and superstition – T. F. Garrard, *Akan Weights and the Gold Trade,* London: Longman, 1980, p. 144.
[12] McCaskie (1978), p. 46.
[13] S. Stockwell, *The Business of Decolonization: British Business Strategies in the Gold Coast,* New York: Oxford University Press, 2000.

decolonization from c. 1938 to Independence in 1957 in a comparative work including the Gold Coast mercantile and service sectors. She concludes that AGC's chairman over this period, Major General Sir Edward Louis Spears, "demonstrated greater appetite for political participation than any other businessman" in his efforts to resist nationalism.[14] This thesis covers a longer period and provides insight on the firm's dynamic relationship not just with the colonial government but also with post-colonial governments - an era less treated by historians, particularly not continuously between 1957 and 2004.

Decker's Ph.D. thesis is a comparative analysis of the attitudes and actions of British business, including AGC, faced with increasing state participation and Africanisation of their workforces.[15] The thesis straddles the colonial and post-colonial era from 1945-77 in Ghana and Nigeria. Decker's analysis is framed within the wider debate of the role played by foreign capital in economic development. It is particularly useful for this thesis in that it compares AGC's behaviour (unfavourably) during this limited time frame with that of other British firms - UAC, John Holt and Barclays. While Decker's interest in AGC is more political and macroeconomic this thesis is microeconomic in perspective with an emphasis on the firm's operations and financial performance.

AGC was an obvious target for the investigation of labour issues being one of the largest private employers in Ghana. Lentz and Erlmann, Crisp and Konings, referred to in Chapter 1, have all written about AGC in connection with class consciousness. This is a popular subject area for African historians because mines provided one of the few sources of waged, industrial labour.

The foregoing works have provided methodological help by listing useful primary and secondary sources - in particular, Dumett's 'Sources for Mine Company History in Africa: the history and records of the Ashanti Goldfields Corporation (Ghana) Ltd'.[16]

The literature survey shows that only specific periods and themes in AGC's history have so far been documented, in particular, the imperial context, decolonization and labour. This thesis, being broader in themes and time scale, will therefore fill important gaps in the literature and will allow the existing findings to be assessed in the context of the whole corporate story.

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[14] Stockwell (2000), p. 195.
[15] Decker (2006).
[16] Dumett (1988), pp. 502-15.

The gold industry in pre-colonial Ghana

Evidence of pre-modern gold production has been found scattered along what we now know to be two gold belts (see Map 3). In the 1930s the Gold Coast Geological Survey Department systematically assessed the gold-bearing geological formations in present day Ghana.[17] The two main gold bearing areas are centred on Tarkwa, the Tarkwaian system, and on Obuasi, which is part of the Birimian system. Both systems run in a northeast-southwest direction and are characterised by faults and folds. The Tarkwa system is described as a banket formation, similar to the Rand reefs. This means the gold is contained in cement-like conglomerations, and is not of a particularly high value although the gold occurrence tends to be uniform. The Birimian system, on the other hand, contains somewhat erratically distributed, high-value gold ore in dense quartz and sulphide reefs with significant occurrences of arsenopyrites, carbonates, silver, and copper bearing sulphides. Mining the latter type of gold ore presents greater engineering and metallurgical challenges than the former.

The importance of the Gold Coast's pre-colonial gold production is seen in the estimate that before the Rand discoveries in 1886 a third of the world's gold came from here.[18] Gold mining, smithing and trading from the region predated the arrival of the Portuguese in 1471 with an overland trade to North Africa.[19] Malian gold artisans are thought to have been attracted by gold to develop a mining industry around the fifteenth century town of Bighu and the older town of Jorga on the northwest, forest-savannah edge in the present Brong-Ahafo region of Ghana.[20] Further south, the name Elmina given by the Portuguese to their coastal trading point, may derive from 'el mina', the mine, a reference to the gold brought to them in exchange for their goods. This gold was likely procured at the time from internal trade and from streams, rivers and coastal gravel and sand.[21] Dredging riverbeds and diving were early extraction methods which were later

[17] N. R. Junner, *Gold in the Gold Coast*, Gold Coast Geological Survey, Memoir 4, 1935.
[18] Cited in T. E. Anin, *Gold in Ghana*, London: Selwyn Publishers, second edition, 1990, p. 3.
[19] Anin (1990), p. 3; Garrard (1980), pp. 1, 3, 6-8.
[20] Wilks (1975), pp. 244-5; Garrard (1980), p.41.
[21] Wilks (1975), p. 4, reference to W. Bosman, *A New and Accurate Description of the Coast of Guinea*, 1704; Garrard (1980), pp. 1, 3, 25-6.

overtaken by pit-mining.[22] Arhin describes some of these pre-modern mining tools and techniques.[23]

Technological and trade influences from the savannah belt southwards along with the geographic expansion of the Asante kingdom in the eighteenth and nineteenth centuries combined to increase the uses of gold and the ancillary trades associated with it in the forest zone.[24] The role of gold widened from ceremonial and ornamental use into a store of value, a means of exchange and wealth accumulation, as well as a source of ideology, power and conflict.[25]

Family, communal and slave labour and the abusa system were involved in gold production.[26] In Asante, both private individuals (with permission from local chiefs) and the monarchy carried out gold production.[27] This sector was taxed in that nuggets found above a certain size were supposed to be sent to the Asantehene who would return some gold to the sub-chief and the miner who discovered the nugget.[28]

Mining and producing gold manually was time and labour-intensive hence the advantage of engaging slaves.[29] Private individuals used slaves incorporated in the family unit to work in gold mining.[30] Royal pits and alluvial workings made use of slaves.[31] An example of this was provided by Dupuis: in the rainy season thousands of slaves in Nsoko (a district of Bighu),[32] would be involved in production for Kumasi.[33] At the height of Asante's territorial expansion, the monarchy controlled gold mines in many of the areas highlighted in Map 3.

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[22] J. Silver, 'The failures of European mining companies in the nineteenth-century Gold Coast', *Journal of African History*, 22, 1981, p. 511.
[23] K. Arhin, 'Succession and gold mining at Manso Nkwanta', *Research Review* (Institute of African Studies, University of Ghana), 6, 1970, pp. 104-6; Silver (1981), p. 511; Garrard (1980), pp. 131-3.
[24] Garrard (1980), pp. 24-6, 37.
[25] J.R. LaTorre, 'Wealth surpasses everything: an economic history of Asante, 1750-1874', Ph. D. Thesis, University of California, Berkeley, 1978, pp. 57, 62-4, 198-9; Garrard (1980), pp. 2, 3, 38, 63; T. C. McCaskie, 'Accumulation wealth and belief in Asante history: I. To the close of the nineteenth century', *Africa*, 53, 1, 1983, pp. 28-9; I. Wilks, *Forests of Gold: Essays on the Akan and the Kingdom of Asante*, Athens: Ohio University Press, 1993, pp.128-50; T. C. McCaskie, *State and Society in Pre-colonial Asante*, Cambridge: Cambridge University Press, 1995, pp. 37-9.
[26] Dumett (1998), pp. 66-74; for a definition of 'abusa' see Glossary; Garrard (1980), p. 135.
[27] LaTorre (1978), p.63, Garrard (1980), p. 135; G. Austin, '"No elders were present": commoners and private ownership in Asante 1807-96', *Journal of African History*, 37, 1996, pp. 10-11; Wilks (1975), p.197, reference to J.E. Casely Hayford, *Gold Coast Native Institutions*, 1903, pp. 95-6.
[28] LaTorre (1978), pp. 63, 128 249; Garrard (1980), p. 135.
[29] J. A. Skertchley, 'A visit to the gold-fields of Wassaw, West Africa', *Journal of the Royal Geographical Society*, 44, 1878, p. 280; Austin (1996), p. 19.
[30] R. E. Dumett, 'Pre-colonial gold mining and the state in the Akan region: with a critique of the Terray hypothesis', in G. Dalton (ed.), *Research in Economic Anthropology*, 2, 1979, pp. 45-6.
[31] Wilks (1975), p. 436
[32] Garrard (1980), p. 41.
[33] Cited in Wilks (1975), p. 435.

Notable goldfields included those in the Wassaw region in the southwest, although these were lost soon after defeat at the hands of the British in the battle of Katamanso in 1826.[34] Closer to the Asante capital, Kumasi, important pits and alluvial workings existed in the Oweri Valley in Asante Akyem and at Manso Nkwanta.[35]

Following the abolition of the slave trade gold dust dominated exports from the Gold Coast in the middle of the nineteenth century. Various estimates of export and production totals have been provided by Wilks, LaTorre and Garrard.[36] Despite measurement difficulties it seems there is some certainty that gold production by Africans rose in the first half of the nineteenth century, peaking in mid-century (perhaps to 30,000 ounces per annum) and tailing off in the last quarter (to approximately 5, 000 ounces per annum).[37]

With respect to European commercial investment in the gold industry in pre-colonial Ghana there is some evidence that the Portuguese and Dutch attempted prospecting, dredging and mining ventures along the Ankobra river, in Komenda and Egwira as far back as the seventeenth and early eighteenth century.[38] But for various reasons, including local opposition and superstition,[39] nothing came of these ventures.

Excited talk of abundant gold from British soldiers returning from the Asante wars of 1873-4 coupled with the publication of travellers' eyewitness accounts initiated a gold rush.[40] This first expatriate gold rush, centred on the villages of Tarkwa and Abosso in the Wassaw region of the British Gold Coast protectorate, occurred between 1877 and 1885. Dumett comprehensively documents this episode previously neglected by researchers who have focused on the more intense rush that followed at the turn of the twentieth century.[41]

One of the first European enterprises employing imported machinery was Pierre Bonnat's French-financed Société des Mines d'Or de l'Afrique Occidental

[34] Wilks (1975), pp. 180-5; A.G. Hopkins, 'Asante and the Victorians: transition and partition on the Gold Coast', in R. Bridges (ed.), *Imperialism, Decolonization, and Africa,* New York: St Martins Press, 1999, p. 37.
[35] Wilks (1975), p. 436; Arhin (1970), p. 101.
[36] Wilks (1975), p. 193; LaTorre (1978), pp. 375-6; Garrard (1980), pp. 163-5.
[37] Garrard (1980), p. 165.
[38] Garrard (1980), pp. 142-3.
[39] Garrard (1980), p. 130.
[40] A. McPhee, *The Economic Revolution in British West Africa,* London: George Routledge and Sons, 1926, p. 51; R. F. Burton and V. L. Cameron, *To The Gold Coast for Gold: A Personal Narrative,* London: Chatto and Windus, 1883, p. ix; Garrard (1980), p. 145.
[41] Dumett (1998).

in 1877 in the Abosso area.[42] This company was later reconstituted with Liverpudlian backers as the African Gold Coast Mining company, which became the Tarkwa and Abosso Gold Mining Company. Dumett discusses other European entrepreneurs active in the Tarkwa location at this time. The common fate of nearly all these ventures was financial failure.[43] Estimates of gold exports in the period 1851-1900 were lower than in 1801-50, in part reflecting the negligible contribution of European commercial production.[44] Silver puts this down to the difficulties encountered with management, technology, capital-raising, labour supply, dishonesty on the part of African and European middlemen, competition from African traditional miners and the administrative failures of the British protectorate.[45] The government's initial inability to control land ownership and to provide a railway were critical.[46] The absence of profit (in many cases the absence of production) quickly led to disillusionment in the European investment markets.[47]

The Wassaw (Gold Coast) Mining Company, which had backing from the Swanzy mercantile house, stands out from this period because it was one of the few actually to produce any gold and, interestingly, employed two Gold Coasters as mining engineers.[48] (Africans were extensively involved in the gold industry as promoters, concession brokers, lawyers, mine owners, even mine engineers, besides of course, mine labourers).[49] Even this relatively successful company established in 1882 had not paid a single dividend by 1896.[50]

Towards the end of the nineteenth century at least some of the royal mines in Asante had adopted more modern forms of mining, such as King Prempeh's Mine discovered by the British in 1896 southwest of Kumasi, which had 300 feet long timbered adits.[51]

There is no documentary evidence at the time of Cade's transaction in 1895 to suggest that any other European had managed to secure a mining concession in the Obuasi region, although it had long been known that some of the finest gold

[42] Dumett (1998), pp. 91-6; K.B. Dickson, *A Historical Geography of Ghana,* Cambridge: Cambridge University Press, 1969, p. 182.
[43] Silver (1981), pp. 511-29. See also Skertchley (1878), p. 274.
[44] Garrard (1980), p. 165.
[45] Silver (1981), pp. 516-25.
[46] Dumett (1998), pp. 274-78.
[47] Silver, pp. 514-7; Dickson (1969), p. 183; McPhee, p. 52.
[48] Dumett (1998), pp. 218-9.
[49] Silver (1981), p. 513; Garrard (1980), p. 144.
[50] The Mining Manual 1894, Silver (1981), pp. 515-6, 523.
[51] Wilks (1975), pp. 435-6.

traded at the Coast came from this area.[52] Asante's foreign policy towards white men had been cautious and discriminate, for example with respect to missions and schools,[53] and it would seem also with gold production. The Asantehene revealed to his captors in March 1896 that "No whiteman has ever been allowed to dig for gold; neither English, French or Dutch, nor German".[54]

In a marked change of foreign policy the Asante embassy in the UK in 1895 attempted to conclude a wide-ranging agreement with George Reckless that would have allowed the development and modernisation of Asante's resources including her goldfields, but in a manner controlled at the centre by the monarchy.[55] This was preferable to an influx of private concessionaires. It was also hoped that such a forward-thinking move would safeguard the kingdom from British incursion. However, with the political turmoil in Asante (discussed below) and the "large numbers" of Fante entrepreneurs who had migrated to gold producing areas in Asante such as Atobiase and (Manso) Nkwanta,[56] it was surely only a matter of time before individual Asante chiefs took advantage of the economic opportunities presented by Europeans.

Cade's initial transaction for the Obuasi concession in 1895 therefore took place at a time when Asante was tottering and her occupation by Britain was rumoured. African production of gold was affected by the political instability and European disenchantment following the failures of the first gold rush had not yet dissipated. In these less than propitious times Cade's first-mover advantage in Asante would prove fortuitous. Following Britain's unopposed occupation of Kumasi in 1896, Cade's newly formed Ashanti Goldfield Corporation concluded with Governor Sir William Edward Maxwell an unprecedented and legally peculiar concession in 1897 (detailed in Chapter 4, 'Land').

AGC made quick profits enabling them to pay a maiden dividend in September 1900.[57] This early success together with the Boer War's disruption of gold production in South Africa and the completion of the railway from Sekondi port to Tarkwa in 1901 encouraged a second 'jungle boom'.[58] Some two hundred

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[52] Garrard (1980), pp. 140-1.
[53] T. C. McCaskie, 'Innovational eclecticism: the Asante empire and Europe in the nineteenth century', *Comparative Studies in Society and History,* 14, 1, 1972, pp. 30-45; Wilks (1975), pp. 202-4;
[54] PRO CO 96/272, enclosure in Maxwell to Chamberlain, 9 April 1896.
[55] Wilks (1975), pp. 720-3; Hopkins (1999), p. 54.
[56] Dickson (1969), p. 181.
[57] MS 14169/2, p. 91.
[58] Dumett (1998), p. 9.

mining companies were established in 1901 alone in the Gold Coast and Asante.[59] At a peak, 3,500 concessions were taken.[60] AGC was nearly five years ahead of this later scramble for concessions, which would come to mark a turning point in European commercial mining overtaking African small-scale production.

Ghana's modern gold industry: 1900-2004

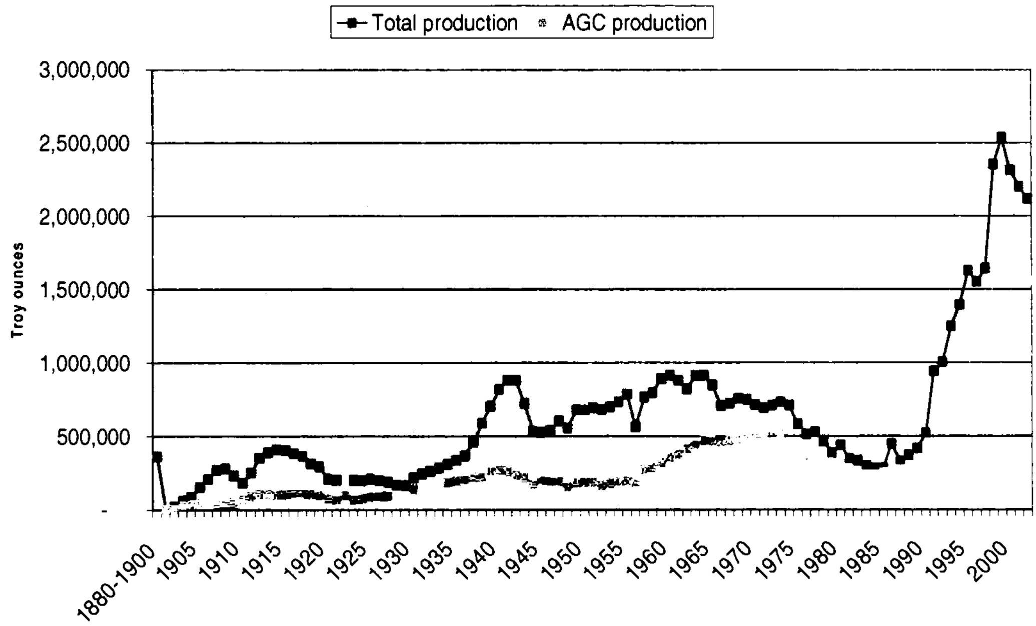
Indigenous mining techniques, albeit more cost-effective than the early European efforts,[61] were limited in growth prospects to the gold-containing rocks visible to the eye and at relatively shallow depths. Two factors soon gave Europeans an advantage over Africans: the advent of cyanidation and the railway. The cyanide metallurgical breakthrough made gold recovery from low-grade ore viable. The railway to Tarkwa, which was later extended to Kumasi (1903), reduced the cost and the time to import the machinery needed to dig deeper shafts, to pump out underground water and to break up ore in more efficient ways. These two factors allowed commercial-scale gold production to expand.[62]

Figure 2.1 and Table 2.2 below show the development of the gold industry in Ghana from 1900 as indicated by output in gold ounces and the number of companies in production.

Figure 2.1

[59] Cited in McCaskie (1978), pp. 42-3.
[60] Dickson (1969), p. 188.
[61] P. Rosenblum, 'Gold Mining in Ghana, 1874-1900', Unpublished PhD thesis, Columbia University, 1972, pp. 2-3.
[62] Dumett (1998), pp. 15, 193-98.

Ghanaian gold industry: total production and AGC production, 1880-2002



Joseph Chamberlain was appointed Secretary of State for the Colonies in June 1895. He held hopes that the gold industry in this part of Africa would be "one of the highest importance", and with a railway in place even "gigantic".[63] In fact a more modest performance would be realised with gold production representing 0.83% of total world production in 1910,[64] (this compared to 33% from the Witwatersrand in the same year).[65] Government exuberance for the sector is seen in the fact that direct involvement in gold production was attempted, but failed.[66]

The graph shows steady growth in production from 1900 to the First World War. The British administration established the Mines Department in 1903 headed by a Chief Inspector of Mines to act as a regulator and collector of industrial statistics. The Gold Coast Geological Survey Department was set up in

[63] PRO CO 879/57/578, notes on the meeting of Gold Coast traders etc. with reference to taxation, held at the Colonial Office, 28 March 1899.
[64] Gold Coast Chamber of Mines Eighth annual report, 1935, p. 38.
[65] S. E. Katzenellenbogen, 'The Miner's Frontier, Transport and General Economic Development', in L. H. Gann and P. Duignan (eds.), *Colonialism in Africa, vol. 4: The Economics of Colonialism*, London: Cambridge University Press, 1975, Table 67; Gold Coast Chamber of Mines Eighth annual report, 1935, p. 38.
[66] This was attempted by Governor Maxwell in 1897 – see R. E.Hamilton, 'Asante, 1895-1900: Prelude to War', unpublished Ph.D. Thesis, Northwestern University, 1978, pp. 222-5. For an even earlier trial in the 1880s see Dickson (1969), p. 186.

1913 to locate and map the economically viable mineral resources in the country.[67]

A persistent problem in this early period for the Tarkwa-based mines was reliability of labour supply. The colonial administration assisted with this between 1906 and 1924 by providing these private enterprises with labour recruited from the Northern Territories through chiefs under the guise of 'communal' labour.[68]

A difficult interwar period was endured by the industry owing to scarcity and the sharp rise in the cost of inputs, followed by a global depression. Production more than halved between 1914 and 1928 (410,000 ounces to 168,933 ounces). The Gold Coast Chamber of mines was established at a low point in 1927 to represent the industry's concerns. The memorandum of association listed seventeen objectives including liaising with government and securing labour supplies.[69]

The Geological Survey Department concluded its first maps in the early 1930s. Its discovery and publication of new gold areas, coupled with the collapse of the gold standard, led to the formation of several new gold mining companies including Marlu Gold Mining Areas Ltd and the Ashanti-Adowsena (Banket) Goldfields Ltd.

A new production peak of 701,417 ounces was reached just prior to the outbreak of World War II. From the output statistics there was no negative impact of the war on production until 1943. In 1942 a new record of 880, 000 ounces was set by the industry. After 1943 scarcity of fuel oil in particular necessitated a gold concentration scheme. Under this scheme a number of producing gold mines were closed by the government and placed on a care-and-maintenance basis in order to channel the limited inputs to the remaining mines.[70]

The post-war decolonization period was marked by industrial unrest throughout the country's mines.[71] The rising cost of frequent labour disputes led to the abandonment of gold mines in 1955-6, most notably the oldest in the country, the Tarkwa and Abosso mine.[72] When other gold mines threatened to

[67] Dickson (1969), pp. 190-1.
[68] R.G. Thomas, 'Forced Labour in British West Africa: The case of the Northern Territories of the Gold Coast 1906-1927', *Journal of African History*, 14, 1, 1973, pp. 79-103.
[69] Gold Coast Chamber of Mines Eighth annual report, 1935, pp. 5, 6.
[70] MS 14170/ 77 chairman to mine manager, 15 February 1943.
[71] Crisp (1984), pp. 94-121.
[72] Crisp (1984), p. 133 mentions four mines, but the Gold Coast Chamber of Mines reported the cessation of three mines in this time period: Lyndhurst Deep Level Ltd, Marlu Gold Mining Areas

close in 1960 President Nkrumah paid an attractive purchase price to the European owners and nationalised them. Four gold mines, Bibiani, Dunkwa, Prestea and Tarkwa, created the State Gold Mining Corporation (SGMC).[73] Output after World War II did not exceed the 1942 peak until 1959. In 1960 915,317 ounces were produced setting a new record which would not be broken until 1991. The decline in gold output after 1970 was partly attributable to the end of the Bretton Woods System and the free gold price allowing lower levels of profitable production, and partly due to deteriorating political-economic conditions in Ghana (discussed below). A period of sharp industrial decline was witnessed from 1975-83.

Rapid recovery thereafter was due directly to Structural Adjustment policies. The liberalised Minerals and Mining Act of 1986 made a considerable impact. This legislation exempted mine imports from import duty and allowed hefty depreciation of capital expenditure in the first years. It also permitted tax losses to be carried forward, gold producers to retain foreign exchange earnings abroad in order to buy supplies, and the free transfer of currency for dividend and loan payments. The government also commenced the divestment of State gold mines. There was consequently an influx of foreign investment allowing the sector to be rehabilitated and to grow. In the first eight years following the introduction of the new law US$1bn of new investment was made in Ghanaian mines and seven additional mine companies were established.[74] Explanations for the evolution of the gold industry in Ghana are inextricably linked to the political economy which is now discussed.

Ltd, and Tarkwa and Abosso Mines Ltd – Gold Coast Chamber of Mines annual report, 1980, Appendix 2B.

[73] Crisp (1984), p. 133.

[74] 'Investment Inflow into the Mining Sector', Finance and Research Unit, Minerals Commission, Accra, Ghana, April 2004.

Table 2.2: Gold Mining Companies in production for selected years (including dredging operations)

Year	Number of producing companies	Total production (ounces)
1910	6	183,691
1920	11	207,506
1930	5	218,494
1940	16	818,911
1950	10	679,173
1960 ◊	7	915,317
1970 ◊	5	714,442
1980 ◊	5	439,669
1990 ◊	7	522,517
1999	12	2,404,604

Sources: Gold Coast Mines Department Annual Reports, Gold Coast Chamber of Mines Annual Reports, Ghana Chamber of Mines Annual Reports, *The Mining Manual*.

◊ State Gold Mining Corporation mines have been treated as individual producers.

The political and economic background c.1895 to 2004

The transition from pre-colonial Asante to colonial Gold Coast and post-colonial Ghana is outlined here. This provides important background information on the company's activities between 1895 and 2004. More detailed discussions of the events sketched here which are directly relevant to AGC's history are provided in the appropriate places in the body of the thesis.

Wilks's *Asante in the Nineteenth Century* provides an impressive account of the political situation between the British and the Asante who held ultimate suzerainty over the Obuasi area, where the gold mines acquired by Edwin Cade in 1895 were located. By 1895 Asante political control and territories were greatly diminished: in 1874 the British invaded Kumasi, the seat of Asante government, and incorporated nearly all of Asante's southern provinces into the British Gold Coast Colony. Thereafter, Kumasi struggled to firmly maintain the allegiance of her central, metropolitan provinces. Divisions over the best policy to take with the British and revolts against increased taxation and forced conscription led to civil war between 1884 and 1888.[75] Weakened by this internal strife, the institution of the monarchy was left in acute crisis.

A military unit led by Colonel Francis Scott invaded Kumasi on 17 January 1896 despite the royal house's overtures for peace and good trade relations and their agreement to an ultimatum to accept a British resident with assurances of security for the Asantehene.[76] The British force entered Kumasi unopposed. On 20 January the Asantehene and his mother, the Asantehemaa, embraced Governor Maxwell's feet before an assembly of a thousand in a humiliating act of submission.[77] Following such a submission they were shocked to be deported as prisoners to Elmina in the Gold Coast Colony, then to Sierra Leone on 5 January 1897, and to the Seychelles on 19 August 1900.[78] The monarchy had been caught unawares in what Hamilton describes as a "coup d'état".[79]

Resistance followed in the 1900 Yaa Asantewaa uprising when Kumasi-based royals fought against British occupation. The rebels were soon quelled. On 26 September 1901 the Ashanti Order in Council was passed declaring the annexation of Asante on the grounds of military conquest. In fact, with the exception of the Kumasi insurgents, the rest of Asante had not engaged the British in military action, and could not accurately be described as conquered.[80]

The varied explanations for British imperial expansion in general contribute to our understanding of different facets of the British annexation of Asante. The economic explanation expounded by Hopkins in his seminal *An Economic History of West Africa* is relevant.[81] According to this economic thesis, commercial interests in tropical raw materials prompted British authorities into positive action to formally secure power during the depression of 1873-96. This was motivated by increasing trade competition due to the advent of steam shipping and widespread use of modern money which reduced foreign entry barriers to West African trade. This view is supported by the petitions made by British commercial interests (and African ones in the Gold Coast Colony) to the Secretary of State for

[75] McCaskie (1983), pp. 35-9.
[76] Wilks (2000), pp. 33, 40-1, 43.
[77] Wilks (1975), p. 657.
[78] Wilks (1975), pp. 304, 656-7.
[79] Hamilton (1978), pp. ix, 37.
[80] Wilks (2000), pp. 13, 58-9.
[81] A. G. Hopkins, *An Economic History of West Africa*, Harlow: Longman, 1973, p. 124.

decisive action against Asante whose frequently bellicose stance disrupted trade.[82] From the late 1880s the Gold Coast administrators proactively secured trade treaties with Asante's outer provinces.[83]

Britain also had political motives to expand geographically so as to ward off France's military expansion across West Africa and the threat of Almamy Samory whose potential alliance with Asante could have blocked British influence in the interior.[84]

African agency, specifically the *African political* factor external and internal to Asante, cannot be ignored. Externally, the complicated alliance of the Fante with the British deserves emphasis in understanding Asante's downfall. This partnership, at times thorny, enhanced Britain's regional control and gave them a political, even moral excuse, to defend their friends (the Fantes) against Asante 'barbarians'.[85] Another political dimension is the internal conflict *within* Asante itself which contributed to British military and imperial success. An important factor behind the weakened monarchy was the opposition it faced internally from wealth-seeking Asante citizens who protested against prohibitive taxation of their extra-subsistence activities such as gold production and marketing.[86] There was also growing awareness of an alternative way of governance and development as offered by the British.[87]

European agency is apparent from the hell bent views of the individual Gold Coast governors Griffith and Maxwell on the destruction of the Asantehene.[88] By 1895 there was a decisive change in policy towards Asante from ambivalence to agreement on military action.[89] In the metropole, Hopkins and Cain's 'gentlemanly capitalism' thesis highlights another dimension of European agency.[90] This Eurocentric perspective highlights the social network between the political elite, financiers and industrialists as a major driving force for imperialism and is supported by the story of AGC's founding (see the next chapter, 'A

[82] PRO CO 879/43/490, E. Helm of Manchester Chamber of Commerce to Colonial Office, 5 October 1895, and T. H. Barker of Liverpool Chamber of Commerce to Colonial Office, 8 October 1895; Wilks (2000), p. 31.
[83] T. Lewin, *Asante Before the British: the Prempean Years, 1875-1900,* Lawrence: The Regents Press of Kansas, 1978, p. 178; Wilks (2000), pp. 20, 22, 46-7.
[84] Wilks (1975), pp. 636-7; Hopkins (1999), p. 51.
[85] Wilks (1975), pp. 169-70.
[86] McCaskie (1983), pp. 35-8; Austin (1996), pp.24-25.
[87] McCaskie (1983), pp. 35-6.
[88] Wilks (2000), pp. 28-9, 45.
[89] Lewin (1978), p. 177; Wilks (2000), pp. 35-6.
[90] P. J. Cain and A.G. Hopkins, *British Imperialism, 1688-1914,* New York: Longman, 2001, second edition.

Chronological Narrative'.) Impelled by a combination of economic and political, external and internal factors the British succeeded in colonising Asante.

Significant events affecting the gold industry occurred during colonial rule. The railway extension from Tarkwa to Kumasi was completed in 1903 thanks to AGC's provision of a revenue guarantee to the government of £30,000 per annum (see Chapter 3).[91] Although Chamberlain had anticipated gold to be the main driver of the Gold Coast economy, this proved to be incorrect. The phenomenal increase in cocoa farming led to the Gold Coast, within about a decade of the introduction of the crop, overtaking Brazil as the world's largest cocoa producer in 1911. The First World War and ensuing depression seriously diminished gold and other export incomes.[92]

Governor Guggisberg (1919-27) set a ten-year development programme during which large infrastructure projects were undertaken. This demanded labour and would impact the supply to mines.

The 1930s saw a new level of unrest with major cocoa hold ups and strikes in the gold mines. Following the Caribbean disturbances in 1930s, the Gold Coast administration responded to London's new recommendations and established a Labour Department in 1938.

Austere economic measures were endured by Africans during the Second World War as imports were directed towards the production of manganese, bauxite and industrial diamonds to support the war effort. The war led to the introduction of a state marketing board, which monopolised the export of cocoa beans. The scarcity of consumer goods and inflation immediately after the war caused enormous discontent.

The political changes precipitating the Gold Coast's Independence in 1957 started in the aftermath of the 1948 Accra riots. This was triggered by a policeman shooting and wounding several protestors on a march organized by ex-servicemen over their pensions. The riots spread to other municipalities on a wave of general dissatisfaction over the rising cost of living that took the administration by surprise. A state of emergency was declared throughout the country.

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[91] 96/684/1, Notes on the record of the corporation since 1897, 21 February 1929; MS 24661/1, debenture prospectus information 21 July 1905, reference to contract between the Crown Agents for the Colonies and AGC dd 19 August 1901; AGC annual report, 1905; letter to shareholders 9 January 1905; MS 14164/2, minutes 9 August 1904.

[92] Hopkins (1973) , p. 238.

An array of nationalist, African-led political parties were able to capitalise on the economic hard times to crystallise anti-colonial feelings. The United Gold Coast Convention (UGCC) established in 1947 emerged as the most prominent, led by J. B. Danquah. In October 1949, the UGCC Secretary, Kwame Nkrumah split from the party accusing Danquah of conservatism and formed his own Convention People's Party (CPP). At risk of over-simplification, the CPP broadly won the support of the youth, farmers and trade unions, which left the UGCC's natural constituency as the African elite: mercantilists, professionals and chiefs. This broad-brush distinction would permeate Ghana's post-colonial politics.

The British government was forced to dramatically fast-forward plans for political devolution in response to the Watson Report into the 1948 riots.[93] To ignore the CPP's demand for "self-government now!" would have risked further political unrest from one of the most economically important colonies.

As a first step towards this, elections for a Legislative Assembly were scheduled in 1951. The elections, following the recommendations of the Coussey Report, were the first to allow Africans democratic involvement in government. While in prison, Nkrumah's CPP won these elections and he was released dramatically to be appointed Head of Government and later Prime Minister. The Governor, Sir Charles Arden-Clarke, maintained veto powers, but, politically, this would not have been easy to exercise.

Thanks to post-war reconstruction and the Korean War commodity boom the Gold Coast enjoyed rising prices for important exports such as cocoa and timber. [94] The boom allowed the commencement of ambitious visible development projects.[95] The pace of this expenditure would accelerate despite the adverse turn in trade terms for primary producers from the end of the 1950s.

Further constitutional changes permitted a general election in June 1954, which the CPP won. An exclusively African cabinet was formed. In August 1954 the CPP reneged on a promise to increase the producer price of cocoa, deciding to freeze it instead. This was the proximate cause of the creation of an opposition

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[93] PRO, CO 847/36/1, no. 9, papers prepared by the Agenda Committee on the Conference of African Governors, no. 2, 'Constitutional Development in Africa', May 1947, cited in Stockwell (2000), p. 1; F. Cooper, *Decolonization and African Society: the Labour Question in French and British Africa,* Cambridge: Cambridge University Press, 1996, pp. 112-13.
[94] Stockwell (2000), p. 55.
[95] Stockwell (2000), p. 59.

party, the National Liberation Movement (NLM).[96] Underlying issues also contributed to the incongruous combination of interest groups that formed the NLM. Nkrumah's dilution of traditional authority structures through the creation of local councils which replaced Native Authorities aggrieved many chiefs as well as the intelligentsia, who were often related to chiefs. Plans to reduce the number of parliamentary seats for the Ashanti region after Independence stung in view of the wealth of this area, particularly from cocoa production. The capture of economic opportunities, such as government contracts, by CPP members provided a strong economic motive for excluded aspirant 'young men' to use politics to create access to wealth. Rathbone and Allman identify this petite bourgeoisie group, who, disillusioned with the CPP's ability to improve their financial lot, became the critical instigators of the NLM.[97] This was reminiscent of the economically-motivated revolt of commoners who tipped Asante into civil war in 1884.[98]

However, the old elite - the chiefs and intelligentsia - quickly usurped the small businessmen and the cocoa farmers in the NLM's leadership. The NLM was first led by J. B. Danquah and then Dr. Kofi Busia. The party initially made demands for complete secession of Ashanti in opposition to Nkrumah and the British government's Independence plans. Eventually the NLM lobbied for a federalist system of government, which forced another election in 1956. CPP victory in 1956 ended the federalist movement and Independence quickly followed on March 6, 1957, when the new name Ghana replaced the Gold Coast.

Initially, there was continuity between Nkrumah's economic policies and those of the British. Nkrumah's first major deviation from the capitalist colonial economic model was his vast development programme in non-productive sectors.[99] Nkrumah's Dawn Broadcast of April 1961 is seen by many as a turning point in his ideology and policies.[100] Increasingly radical and statist economic

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[96] J. M. Allman, 'The young men and the porcupine: class, nationalism and Asante's struggle for self-determination, 1954-57', *Journal of African History*, 31, 1990, pp. 263-79.

[97] R. Rathbone, 'Businessmen and politics: party struggle in Ghana,1949-1957', *Journal of Development Studies*, 9, 1973, pp. 390-401; Allman (1990), pp. 263-79.

[98] Allman (1990), pp. 268-9.

[99] Government expenditure in 1955 was four times the 1950 level in real terms, much of this was allocated to community and social services: construction, roads, power and water supply, education and health. See J. Frimpong-Ansah, *The Vampire State: the Political Economy of Decline in Ghana,* Trenton: African World Press, 1991, ch. 6.

[100] Text of President Nkrumah's *Dawn Broadcast*, 8 April 1961, Accra: Government Publication, 1961; Killick suggests the turning point was earlier in 1959 when Nkrumah gave a speech to the CPP emphasising socialism (1978), p. 36.

policies followed. Monopoly rights were given to new state corporations such as the Ghana Trading Corporation that imported a wide range of consumer goods.[101] A new national currency, the cedi, having been completely de-linked from sterling was made inconvertible; tight restrictions were placed on import licences, foreign exchange and remittances. These measures reduced the openness of the economy. Although reassurances were given to foreign enterprises that they would not be forcibly nationalised without fair compensation, [102] these economic policies impacted negatively on the profitability and operations of expatriate firms.[103]

A Seven Year Economic Plan was launched in 1964 to promote socialism and rapid industrialisation. It was hoped that this would be achieved through a 5-pronged approach comprising a visible, if not dominant, state sector,[104] a joint state-foreign private capital sector, a co-operative sector, a foreign private enterprise sector, and a small-scale Ghanaian business sector.[105]

The elimination of political freedoms was another feature of Nkrumah's rule. In 1958 the Preventive Detention Act was passed and used to silence political opposition and constitutional changes rendered the country a one-party state in 1964.

1964/5 marked a peak in cocoa production, the bedrock of the economy, at 571,000 tonnes. This was followed by long-term decline of the sector partly caused by sharp price falls on the world market. Other commodities were affected and coupled with abuses in the import licences system a period of economic hardship ensued. In 1965 the costly Volta River Project to provide electricity was finished. A year later Nkrumah's government was ousted in a military coup which met with considerable public support.[106]

The military led National Liberation Council (NLC) and the subsequent democratically elected Progress Party (PP) of Dr. K. Busia shared the NLM legacy.[107] They achieved limited success in their partial attempt to shift economic

[101] Rimmer (1992), p. 19.
[102] G. Kay (ed.), *The Political Economy of Colonialism in Ghana: A Collection of Documents and Statistics, 1900-1960,* Cambridge: Cambridge University Press, 1972, pp. 89-92; Crisp (1984), p. 140.
[103] Decker (2006), pp. 132-3.
[104] M. Fahnbulleh 'The elusive quest for industrialisation in Africa: A comparative study of Ghana and Kenya, c1950-2000', Ph. D. Thesis, University of London, 2005. p. 121.
[105] Text of President Nkrumah's *Dawn Broadcast,* 8 April 1961, Accra: Government Publication, 1961; text of speech by President Nkrumah, 'Overseas Capital and Investment in Ghana', 24 March 1962, Accra.
[106] See for example Spears's eyewitness observations from Obuasi at the time of the 1966 coup in SPRS 3/60/5 'Twenty-two years with AGC in the Gold Coast and Ghana', 3 February 1969.
[107] Rathbone (1973), p. 391.

focus onto rural policies and to usher in free market reforms. The NLC and PP were opposed to high levels of state-ownership in private enterprise, to the benefit and relief of large expatriate businesses, such as AGC. At the same time the NLC and PP introduced the first Ghanaianisation laws to assist Ghanaian entrepreneurs, to the detriment of small and medium-sized Levantine and Indian businessmen.[108]

The democratic period under the PP was short-lived as a second military coup in January 1972 headed by Colonel I.K. Acheampong overthrew Busia. The policies of Acheampong and his National Redemption Council (NRC) exhibited significant continuity with Nkrumah's regime with respect to the relationship between the state and the economy. In his May Day 1973 speech,[109] Acheampong largely blamed "evil" neo-colonialism and the "sharks" of international finance for shackling the economy. He declared a policy of self-reliance and increased government participation in the timber and precious metals industries. This led to 55% state-ownership of the Ashanti Goldfields Corporation and the summary removal of its headquarters from London to Accra. Operational control, however, remained firmly in expatriate hands. Acheampong's philosophy of self-reliance involved raising exports and reducing imports of food and industrial raw materials, hence the Operation Feed Yourself and Operation Feed Our Industries programmes. For the benefit of urban workers, the NRC outlawed redundancies and improved social security. The Industrial Relations Act of 1971 was repealed thereby increasing trade union rights. The currency devaluation of 1971 was partly reversed. The state-led distribution system, controlled prices and import licensing system were widened. (How these policies affected AGC is seen in Chapter 3). Acheampong went on to repudiate the country's foreign debt obligations.

Economically, the self-reliance strategy and the rising commodity price of gold and cocoa helped to improve the economy in the NRC's first two years. From 1975, however, fiscal, inflationary and exchange rate disincentives to produce, mismanagement, corruption, the oil price shock and NRC internal rifts all led to sharp economic decline.[110] Survival responses included reversion to

[108] Decker (2006), pp. 147-8.

[109] Text of speech by Col. I. K. Acheampong, May 1973, from *Speeches and Interviews by Col. I. K. Acheampong*, vol. 2, n.d. but Accra 1973, pp. 119-25.

[110] Inflation in 1977 was 116.5%, money expansion between 1976 and 1978 rose 165.7% - A. Boahen, *The Ghanaian Sphinx: Reflections on the Contemporary History of Ghana 1972-1987*, Accra: Ghana Academy of Arts and Sciences, 1989, p. 10; export volumes drastically declined, see Rimmer (1992), Table 7.1, p. 143.

subsistence production, smuggling, *kalabule* (rent-seeking tactics) and emigration. Acheampong's consolidation of power in 1975 by the creation of the Supreme Military Council (SMC) to replace the NRC, coupled with increased patronage to buy silence and political support allowed the regime to continue as long as it did. By 1978 opposition from professionals, students and churches led to Acheampong's removal from the SMC in a palace coup to be replaced by General Akuffo.

The "June 4 Revolution" in 1979 witnessed Ghana's bloodiest coup under the leadership of Flight Lieutenant J.J. Rawlings and junior officers. The military did, however, allow the SMC's planned democratic elections in September of that year to proceed. Dr. Hilla Limann won the election on an Nkrumah platform. On 31 December 1981, however, Rawlings's Provisional National Defence Council (PNDC) dissolved parliamentary democracy and replaced it with a self-styled "participatory democracy".[111] Rawlings also claimed the Nkrumah legacy. The PNDC comprised three Marxist factions: the June 4 Movement, The Peoples' Revolutionary League of Ghana and the New Democratic Movement who were divided over the appropriate policy response to make to tackle the economy's acute problems.[112]

In the budget of May 1983 the most significant post-colonial change in the political economy occurred with the rejection of the state-led, socialist approach in favour of the adoption of Structural Adjustment policies. The Ghana Commercial Bank Quarterly Review of 1984 spoke of the "establishment of a liberal market system in the near future" evidenced by the abolition of controlled prices, currency devaluations, "less government intervention in economic activities" and divestments.[113] Frimpong-Ansah and Tsatsu Tsikata write that Ghanaians and not the IMF initiated structural adjustment.[114] Although Herbst argues that there was nothing deterministic about the PNDC policy change - "there is no clear relationship between an African country's economic condition and its willingness to undertake reform measures" -[115] Frimpong-Ansah explains that the about-turn in ideology was forced by the government's realisation of the

[111] Text of broadcast by Flight-Lieutenant J. J. Rawlings, Chairman of the PNDC, 'No Turning Back', 29 July 1982.
[112] Boahen (1989), p. 45.
[113] Nearly 6,000 price controls were abolished by the PNDC – Herbst (1993), p. 62.
[114] Frimpong-Ansah (1991), p. 153; Text of speech by Tsatsu Tsikata, 'The Human Dimension of Africa's Economic Recovery and Development: Ghana's Country Experience', 1988, Khartoum conference of UN Economic Commission for Africa, p. 15.
[115] Herbst (1993), p. 30.

depths of the economic problems. [116] The economic situation in 1983 was aggravated by a drought and the expulsion of about a million Ghanaians from Nigeria.[117]

Since 1983, Ghana has implemented successive stages of Structural Adjustment reforms. Bold and harsh policies ensued, including significant devaluations and the return to a convertible cedi. Despite the public, particularly urban, discontent following removal of petrol subsidies in 1990, the government continued on the path of reform. The export sectors, including gold production, were highlighted for particular attention through the liberalisation of regulations to encourage foreign direct investment.

Political changes commenced in 1990 with preparations for the return to democratic rule. Rawlings's PNDC reconstituted itself as the National Democratic Congress and won the November 1992 elections. Political and economic recovery paralleled each other.

The NDC were re-elected in 1996 but lost in 2000 to the main opposition party, the New Patriotic Party (in the Danquah-Busia tradition) led by John Kufuor. This proved to be a landmark election because it was the first time that there had been a peaceful change from one civilian administration to another since Independence.[118]

Summary

Ghana's post-colonial economic policies showed a surprising degree of continuity between 1961 and 1983; during this time, although the economic and political pressures varied, policy changes worked within the state-led development paradigm. It was not until the severe economic crisis of 1983 that changes were made to the paradigm itself, ushering in a market economy. Macroeconomic policies had direct microeconomic effects on AGC as will be seen in the following chapters.

Table 2.3 shows the important role played by gold in the colonial and post-colonial economy. For most of the twentieth century the gold industry was the second largest export earner. Within the industry AGC was by far the largest gold

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[116] Frimpong-Ansah (1991), p. 153.
[117] An increase of nearly 10% of the population.
[118] J. Ayee, 'The 2000 General Elections and Presidential run-off in Ghana: An Overview', *Democratisation*, 9, 2, 2002, p. 148.

producer. As such, its performance and evolution is relevant to our understanding of Ghana's colonial and post-colonial economy.

The political economy outlined above provides essential background for the next chapter, 'A Chronological Narrative'.

Table 2.3: The gold industry's contribution to export earnings in colonial and postcolonial Ghana

Year	Total Export value	Gold export value	Gold% of total	Cocoa% of total
1900*	£797,000	£38,000	5%	3%
1910*	£2,509,000	£790,000	31%	35%
1920*	£12,170,000	£889,000	7%	83%
1930*	£9,848,000	£1,056,000	11%	71%
1940*	£13,449,000	£7,208,000	54%	33%
1950*	£75,393,000	£8,719,000	12%	72%
1960*	£111,408,000	£11,088,000	10%	60%
1970¤	¢460 mn	¢26 mn	6%	72%
1980¤	¢3,104 mn	¢540 mn	17%	65%

Sources: * Kay (1972), Table 21A, pp. 334-5; ¤ Huq (1988), Table 10.5, p. 203; ± Earth Trends Country Profiles, Economic Indicators Ghana: http://earthtrends.wri.org/pdf_library/country_profiles/eco_cou_288.pdf, accessed 15 May 2006.

CHAPTER 3:
A CHRONOLOGICAL NARRATIVE

The purpose of this chapter is to provide a descriptive narrative of the company's history. It is organized in six parts broadly corresponding to important turning points in corporate and operational leadership: the Cade era (1895-1905), the Feldtmann era (1905-30), the Batty era (1930-45), the Spears era (1945-68), the Lonrho era (1968-86), and the Jonah era (1986-2004).

The Cade era, 1895 to c.1905

In March 1890 two Fante merchants based in Cape Coast, Joseph Etruson Ellis and Chief Joseph Edward Biney along with their accountant, Joseph Peter Brown, purchased from the king of Bekwai (the Bekwaihene) the right to mine an area of Asante territory spanning 100 square miles around the village of Obuasi, for 100 years.[1]

Ellis was born in Kuntu, near Saltpond in 1845. He attended the Wesleyan School in Cape Coast after which he trained as a tailor and moved to Freetown for some time. He returned to Cape Coast to work as an agent for European merchant firms, eventually establishing his own trade company. One product he imported was a gunpowder machine for rock blasting which unfortunately led to a horrific explosion in his house killing many of his family members. Ellis died in July 1917 at the age of 72.

Biney was not a traditional chief but was called "Chief" because of his prominence in his community. He too came from the Saltpond area, from a village called Anyemaim, and studied at the Wesleyan School. Like Ellis, he worked as a clerk for European commercial houses before going it alone. Biney and Ellis were part of an African syndicate including Dr Ernest Hayford, J. W. Sey and John Mensah Sarbah established to acquire mine and timber concessions.[2] The men, if

[1] The following details are derived from MS 24669, T. Rowe, 'The Early Pioneers'. Rowe, a Lonrho employee, does not cite his sources for these details.

[2] In this period many African enterprises were engaged in the concessions business including the African Gold Coast Company, The Gold Coast Native Concessions Purchasing Company, The African Concessions Trust and the Ashanti Exploration Company – Wilks (1975), p. 625, fn. 202. Biney, Ellis and Brown may very well have been connected with some of these other companies.

not directly involved in the gold rush of 1877- 85, would have known of the opportunities. Biney died in December 1937 aged 88.[3]

According to Dumett the Akan chiefs kept the location of their mines close secrets and "next to nothing was known [by Europeans] about the location of Asante mines at the time of the first European gold rush to Wassaw in the 1870s and 1880s."[4] Wilks cites British government correspondence between Accra and London showing that young men from the Coast were attracted by the gold mining and rubber opportunities to settle in Asante provinces.[5] These men were allegedly defiant towards both the Asante and the British authorities and instigated villagers to rebel against their chiefs. A specific reference is made to "numerous Cape Coast educated natives, who are working at the gold mines in Inquanta".[6] Migration from the coast into forested areas was not unprecedented. Earlier in the nineteenth century, with the shift away from the slave trade, southerners moved northwards to exploit the expansion of 'legitimate' trade in palm oil.[7] Ellis, Biney and Brown's venture supports the administrators' observation of migration for rubber and gold mining later in the nineteenth century. Ellis and Biney owned a house in Bekwai.[8] Biney at least would also have maintained a main residence at Cape Coast where his trade merchant business was based.[9] Biney was one of a growing number of Africans engaged in importing and retailing cheap European, mostly British, manufactured consumer goods.[10] He appears to have contributed more of the finance for the Obuasi venture since he was later allocated a greater number of shares when the concession was sold to Edwin Cade.[11] Ellis was more involved with the operations of the mine as one of the principal mines worked at the time was

[3] MS 24669, 'The Early Pioneers', p. 10.
[4] Dumett (1998), p. 35.
[5] Wilks (1975), p. 534, reference to *Further Correspondence*, British Parliamentary Papers C.4052, 1884, p. 53: Barrow's report dd. Accra, 5 July 1883, and C.4477, 1885, p. 79: Kirby to Colonial Secretary, dd. Kumase, 5 February 1884.
[6] Wilks (1975), p. 534, reference to *Further Correspondence*, British Parliamentary Papers C.4477, 1885, p. 79: Kirby to Colonial Secretary, dd. Kumase, 5 February 1884.
[7] Hopkins (1973), ch. 4.
[8] McCaskie (1978), p. 39, citing from Cade Mss., University of Birmingham, Typescript Fragment of a Visit to Bekwae and Adansi.
[9] Biney was appointed Cade's Cape Coast agent to handle and relay imports for this reason: MS 24670, Cade to directors, 25 December 1897.
[10] Hopkins (1973), pp. 126-7.
[11] MS 24669, 'The Early Pioneers', pp. 8, 9.

named after him and when visiting the site in 1895, Cade refers to "Ellis and company", rather than 'Biney and company'.[12]

The details of the transaction between the Fante entrepreneurs and the Bekwaihene, Yaw Boakye, are unclear. Although they claimed their concession was for 100 square miles the limits of it had definitely not been measured or demarcated. None of the area had been surveyed or mapped. Ellis and company's mining appliances were at Obuasi and the Ellis Mine was located just south-southeast of Obuasi, indicating the small area actually being worked.[13] The Bekwaihene's ignorance of the real extent of 100 square miles would become apparent later (see below). It was a unit of land that probably sounded neat and there is evidence that it was offered repeatedly by the Bekwaihene.[14]

Despite sometimes violent rivalry at state level, the Fantes had closer language and cultural affinities with the Asantes than Europeans had and these advantages no doubt enabled them to discover the location of Asante's richest mines. The Bekwaihene may have been impressed by the educated, English-speaking Fante merchants who may have boasted of their connections to English merchants who could supply them with machinery to greatly increase the gold output. This would have benefited the Bekwaihene by increasing his share of production. The Fantes may have been more trusted than a chief's own miners who had a reputation for robbing chiefs of their tribute payments.[15] The custom was for miners to pay the landowner a third of their output and it would appear that the Ellis, Biney, Brown agreement was also based on this sharing system known as abusa. Cade reported in 1895 that, "the whole system seems to be built up upon some absurd arrangement of sharing".[16] This confirms McCaskie's thought that the original Fante concession of 1890 was not the transfer of inalienable title to the land.[17]

Perhaps the strongest incentive the Bekwaihene Yaw Boakye had to sell leases in the Obuasi region was that he had no security of tenure there. The Obuasi area actually belonged to the Adansihene. In 1879 the Adansihene Nkansa

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[12] MS 24666, Cade to directors, 'Report on Obuasi Gold Mine Estate', Cape Coast, August 1895, pp. 3, 26, 27.
[13] MS 24666, report on Obuasi, 1895, p. 27.
[14] PRO CO 879/57/578, Chamberlain to Hodgson, 11 August 1899, regarding the 100 square miles concessions of Mr Low and Captain Campbell granted by the Bekwaihene.
[15] Silver (1981), p. 525.
[16] MS 24666, report on Obuasi, 1895, p. 28.
[17] McCaskie (1978), p. 38.

sought secession from Asante to join the British protected territory.[18] According to McCaskie and Cade himself, the then Bekwaihene, Yaw Gyamfi, incensed at Adansi's disloyalty to Kumasi, invaded Adansi.[19] However, Wilks provides evidence that the Bekwaihene Yaw Gyamfi and his predecessor, Kakari, may have had their own secessionist agenda to create a new Bekwai Federation, independent of both the Asantehene and the British.[20] After a series of battles in 1886 (not 1884 as Cade thought)[21] the Adansi people and their king fled to the Gold Coast Colony and the Bekwaihene assumed control over parts of Adansi territory, including Obuasi.[22]

That the Fantes had not sought approval from the Adansihene, nor it appears from the Asantehene, could be due to the fact that either the venture was only perceived as a profit-share rather than an ownership agreement, or because they were contemptuous of the old, and weakened, authority structures.[23] In any case, the three Fantes can rightly be called entrepreneurs because they responded to a business opportunity with a high degree of risk using their own capital. Dumett writes, "The very idea of indigenous African entrepreneurs taking the lead in modern mining concessionaire activity deserves emphasis because it was extraordinary on the continent of Africa at this early juncture".[24]

In February 1895 after five years of difficulty in using the equipment procured through the firm of Smith and Cade, who were one of Biney's English trading agents, a particularly high-grade sample of ore was sent to Edwin Cade in London with an invitation to "come and see".[25] The Fantes' equipment consisted of "small appliances", a small, hand-powered 3-stamp mill and amalgamated plates.[26] Crucially, they had no ventilators or fans needed to work deeper shafts.[27] Cade had the sample assayed by Johnson Matthey and it was found to have a high gold content. A second larger sample was requested and this confirmed the extraordinarily high quality of ore: 10.5 ounces of gold to the ton.[28]

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[18] Wilks (1975), p. 522.
[19] McCaskie (1978), p. 39, and MS 24666, report on Obuasi, 1895, p. 3.
[20] Wilks (1975), pp. 533, 567-70.
[21] MS 24666, report on Obuasi, 1895, p. 3.
[22] Wilks (1975), pp. 569-70.
[23] Wilks (1975) refers to the "important and catalytic role" played by educated Gold Coasters in the demise of Asante after 1874 by their rebelliousness, pp. 533-4.
[24] Dumett (1998), p. 23.
[25] Turner (1947), p. 3.
[26] MS 24666, report on Obuasi, 1895, pp. 27, 29.
[27] Ibid., p. 3.
[28] Turner (1947), p. 3.

A land "pregnant with the precious metal"[29]

The assay results were received on 20 April 1895.[30] Within a month Cade had formed the Cote d'Or Mining Company in the UK to raise funds for a reconnaissance trip. Cade is described as "a shortish, wirey man" with red hair and beard.[31] He was born in Ipswich on 26 July 1856. After training as an apprentice in his father's watch-making and photography shop, Cade moved to London in 1882 to work in a photographers studio. Through church, he met and married Sarah Elisabeth Smith on 20 November 1883. Cade joined his father-in-law's West African merchant business which was renamed Smith and Cade. Mr Smith had not shown any interest in Biney's earlier overtures.[32]

Cade set sail from Liverpool in May arriving in the Gold Coast in June 1895. He sent a telegraph from his boat, SS Loanda off Sierra Leone, on 31 May to the colonial secretary in Accra informing him that he and his companion, a Robert Douglas Fry of Ipswich, were on their way to "the boundary of Ashantee (further if needful)" for a commercial expedition.[33] He asked for an appointment with the Governor and offered his services to the administrators to gather intelligence for them during his trip.[34] Cade already had good information on the state of the colony's affairs, likely gathered from London and Liverpool, since he knew the positive state of the colony's reserve funds and he was able accurately to predict that Asante would be annexed within a year and without a full blown war but through the show of British might.[35]

The initial reception given him from the local administration was negative.[36] This probably stemmed from the colony's bad experience of the gold rush of 1877-1885 from which not a single company had sustained success, as well as anxiety over the Asante embassy that had recently arrived in the UK and the course of action ultimately to be taken against Asante. Governor Maxwell knew that any concession negotiated in Asante would be outside British jurisdiction.

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[29] MS 24666, report on Obuasi, 1895, p. 8., Cade quotes Richard Burton.
[30] MS 24669, 'The Early Pioneers'.
[31] The following details are found in MS 24669, 'The Early Pioneers'. p. 12.
[32] Ibid., pp. 11-12.
[33] PRO CO 879/43/490, Cade to Colonial Secretary, 31 May 1895.
[34] Ibid.
[35] MS 24666, report on Obuasi, 1895, p. 6.
[36] PRO CO 96/258, Maxwell to Ripon and minutes dd. 18 and 20 June 1895.

Maxwell advised Cade not to proceed and took advice from London.[37] He wrongly reported to Marques Ripon, Secretary of State for the Colonies, that Cade carried credentials from Messrs Radcliffe and Durant of Liverpool,[38] associated with the unwelcomed Asante embassy. Cade denied any such connection: "I may say at once, that neither myself, nor my firm (Smith and Cade, 2, Aldermanbury Postern, London), nor my friends here have anything whatever to do with the Ashanti Embassy now in London or in any firm connected with them."[39] He did provide five referees, but these did not include Radcliffe and Durant.[40]

Once at Cape Coast Cade was highly critical of the administration for the lack of infrastructure, particularly any wharfing facilities.[41] He pretended to the administrators that had he known that his destination was outside the Gold Coast Colony he would never have left England.[42] However, his earlier letter from SS Loanda betrayed his eagerness to venture into Asante if needed. Ripon responded to Maxwell that they could not stop Cade but he was to be warned of the risks he had chosen to bear and not to meddle in the politics at his destination.[43]

The journey to Obuasi required travelling about 70 miles on foot and by hammock from Cape Coast inland to Prahsu using the military road built about twenty years before by the British in the Asante Wars of 1872-74 but which had fallen into disrepair.[44] From Prahsu to Obuasi as the crow flies is just over ten miles. However, there was no road at all here, and the winding, hilly route through forests, swamps, and bridgeless streams felt like another 50 miles to Cade. He used this transport problem to threaten Biney, Ellis and Brown that he might pull out of the deal, "I declared to my friends that while this insuperable difficulty existed I would not arrange any terms". He was an astute businessman and negotiator because, although making this verbal statement, he had already calculated to himself that about 40-70 miles of road building from Prahsu to Obuasi would be needed at an estimated cost of £100 per mile and he figured he could therefore reduce the purchase price by £7,000-£10,000.[45]

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[37] PRO CO 96/258, Maxwell to Ripon and minutes dd. 20 June 1895.
[38] PRO CO 879/43/490, Maxwell to Ripon telegraph received 18 June 1895.
[39] PRO CO 879/43/490, Cade and Fry to Colonial Secretary, Cape Coast, 19 June 1895.
[40] PRO CO 879/43/490, Cade to Colonial Secretary, 31 May 1895.
[41] MS 24666, report on Obuasi, 1895, p. 12.
[42] PRO CO 879/43/490, enclosure, Cade and Fry to Colonial Secretary, 19 June 1895.
[43] PRO CO 879/43/490, Ripon to Maxwell, 20 June 1895.
[44] MS 24666, report on Obuasi, 1895, p. 14.
[45] MS 24666, report on Obuasi, 1895, p.15.

Cade was impressed by the indigenous mining skills, "I have given the Ashantees every credit for their acuteness and skill in knowing where to work, and unstinted praise for the courage and patience of their endeavours".[46] However, on the balance of all his comments concerning Africans, his attitude was racist. His report is littered with derogatory remarks: "revoltingly dirty... the most ideal models of absolute laziness... useless... they have no ambitions, no pastimes or zeal, art or desire beyond an animal existence. (I think I could say something in opposition to the modern general views on slavery)."[47]

The Fantes employed a headman, a Mr Wilson (a Fante too it seems).[48] There was no mine plan and the majority of production was carried out by independent workers who produced for themselves at their own expense, but paid a proportion of their winnings to the Fante entrepreneurs. However, Wilson attempted to use the imported machines to process ore from one shaft at Ellis's Mine.[49] Cade agreed to buy this equipment from Ellis. In considering his own production needs, he gathered information on labour rates which varied depending on the role as well as the labourer's tribe (the Fantes being paid more than the Adansis).

Twenty-eight bags of random rock samples were filled and carefully labelled to show the location they were taken from, for assay tests in London. Cade was wise to gather his own samples from locations of his choice as it was not unknown for Africans to dig holes and claim they were indigenous mines or to place gold in particular locations to boost the price for a concession, a practice called "salting".[50]

The price paid for the concession is not found in any AGC report - the amount is blanked out. That Cade obtained a bargain is evidenced by his own words and the reaction of the vendors to the price agreed, it was "a very bitter disappointment to them all".[51] The vendors informed him that they had rejected a previous offer of £40,000 from a London firm and were seeking £250,000. Cade paid a little, "though not much", above his original figure but agreed to consider a timber concession that the vendors also wanted to sell.[52] Payment was made in

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[46] Ibid., p. 9.
[47] Ibid., p.30.
[48] McCaskie (1978), p.39.
[49] MS 24666, report on Obuasi, 1895, pp. 27-9.
[50] Silver (1981), p. 518.
[51] MS 24666, report on Obuasi, 1895, p.22.
[52] Ibid.

cash and shares. Cade paid a deposit of £200 at Cape Coast Castle. Two years later £2,500 was minuted as the balance to be paid to Biney, Ellis and Brown and shares of 1,000, 770 and 299 respectively were reported. It is unlikely that any other payments were made as the early board minutes, which cover all types of cash transactions, fail to mention any.[53] The value shown in the AGC balance sheet for the concession - £45, 937 - was the amount paid to the Cote d'Or Company in the form of AGC shares to take over the interest. There would have been at least four copies of the sale agreement – one to each vendor and a fourth to their barrister, whose name is blanked out of Cade's 1895 report. It is possible that a copy may have survived in Ghana.

Although the indigenous merchants had transacted with the Bekwaihene alone, Cade sought the agreement of the Bekwaihene Yaw Boakye (who asked Cade to "petition for their annexation to the Gold Coast Colony")[54] and then he visited the aged and blind Adansihene Nkansa in Assin.[55] He wrote to his board members, "I am determined, however, to proceed at all risks and so to shape my course that even in the event of a purchase not being at present possible the position of the company may still be a desirable one in the event of annexation [of Asante] (by Her Majesty's Government) taking place! To this end I made a good friendship with the two native kings concerned (Becquai and Adansi) and endeavoured to so word the deed of concession as to meet every contingency which presented itself to my understanding as likely or possible".[56] The terms of these agreements set the Bekwaihene's rent at £133 and the Adansihene's at £66.[57] The Fantes had been paying £100 to the Bekwaihene alone. Cade felt the Bekwaihene needed a premium to encourage him to abandon his original agreement with the Africans, and the sum for the Adansi merely served political purposes.[58] These rental amounts remained unchanged until 1969.

A certain Reverend Somerville of the Methodist Missionary Society, who was in Bekwai in 1896, wrote that the Asantehene, Agyeman Prempeh, was

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[53] MS 14164/1 minutes, 12 July 1897, and www.ashantigold.com/culture/agchistory.jsp?subsection=1 accessed 10 November 2004.
[54] McCaskie (1978), pp. 39-40, reference to Cade Mss., University of Birmingham, Typescript Fragment of a Visit to Bekwae and Adansi.
[55]Ibid.
[56] Turner (1947), p. 3.
[57] Paragraphs 2 and 3.
[58] MS 24666, report on Obuasi, 1895, p. 5.

displeased with Cade's transaction but powerless to act.[59] Indeed, when the Asante ambassadors in England heard of Cade's deal with the Bekwaihene and Adansihene they, wrongly assuming that the Englishman had commenced operations, despatched a stern letter to Asante kings and chiefs warning them not to let white men know the wealth of the country.[60] McCaskie concludes that the Asante government never accepted Cade's deals.[61]

Cade was knowingly deceptive in his dealings with the Africans. He exploited the absence of any official maps to include two mines belonging to the Bekwaihene within the boundaries of his concession – these were Korkortaswia and Ayeinm. Cade openly admitted: "Whether or not he (King of Becquai) will think that I have overlapped him by my measurements later on, I do not here discuss. The deed is fully accepted, and what is now therein must remain. I am only going to suggest that for the present this matter may remain unlooked at. At a later period the desirable policy will duly develop."[62] Cade added in his report that the kings were illiterate and did not comprehend measurement.[63] He proceeded to Cape Coast to lodge his agreements with the colonial administration.

The establishment of the Ashanti Goldfields Corporation

On 4 September 1895, Johnson Matthey reported on the 28 samples shipped from Cape Coast. Twelve bags assayed more than seven fine ounces of gold to the ton. There was significant silver content too. If Cade had hoped that the speedy British occupation of Asante, which occurred in January 1896, would lead to a straightforward recognition of his concession, he was wrong. The Cote D'Or Company, which had raised finance for Cade's exploratory trip, was initially unable to obtain the government's recognition.[64] It was not until the recruitment of Frederick Gordon, a lawyer and owner of a nationwide chain of Gordon Hotels, that progress was made with the Colonial Office.[65]

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[59] McCaskie (1978), pp. 41-2, reference to Methodist Missionary Society, London, Somerville to Hartley, Bekwai, 20 April 1896.
[60] PRO CO 879/44/504, enclosure from John and Albert Owusu Ansah, London 27 September 1895 to kings and chiefs of Ashanti.
[61] McCaskie (1978), p. 41.
[62] MS 24666, report on Obuasi 1895, p. 6.
[63] Ibid., pp. 5, 6.
[64] MS 24661/3, report on AGM, 14 December 1911, p.11.
[65] Ibid.

Frederick Gordon was associated with Edward Ponsonby, the Viscount Duncannon, who would later become the eighth Earl of Bessborough (1851-1920). It seems this was the connection that opened doors for Cade, for Duncannon's wife was the sister of the first Baron Wimborne, Ivor Bertie Guest. The Guests had owned iron and steel manufacturing companies in the Midlands since 1750. They were also in the coal mining business. Gordon and Duncannon served as directors on the board of Guest, Keen and Nettlefolds Limited, which was a conglomerate of Baron Wimborne's companies. (Nettlefolds had once been in the family of Joseph Chamberlain).[66] Wimborne was married to Lady Cornelia Spencer-Churchill, daughter of the seventh Duke of Marlborough. Besides the familial relationships with peers of the House of Lords, Duncannon was the secretary to the speaker of the House of Commons from 1884 to 1895.[67] Duncannon held private meetings with Chamberlain concerning AGC's establishment.[68] It is unclear how Cade met Gordon but through him Cade was able to benefit from the confluence of old industrial wealth, landed aristocracy and political connections.[69]

A letter from Downing Street to the Cote D'Or Company dated 28 February 1896 listed the following requirements. Proof was needed that, first, the persons who sold the concession had the power to do so; second, that the arrangement was fair and reasonable and third, that it would be advantageous to the country and the chiefs. In addition, a report was requested from the Gold Coast government to ascertain their views. The Cote d'Or company had to provide the Colonial Office with their articles of association and any other information supporting "a reasonable prospect of efficient and continuous work being done within a reasonable time" if the concession were to be recognised.[70]

Recognition came on 27 April 1896.[71] To exploit the concession a new company was required with larger capital. Ashanti Goldfields Corporation Limited (AGC) was incorporated in London on 25 May 1897. The founding

[66] McCaskie (1978), p. 43.
[67] *Dod's Peerage, Baronetage, and Knightage of Great Britain and Irleand for 1893*, London: Whittaker and Co.; *Burke's Landed Gentry of Great Britain and Irleand for 1886*, London: Harrison and Sons; *Whitaker's Peerage, Baronetage, Knightage and Companionage for 1911*, London: Whitaker and Co.; *Kelly's Handbook to the Titled, Landed and Official Classes for 1907*, London: Kelly's Directories; *Who Was Who, 1897-1915*, Vol. I, London: A and C. Black, 1988, sixth edition; The Mining Manual, 1903.
[68] MS 14164/1, minutes, 7 March 1898.
[69] Cain and Hopkins (2001), p. 43; McCaskie (1978), p. 43.
[70] MS 24659, papers on establishment, 1896-7.
[71] Wilks (1975), p. 658.

directors were Cade, Gordon (chairman), Viscount Duncannon, George Edwards who was an engineer, and one Edward Byas. Duncannon must have been instrumental in raising AGC's required capital at a time when there was growing disappointment with South African gold companies. Two hundred and fifty thousand shares of £1 each were authorised. This level of capitalisation was about average. Harvey and Press calculate that the mean capital employed by British foreign direct investment in non-ferrous metal mining in 1894 was £205,033. Half of all such companies had a capitalisation between £0.1m - £0.499m.[72] The first allocation of shares was completely taken up by the founding directors and their friends.[73]

Cade's concession was validated by the issue of a new government agreement dated 3 June 1897 between the Governor of the Gold Coast Colony, Sir William Edward Maxwell, the Fante vendors, Cade's Cote d'Or Company and the newly formed Ashanti Goldfields Corporation (see Chapter 4, 'Land'). The Cote d'Or Company was liquidated, its shareholders received £50,000 in fully paid-up AGC shares in consideration.[74]

The AGC memorandum of association listed a wide range of sanctioned activities abroad, not just in Africa.[75] This included banking. The only operation expressly excluded was life assurance business. A mine engineer who worked at Obuasi in 1899 associated AGC (because of the background of the directors) with hotels, furniture, soap and beef extraction.[76] One objective of the company was to promote emigration and the creation of towns,[77] in support of Chamberlain's imperial goals. Thanks to the British government invasion of Kumasi, Cade's failure to seek the Asantehene's consent in purchasing his concession became immaterial. The lease granted by the British government was for 90 years commencing 1 January 1897. The fact that 90 years was offered instead of 93 (from the Bekwaihene's grant of 100 years to the Fantes in 1890) suggests that this was viewed as an entirely new concession, rather than the transfer of the Fantes' concession. This would support the view that, in the eyes of the

[72] C. Harvey and J. Press, 'Overseas investment and the professional advance of British metal mining engineers, 1851-1914', *Economic History Review*, 42, 1, 1989, p. 68.
[73] MS 24661/3 report on AGM, 14 December 1911.
[74] MS 14164/1, minutes, 25 May 1897 and 3 June 1897.
[75] MS 24661/1 AGC Memorandum of Association, attached to Debenture Prospectus, 21 July, 1905.
[76] MS 24669, Reminiscences of Thomas George Madgwick Mine Engineer, 1899-1900.
[77] MS 24661/1 AGC Memorandum of Association, attached to Debenture Prospectus of 21 July, 1905.

authorities, the original concession was only a profit-share agreement. In the immediate aftermath of the 1896 invasion there was confusion over the laws governing the grant of concessions in Asante.[78] AGC's 1897 concession agreement was legally peculiar (these issues are examined in Chapter 4, 'Land').

The start of operations

On 24 November 1897, Cade along with a mining engineer, John Daw, recruited as mining superintendent, and fifteen European employees arrived at Cape Coast with 40 tons of equipment to transport on foot to Obuasi.[79] John Daw (1851-1934) was born in Devon and had extensive work experience in the Norwegian copper mines.[80] The rest of the group comprised miners, carpenters, a medical officer and a civil engineer. Cade recorded that there were a large number of ships at Cape Coast and packages were lost. There was a shortage of carriers due largely to the government monopolising recruitment and its bad reputation in delaying payment which discouraged labour supply. Some carriers feared travelling inland because of rumours of raids by the Muslim guerrilla leader, Almamy Samory, who was fighting the French, and others. Seven hundred and fifty men and women (some with babies on their backs) were recruited as carriers, mostly Kroo men and Sierra Leoneans, and sent with single AGC loads. Another 300 were needed. A single load weighed between 70 and 100 pounds. The first carriers set off with the fifteen Europeans, Cade remained in Cape Coast to receive and transfer the rest of the shipment.

Prior arrangements had been made for the manager of the British Bank of West Africa (BBWA) in Accra to approach two UK-based firms with Cape Coast agents to provide AGC with banking facilities – Miller Bros and McIvor [spelling unclear]. Three thousand pounds had been cabled from London to BBWA Accra.[81] However, Cade found that the merchants hated the Bank, and resented helping its customers. They would only cash Cade's cheques for him at an expensive 1.5%. Six months later the discount rate on offer was 2.5%. Cade wrote angrily to a Mr Paterson, presumably of the BBWA, about the uselessness of their cheques and his regret at depositing money with them in Accra which was

[78] Hamilton (1978), p. 198.
[79] The following details are taken from MS 24670, Cade Letters, November 1897 to August 1898.
[80] MS 24669, 'The Early Pioneers', p.17.
[81] MS 14164/1, Minutes of AGC Board Meeting, 15 October 1897.

inaccessible and did not pay interest. He urged them to open facilities in Cape Coast.[82]

Cade gave each carrier a card with details of the date and the load which would be signed for in Obuasi and returned to him in Cape Coast for payment. Since he paid immediately on receipt of the chit and without quibbling he found an increase in the supply of carriers for AGC work and was able to reduce the transport costs from £70 to £50 per ton.[83]

Cade left Cape Coast for Obuasi on Christmas Day. Unable to afford to retain a European forwarding agent he appointed Biney to that role. Arriving at the mine on 10 January 1897 Cade was pleased with Daw's progress. The inhabitants of Obuasi were shooed away, about 1,000 African gold miners moved to Ayeinm on the western boundary of the concession. Nine miners, including Daw, had international mining experience and they declared that they had never seen goldfields as rich as the pits in Obuasi. The dozen hills in sight from Obuasi remained to be explored. Cade was conscious to keep his excitement private as he did not want the share price to go up until his return to London.

The mining camp made use of old war department hospital tents until more permanent buildings were constructed. Tinned food supplies were quickly depleted and delays were experienced in obtaining food deliveries from European trade stores such as Swanzy, Eastland and Mann. An invoice from Swanzy listed claret, pipes, cigars, pate, tobacco, almonds, raisins and dynamite.[84]

Ever politically conscious, Cade took photographs of the company's new African recruits and volunteered to write Chamberlain a report with the photographs as evidence that at least in AGC's mine, accusations of ill-treatment were unfounded.[85] Labourers, as well as trained carpenters and masons were recruited from the coastal towns. Some were then trained to be miners.[86] The initial African pay scale is tabled below.

[82] MS 24670, Cade to Mr. Paterson, Cape Coast, 31 May 1898.
[83]MS 24669, John Daw, report on expedition, 12 December 1898, p. 20.
[84] MS 24670, Cade to Daw, Cape Coast, 28 May 1898.
[85] MS 24670, Cade to directors, 20 April 1898.
[86] MS 24669, John Daw report, 12 December 1898, p. 21.

Table 3.1: African daily wage rates, 1897/8[87]

Role	Daily wage
Labourers	9d – 1s/3d
Skilled labourers	1s/6d – 2s/6d
Miners	1s/6d – 4s/0d

Using the location of existing native pits to work from, Daw's strategy was to commence surface mining in a small one to two square mile area. The miners only looked for gold-bearing quartz which was identifiable with the naked eye – there was no geologist among them. The local topography lent itself to driving adits into the sides of hills. Depths up to 1,000 feet below the apex could be excavated without hauling or pumping machinery. The adits were separated by 100 –150 feet vertical intervals, and some were driven horizontally up to 1,000 feet. The first mines worked were the Obuasi, Ashanti, Insintsiam and Cote d'Or (see Map 4). Korkortaswia remained untouched and Ayeinm was left to private African miners who worked pits to depths of 200 feet.[88] They were eventually evicted from Ayeinm in April 1900.[89]

The Bekwaihene's ignorance of the true extent of 100 square miles and Cade's shrewdness in actually naming existing mine areas in his 1895 agreements quickly became apparent. The Bekwaihene had granted a concession over Sansu to a Kwaku Bissa in 1883 and this African had sold it on to a European, a Claude Beddington. Beddington therefore disputed AGC's inclusion of Sansu in their 100 square miles. Korkortaswia was also disputed by the Bekwaihene. The Bekwaihene remarked to Daw, "I beg to state that the Sansu Mine in question was not given to you. Even Ayimim and Kokotasiasua were not in addition...Through all of which beg to say am cheated why? Because I have not heard the miles...had I heard the said miles I would not hence sell it."[90] Daw was incorrect when he retorted that "Mr Cade took very great care to explain to you the exact area asked for, and that you expressed yourself satisfied therewith" [91] – Cade had

[87] Ibid.
[88] MS 24669, Extracts from John Daw's reports, p. 1.
[89] Ibid, p. 3.
[90] PRO CO 879/57/578, Hodgson to Chamberlain 4 January 1900, enclosure, King of Bekwai to AGC 7 June 1899.
[91] Ibid., enclosure, Daw to King of Bekwai 7 June 1899.

intentionally done quite the opposite![92] Due to the impregnable forest and high survey costs the exact limits of AGC's 100 square miles, (ten miles north of Obuasi, ten miles south, and five miles wide) would not be definitively surveyed and demarcated even as late as 1969.[93] Daw's further defence to the Bekwaihene was that the concession was an imperial concession, granted by the British government and that the Bekwaihene had to contact the Governor if he had any issues. Daw also threatened to have the king arrested and imprisoned in Kumasi.[94] This had the desired effect and the Bekwaihene submitted, settling for some gifts including alcohol and an umbrella.[95]

Daw organized the construction of a mill, which came to be known as the Cote D'Or treatment plant. This initially comprised five stamps of 380 lbs each, a stonebreaker, sawmill, boilers and engines.[96] Timber supplies were ample for fuel and construction purposes. Water was available from the river Jimi a few miles away. On 19 February 1898 the first trial of running the mill on steam proved successful. Rails were laid and trucks built to connect the mines and to transport the ore from the pits to the mill. The only disappointment was with the civil engineer who failed to cut a straight road (presumably from Obuasi to Prahsu). A critical success factor, Cade quickly realised, would be to select new recruits very carefully.

The first gold ounces were poured on 10 March 1898. A wet process was used whereby water was added to the ore which was crushed and ground into smaller pieces and passed through mesh screens. This was followed by amalgamation and smelting. Cyanide experiments commenced in 1900 but cyanidation would not be fully adopted until 1904.[97] The mine was officially opened by the governor of the Gold Coast. By 30 June 1898, the accounting year end, 263 tons had been milled producing 615 ounces of gold, and a further 102 ounces was bought from African miners.[98]

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[92] MS 24 666, report on Obuasi 1895, p. 6.
[93] When AGC's mine lease was surrendered and a new one issued to Lonrho with effect from 1 January 1969 it is noteworthy that the original concession was referred to as "approximately" 100 square miles - 'Agreement and Lease dated April 15 1969, The Government of the Republic of Ghana in trust for the people of Ghana and Ashanti Goldfields Corporation Limited and Lonrho Limited', paragraph 1, Lonmin, Grosvenor House, London.
[94] PRO CO 879/57/578, Hodgson to Chamberlain 4 January 1900, enclosure, Daw to King of Bekwai 8 June 1899.
[95] Ibid.
[96]MS 24669, 2 December 1898.
[97] See Glossary for definition.
[98] MS 14169,Bullion Books, 1897.

Cade quickly ran out of coins, unwilling to cash the £1,900 of cheques he held at the exorbitant rates. A bi-monthly shipment of £500 in silver (representing one to two months' cash needs) to Obuasi would be needed, as Cade feared that running out of cash would ruin the company's reputation and labour recruitment prospects. To this end a strong-room was built from metal plates and code words were used in cables with Biney who took charge of the money courier.

The company's attitude towards the local chiefs is perhaps seen in the comment that visiting the Bekwaihene was a "necessary nuisance".[99] The 'king' complained about the delay in receiving his rent, which Cade explained was to be paid directly by the government.[100] The Kumasi Resident, Captain Aplin, a Reverend Morris of Kumasi, a captain McAustin of Uganda, Major von Wiesman's expedition from Kumasi, the Bekwaihene, his chief linguist, the king's nephew, the Adansi chiefs and linguists and some Gold Coasters were invited to the camp on 29 April 1898 to bid Cade farewell.

Cade arrived back in Liverpool on 22 June 1898. No time at all was wasted to get the mine's management on a sound footing. At a directors meeting on 30 June, production targets and budgets were set. Initially, the aim was to crush 225 tons of ore to yield £2,160 of gold a month. This would be doubled with the addition of fifteen more stamps at the mill. Monthly outgoings were not to exceed £700 of which £300 would be spent on development work. A goal was set to erect 100 stamps of 950 lbs each in two years. An extraordinary general meeting of shareholders was convened on 21 July to allow Cade, the managing director, to report fully on his visit. The directors met regularly, initially on a weekly basis to discuss operations, finance, purchases and recruitment.[101] At this stage £50,000 in AGC shares were fully paid-up, and a cash call was made for a further £75,000. The share price was trading at a £1 premium.[102]

By 1899 the workforce was recorded as 2,312 including the private African miners still on the property from whom AGC obtained some gold, and 30 expatriates.[103] The mine stopped production from July to December 1900 because of the Kumasi uprising and fears of attack. Eighteen anxious expatriates resigned

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[99] MS 24670, Cade to AGC directors, 20 February 1898.
[100] MS 24670, Cade letters, p. 37.
[101] MS 14164 series.
[102] MS 14164/1, report on EGM, 21 July 1898.
[103] MS 24669, Extracts from John Daw's reports, p. 2.

before the end of their contracts and returned to the UK.[104] A defensive stockade was built around a group of bungalows at the top of the camp hill as a precaution although no mine property was attacked. From 1896 the Adansis began to return from exile to their lands surrounding Obuasi. They did not take part in the Yaa Asantewaa war, remaining loyal to the British,[105] which explains the absence of hostilities at the mine camp.

In 1899 Cade attempted to obtain the same type of privileged concession that he had acquired from the British government for the Obuasi area to operate King Prempeh's Mines near Kumasi. AGC were undoubtedly surprised to hear from Chamberlain that the government had no power to make such a grant (see Chapter 4, 'Land').[106]

In 1902 Daw set up the following departments each with its own manager: assay office, survey office, plate-laying department, brickyard, buildings (by this time there were 40 at Obuasi including housing, offices, workshops, stores), the machinery department, sawmill, estate department (in charge of forestry, land clearing, growing rubber and fruit and food crops for the workers), and the mining department. A secretarial department handled administration and accounting. An accountant was sent to the mine to establish recording and reporting systems.[107] An emphasis on good organization is apparent both at the mine and at the London head office.

Construction of a railway by government had started in April 1898 from the port town of Takoradi to Tarkwa. From Tarkwa the plan was for the line to proceed north-northeasterly to Kumasi via Obuasi. The railway reached Obuasi in June 1903 and the first daily passenger and goods service commenced on 1 July. AGC had been instrumental in the railway's extension, guaranteeing the colonial government's revenue which permitted construction to proceed.[108] Along with steam ship developments the railway significantly reduced the London to Obuasi journey time from four weeks to two weeks.[109]

[104] MS 24661/1 John Daw report, 1900, p. 23. On 30 June 1900 there were 21expatriates on the mine.
[105] Hamilton (1978), p. 200, fn. 1.
[106] PRO CO 879/57/578, Mann, AGC Secretary, to Colonial Office, 15 December 1898; Chamberlain to Hodgson, 24 August 1899; Colonial Office to AGC, 20 March 1900; Cade to Colonial Office, 3 April 1900; Colonial Office to AGC, 24 April 1900.
[107] MS 14164/1, minutes, 24 November 1902.
[108] MS 24661/1, letter to shareholders, 9 January 1905, and report on AGM, 14 December 1905.
[109] MS 24661/1 John Daw report, 26 June 1903.

Two subsidiary companies were established in 1903. Ashanti Goldfields Auxiliary Limited was set up to exploit other concessions acquired in Ashanti. Its major operation was a gold dredging concession on the River Offin. It was while visiting this site that Cade died of malaria in June 1903. John Daw replaced him as managing director and left for London. The Ashanti Sansu Mine Ltd was set up to mine the Sansu mine southwest of the Obuasi group of mines. A similar arrangement was planned for Korkortaswia, although it never materialised. The following year the mines' trading store was isolated to form the Ashanti-Obuasi Trading Company to look after the staff's consumer needs. It would later be 51% owned by the United Africa Company.

Quick Growth to Disillusionment

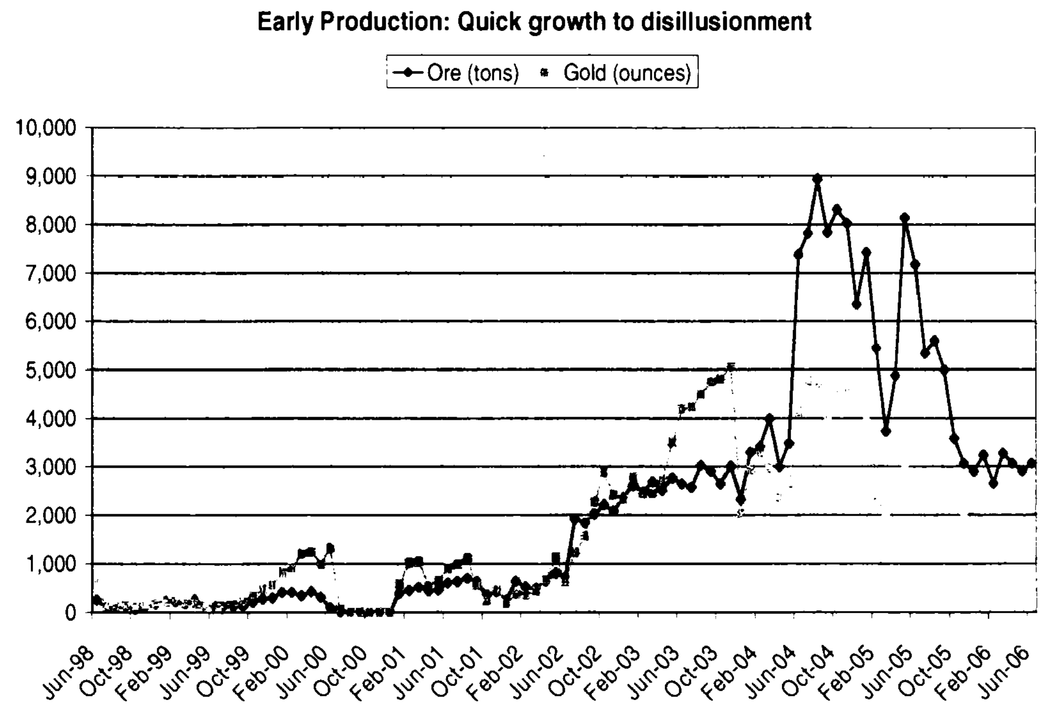
Daw's reports from the mine were continually optimistic. His over-confidence is apparent from comments such as "There is a magnificent revenue near at hand", and "AGC will be the premier gold-producing corporation of the world".[110] Daw, however good his organizational skills, was not of the new breed of scientific mine engineers. He did not work to a mine plan and no attention was paid to ore reserves until May 1904. By this time the quick and relatively cheap returns to adit mining appear to have ended. From then on the ore sent to the mill was increasingly difficult to process with the presence of other minerals with the quartz and gold, and the gold recovery rate declined despite increases in ore mined. Revenues fell as gold production fell and costs rose from the initially unsuccessful implementation of cyanidation. Cash flow problems necessitated short-term borrowing from the firm's London bankers, each director also lent the firm £800 at 5% and some of the company's portfolio investments were sold to raise cash.[111]

A 5% dividend had been paid every quarter between September 1900 and December 1901. This was an impressive start considering that operations had only started in March 1898. Out of twenty-five British companies formed to mine gold between 1878 and 1882 only Swanzy's Wassaw (Gold Coast) Gold Mining Company had managed to pay a dividend and that came after fifteen years of

[110] MS 24661/1, report on AGM, 16 December 1903.
[111] MS 14164/1, minutes, 24 March, 26 May, 21 July 1902; vol. 2, 19 December 1902, 26 January, 23 February, 23 March , 13 July 1903, 4 July, 9 August, 24 August 1904.

production.[112] No AGC dividend was paid in the calendar year 1902 but payments resumed in 1903 only to be stopped again until 1907.[113]

Figure 3.2



The Feldtmann era, 1905-c.1930

The board of directors responded quickly to the decline in gold output, profitability and liquidity. A metallurgist experienced in the cyanide process from Johannesburg was recruited in autumn 1904 after unsatisfactory results were obtained from the new cyanide plant.[114] The company secretary, Charles Mann, was appointed head of the mine's commercial affairs and visited Obuasi between July and October 1904 to curb expenditure, and an independent mine consultant was hired to assess the situation. W. R. Feldtmann, a chemist and metallurgist, with his assistant James MacTear, a mine engineer, arrived on the mine in 3 March 1905 and spent seven weeks with the remit to provide "a full and exhaustive report" on the state of the mine and its prospects.[115]

[112] The Mining Manual, 1894; Silver (1981), p. 523.
[113] MS 14169/2, dividend statement, p. 91. (Appendix 3 shows the dividends attributable to each financial year, rather than that paid during the calendar year).
[114] MS 24661/1, letter to shareholders, 7 September 1904.
[115] MS 24661/1, report on EGM, 22 May 1905.

Feldtmann's preliminary report was received in May 1905; it was sealed and only opened to be read for the first time in front of the shareholders gathered for the extraordinary general meeting of 22 May. The directors' desire not to be spoken of in the same breath as speculators of ill repute made them conscious of taking every reasonable opportunity to prove their honesty and probity – hence the sealed delivery of Feldtmann's report. The report blasted Daw's mining strategy. No attention had been paid to the development of ore reserves – only nine months' worth of ore was in sight. Unsystematic adit mining for quick returns had compromised the optimal mine development plan and extraction possibilities, leaving the ground insecure in many places. The good news was that the ore bodies of the working mines appeared to be chutes with permanent and continuous depth. Whereas Daw had focused on increasing tonnage to feed all the stamps in the mill, Feldtmann recommended reducing tonnage (from 8,000 to 3,000 tons per month) to concentrate on good quality ore. This would result in economies by leaving many of the stamp mills redundant (30 to 20 to be used out of the 40). This policy would allow time for ore reserve development by removing the pressure to utilise 100% of the mill capacity. The results would be more even ore grade and greater economy. Feldtmann discovered that Daw had been measuring the amount of ore sent to the mills incorrectly. The ore trucks contained more ore than Daw had calculated. This increased weight reduced the calculations of the value of gold extracted which were expressed per ton. Feldtmann recommended ore reserve development and systematic stoping at a rate of 100 feet in depth each year. A shaft sinking programme would permit the transition from adit to deep mining. Regarding the cyanidation problems, Feldtmann ordered experiments to ascertain the cause of the difficulties. The consulting engineer also recommended prospecting the entire concession. Feldtmann estimated that based on his policy the Obuasi, Insintsiam and Ashanti group of mines, excluding Ayeinm, could produce a gross income of £250,000 a year of which £100,000 would be profit before tax. With patience and reasonable expenditure he felt the future outlook could be very profitable. The gold produced from stored tailings would fund the stope development programme but new capital would have to be raised for vertical shaft development.[116]

[116] See Glossary for definitions of 'stope' and 'tailings'.

Feldtmann was appointed as the company's consulting engineer to implement his policy with immediate effect. Daw resigned but remained on the board of directors for another year. Debentures were issued to raise £80,000 to finance Feldtmann's development programme, after clearing certain liabilities. Subscription opened in July 1905 for 1,600 5-year, first mortgage debentures of £50 each, paying 7% . Each debenture was convertible into 40 fully paid shares of 4s. each, if exchanged before the maturity date. The company would pay a 5% premium if the debentures were repaid before the 5-year maturity date.[117] Feldtmann's preliminary report was attached to the debenture prospectus.

Monthly production and mine development reports started from July 1905. Feldtmann concentrated on the Ashanti and Obuasi mines, which held the largest and richest gold resources but provided difficult mining conditions because of the depth, the heavy ground and the need for selective stoping. In some areas the Ashanti ore assayed 84 dwt per ton;[118] Ayeinm provided lower quality ore (averaging 10 dwts per ton)[119] but it was easily extracted; Cote d'Or was an irregular gold mine in that the occurrence and the grade of its gold ore were erratic; and Korkortaswia was an adit mine nearly three miles north of the Ashanti group of mines which was worked by Africans with minimal white supervision.[120] It was therefore a low-cost mine producing small quantities of low grade but payable ore. Insintsiam had been heavily worked by Daw and the mine was made secure under Feldtmann and then abandoned.

In April 1908 an important mineral discovery, Justice's Find, was made southwest of the Ayeinm mine, thanks to Feldtmann's new emphasis on systematic prospecting and the creation of a new sampling and assay office. Unlike the existing mines, Justice's had no quartz content. Its upper levels comprised oxidised clayey ore and at lower levels increasing proportions of arsenic sulphides. The upper levels were easily extractable with open pit mining. Until further vertical extension was made to each mine with new shafts sunk, Justice's provided the bulk of proven ore reserves. Similar geology was uncovered at Sansu. Other prospects discovered at this time were Blackie's, Old Chief, Big

[117] MS 24661/1, debenture prospectus, 21 July, 1905.
[118] MS 24661/2, cable to shareholders, 23 September 1909.
[119] MS 24661/2, report of the Consulting Engineer, 31 October 1909.
[120] Ibid.

Blow and Tom Collins. Feldtmann proposed a scheme to reduce the company's prospecting costs where Africans could apply for prospecting licences on the company's property; they would only be paid if successful results were achieved.[121]

A new debenture offer had to be made in 1908 to further accommodate Feldtmann's development plans. The repayment date of the first debenture was extended from 1910 to 1913 and more attractive share exchange terms were offered to encourage more debenture holders to convert to shares. In addition, in January 1909 a new share issue was made which increased the share capital by £15,500 and raised £67,812 from the share premium.[122] Some of the funds were used to finance the first dividend paid in two years.[123]

The cyanidation problems were resolved when experiments showed that the refractory nature of the ore from the Obuasi group of mines could be dealt with by dry crushing and then roasting the ore, followed by cyanidation. The old procedure of wet crushing and amalgamation continued to be used for Cote d'Or, Ayeinm and Korkortaswia ores which had greater quartz content. A new roasting plant was therefore commissioned and delivered gold recovery levels of 93% compared to 67% without roasting.[124] A filter press was found to be the most economical way to treat Justice's oxidised ore. The roasting process and filter process are described in detail below. A choice of treatment processes based on ore type ensured better recovery rates. Another option employed by Feldtmann was not to treat certain ores at all if he felt the current state of technology would not allow satisfactory recovery rates. Such ores would be left unmined or, in the case of tailings containing large gold residues, they would be stored in tailings dams. Roasting and cyaniding additions had initially been bolted on to the old stamp mill but by June 1910 a purpose-built roasting plant, the Central Treatment Plant (CTP), was in full operation. It was located at the centre of the property near the Ashanti and Obuasi mines.

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[121] MS 24669, Feldtmann's report, 1905, p. 7.
[122] MS 24661/2, report on proceedings, 12th AGM, 16 December 1909.
[123] MS 24661/2, letter to shareholders, 30 January 1909.
[124] MS 24661/2, report on meeting of debenture holders, 3 July 1908.

Table 3.3 Treatment processes during the Feldtmann era

Treatment processes[125]	Suitable ore type and mine
Wet crushing + amalgamation (ceased October 1909)	Quartz, visible gold, "free milling".
Dry crushing + roasting + amalgamation	Lower grade ore. Cote d'Or, Ayeinm, Korkortaswia.
Dry crushing + roasting + cyanidation	High-grade and/ or refractory ore. Ashanti, Obuasi, Insintsiam mines.
Filter press	Oxidised ore. Justice's Mine
Straight cyanidation	Tailings

Table 3.4: The roasting process

- Rock breaker reduces ore to about 2 ½"cubes - Rotary cylinders dry the ore which arrives wet from the mines - Dried ore is fed in to Krupp ball-mills which reduces the 2½" cubes into sand fine enough to pass through 30-mesh screens - The sand is conveyed automatically through Edwards' roasting furnaces and then cooled. It loses 12-15% of its weight when roasted because of the loss of graphitic, sulphide and arsenic compounds - The roasted grains are put into cyanide vats for 10 days - The cyanide dissolves around 90% of the gold content - The gold is precipitated on zinc shavings - The precipitated gold is collected and smelted.

[125] Ibid.

Table 3.5: The filter press process

- Wet crushing in a stamp mill to produce a pulp
- Hydraulic classifiers separate the sand from the pulp leaving the slimey pulp
- Brown agitators are used to agitate the slimey pulp
- The pulp passes through a filter press to filter the slime, wash and clarify it
- The refined pulp is put into cyanidation vats for leaching
- Precipitation as for the roasting process
- Smelting

Experiments in Obuasi and in London were conducted continually to tweak and improve the treatment process. The number of days for cyanide leaching, the mesh sizes, and types of fuel to use in the furnaces, for example, were constantly tested in an attempt to find the optimal recovery rate. When the old wet crushing stamp mill was decommissioned, the site was adapted to a small experimental treatment plant to carry out such tests. Feldtmann emphasised the need to keep visible ore reserves ahead of the amounts milled because of the lack of uniformity in the gold deposits. From less than a year's production available in sight when he took over, the visible reserves increased to and were maintained at amounts equivalent to four or five years' production. Establishing reserves required knowing the full cost of mining, treatment processing, royalties and other expenses. Knowing the price of gold, the total costs arrived at would be used to determine a minimum grade of gold which would be "payable". This minimum would determine the ore to be included in reserves and the selection of ore to mine. Changes in cost structure or gold price would impact immediately on the reserve situation and the selection and quantity of ore to mine.

Feldtmann's reports reveal a constant balancing of ore grade and quantity to mining and treatment costs. He aimed for certainty of steady and regular income rather than fabulous short-term gains. When he was based in London, his partner MacTear assumed the day-to-day management role in Obuasi. Feldtmann would visit the mine once a year for about a month. The shareholders' confidence in him grew as his reasonable but steady income targets were achieved. Five new concessions of five square miles each were acquired adjoining the original concession to the west, east and south boundary, taking the total area to 125 square miles.[126]

From 1910 regular dividends were paid three times a year, even throughout the First World War. During this period the mine produced gross income between £25,000 and £35,000 each month, and pre-tax profits in excess of £100,000 a year. A further subsidiary was established, Ashanti Rivers and Concession Ltd, but none of its properties developed successfully. It was also decided at this time to put the 93 square miles of the original concession which was not being mined along with the newly acquired 25 square miles of adjacent property into a new company focussed on prospecting, Ashanti Goldfields Territories Limited (AGTL). AGTL was reacquired by AGC in 1914 after no major discoveries were made. The more risk-friendly of the existing shareholders had been given the opportunity to take up shares in the speculative AGTL.

The main operational obstacles between 1905 and 1916 related to firewood shortages. These were caused predictably between April and June (the main planting season) when the wood cutters would attend to their own farms. Wood shortages affected the steam power supply for the treatment plants which ran on wood, and the underground timbering activities. These seasonal interruptions were satisfactorily resolved by stockpiling wood. The dependence on wood fuel necessitated ever-increasing capital expenditure on extending tramlines further away from the mines and deeper into the forest. African contractors were also used to obtain wood and were paid by the stack delivered. There was no scarcity of wood but delivery costs led to experiments and cost comparisons for the use of anthracite gas with an electric generator versus wood fuel from 1911.

Machine breakdowns were a cause of further problems. A foundry was established at Obuasi to manufacture spare parts where possible; however, at times, critical parts would have to be shipped from the UK. As far as possible a degree of redundancy was built into the treatment process to allow some machines to be turned off for cleaning and maintenance without disrupting output.

Unlike the mines in the Tarkwa area that experienced acute labour shortages pre-1909, AGC's internal reports continually describe local labour as "ample".[127] This explains why AGC did not participate in government-organized forced

[126] MS 24661/2, AGC annual report 1909, and report on AGM, 16 December 1909.
[127] See for example, MS 24661/2,report on AGM, 15 December 1910, p. 5; MS 24661/1, report on AGM, 16 December 1903; report on AGM, 15 December 1904; Feldtmann report, 15 July 1905.

labour for the mines in the Gold Coast early in the twentieth century, confirming Thomas's observations of Ashanti.[128] Obuasi was located approximately 80 miles to the northeast of the main Gold Coast mining district centred on Tarkwa, and for most of the period to 1913 there were no European mine competitors in continual production in the immediate vicinity. AGC was therefore spared from competing with neighbouring mines for workers. This geographic isolation largely explains the different labour demand and supply experiences between the Tarkwa mines and AGC (other explanatory factors are considered below).[129] Contrary to Thomas's statement that during the early 1900s "there was a distinct shortage of wage labour in the Colony and Ashanti" the company records show that until 1913 African labour in the Obuasi area was sufficient. So it was not for any moral reasons that AGC did not get involved in the coercive, government-organized recruitment schemes of 1906-10: the firm simply did not need these services.

In 1911 "some slight scarcity" was reported at AGC, especially for hammer boys underground.[130] The company attributed this to the increase in prospecting companies in the area and expected it to be temporary unless a major mine was discovered. Economy was achieved by introducing light drills underground to reduce the number of hammer boys required. The following year numbers returned to normal. It was not until 1913 that the firm first experienced an "exceptional" shortage of African labour, outside the usual seasonal shortage in the wood cutters department. Nearly every department was affected which impacted on production.[131] As a result, the Cote d'Or filter press treatment plant was shut down and the treatment of tailings was suspended. The lack of wood led to an increase in costs from using imported coal. In response, output targets were reduced rather than importing expensive expatriate labour. Mining was focused on the richest ores in the Obuasi chute of the Ashanti mine which was expensive to mine and treat because of the depths and the refractory nature of the ore. Monthly income levels fell by 12.5% and profit by 32.5% in July that year compared to February's returns.[132] Some African wages had to be increased. The cause of the exceptional shortage was identified as the growth of the cocoa industry. The chief engineer viewed the problem as a temporary one because the cocoa farming

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[128] Thomas (1973) fn. 2, p. 79.
[129] Crisp (1984), p. 29.
[130] MS 24661/2, Feldtmann report, 12 April 1911.
[131] MS 24661/4, July 1913 monthly progress report to shareholders; and Chief Engineer's report, 30 September 1913.
[132] MS 24661/4, February to July 1913 monthly progress reports to shareholders.

process (they wrongly believed) only required men for the initial land clearing, it was hoped that their womenfolk would then take over the farming and that the "first touch of adversity" would bring workers back.[133] (The First World War would actually relieve the labour situation, as will be seen below). A policy change was made to convert the CTP to be gas-electric motor driven instead of wood-steam. The experiments with the gas producer were advanced to the construction of a gas plant in response to labour supply uncertainty.

After 1919, labour competition stiffened from cocoa farming and Guggisberg's government construction projects. AGC suffered one acute year of constant labour shortage. This eased up by December 1920 for mine labour and by March 1921 for firewood labour.[134] The directors acknowledged that they were not as badly affected by the severe labour shortages of 1919-22 as other mines in the country.[135] AGC were able to partially relieve the problem by increasing wages (a strategy which the more marginal mines could not afford).[136] The company also benefited from a steady stream of Northerners who had been recruited originally by the government to work on the railways but who later found their way to Obuasi.[137] AGC being closer to Kumasi than the mines in the Tarkwa region had an earlier opportunity to employ workers who were travelling south. Another possible reason for the company's better labour supply was the visible gold known to exist in Obuasi reefs. This may have tempted some as a source of supplementary income.[138] (From the 1940s AGC attempted their own unilateral schemes in the Northern Territory using chiefs. It was the involvement of chiefs in the process that could have given rise to coercion.[139] The company established direct relationships with Northern Territory chiefs and government

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[133] MS 24661/4, Chief Engineer's report, 30 September 1913.

[134] MS 24661/5, Consulting Engineer's report 30 September 1921

[135] PRO CO 96/684/1, Notes on the record of the corporation since 1897, 21 February 1929.

[136] MS 24661/5, report on AGM, 14 December 1920; Crisp cites one example in 1904 of mine workers at Akrokerri (Ashanti) Mines demanding that their wages be increased to match those at AGC. But it was not always the case that AGC paid better, the company adjusted its wages to the labour supply conditions - Crisp (1984), pp. 29, 30. In September 1945 they had to increase the pay scales to match that suggested by the Chamber of Mines – SPRS 3/1/34, Spears to Batty, 25 November 1945.

[137] MS 24661/5, Consulting Engineer's report 30 September 1920.

[138] A. Phillips, *The Enigma of Colonialism: British Policy in West Africa,* London: James Currey, 1989, pp. 56-7, fn. 81.

[139] MS 14170/71, Secretary to Thomson, GM, 6 March 1940; vol. 88, Secretary to GM, 6 May 1949; vol. 89, Secretary to acting mine manager, 15 September 1949, unsigned but Spears to Park, consulting engineer, 27 September 1949; vol. 90, Secretary to J.W. Cairns, Bibiani GM, 21 February 1950; vol. 96, Chairman to Norman, GM, 24 April 1953. AGC also joined the Chamber of Mines' Mines Transit Welfare Centre Recruitment Scheme which similarly ended in failure – MS14170/94, Spears to Edwards, GM, 5 February 1952; vol. 96, Secretary to Norman, GM, 14 January 1953.

officials with the aim of securing a steady labour supply.[140] The future managing director and chairman, General Spears, made a request to the Commissioner of Labour for AGC to adopt a Northern Territory tribe.[141] Although this plan failed it showed the subtle measures the company considered employing in order to obtain Northern recruits.) As it happened these recruitment schemes invariably failed - market forces attracted Northern labour freely to Kumasi and then to cocoa opportunities before mining would be considered.[142] Ultimately, therefore, AGC had to rely on the voluntary arrival of workers.

The minutes from shareholder meetings during this pre-World War I period show a great awareness by them of comparative international mining costs and techniques. Many held other mining shares and kept abreast of mining literature.[143] A minority were vocal in criticising the directors over their pay and the extent of London office costs.[144] The existence of founding directors on the board, however, kept the majority of shareholders in support of the board.

The frequency of communication between Obuasi and London and between the board and the shareholders was high. In addition to submitting monthly progress reports, the mines manager in Obuasi would cable any important daily events when necessary. Before the war these cables were issued to each shareholder within a day or two of receipt. The level of detail in the monthly reports, such as the breakdown of costs, supported the firm's policy to be as "explicit and informative as possible".[145] The Secretary, Charles Mann, operated an open-door policy and shareholders were able to visit him in London to put their queries forward in person.[146]

The Effects of World War I

On the announcement of war, orders for stores from the UK were sharply increased. No immediate impact of the war on African labour supply was felt, but

[140] MS 14170/71, Secretary to Thomson, GM, 6 March 1940; vol. 88, Secretary to GM, 6 May 1949; vol. 89, Secretary to acting mine manager, 15 September 1949, unsigned but Spears to Park, consulting engineer, 27 September 1949; vol. 96, Chairman to Norman, GM, 24 April 1953.
[141] MS 14170/ 90, Secretary to J.W. Cairns, Bibiani GM, 21 February 1950.
[142] Phillips (1989), p. 44.
[143] See for example MS 24661/3, report on AGM, 14 December 1911.
[144] Ibid.
[145] Turner (1932).
[146] MS 24661/5, report on AGM, 12 December 1916.

military recruitment in Kumasi had commenced and this worried the company.[147] The African workers managed without the usual complement of white supervisory staff.[148] UK Customs quickly banned the export of certain mine inputs. The company increasingly turned to South Africa, Canada and the USA for supplies.[149] Negotiations were ongoing with the Ministry of Munitions and the War Trade Department to seek export allowances. The company failed to obtain exclusion from the war Finance Act's excess profit tax and joined with other gold companies to lobby for some relief. During the war a bullion embargo was imposed which required all of AGC's gold to be sold to the Treasury at a fixed price.

An agreement was secured with the firm's UK cyanide supplier to hold prices at the pre-war levels until the end of 1915. Good terms were also sought from UK spares suppliers. Investigations were made into obtaining Nigerian coal from the newly-discovered Udi coal fields. A batch of this coal was obtained for testing in the U.K. and discussions with the Nigerian colonial authorities over price and quantity started.

For the years ending 30 June 1915, 1916 and 1917 the company continually exceeded its profits records.[150] This was remarkable considering that as the war progressed costs rose for stores, rail and shipping freight, bullion transport insurance and white staff war bonuses. Savings were attempted at Obuasi by suspending prospecting, reducing expenditure on mine development and focussing extraction on identified high-grade resources. The Cote d'Or treatment plant was shut down (December 1916) and mining was suspended at the Old Chief, Big Blow and Justice's mines and Ayeinm (February 1917) to conserve supplies for the treatment of higher grade ore from the Obuasi chute of the Ashanti mine. In 1917 shaft sinking was completely stopped. The reduced output plan meant that labour and fuel needs were also reduced. The gas power plant which ran on imported anthracite was in full operation from September 1914 until April 1918 when the availability and price of anthracite necessitated a return to wood-steam operations. African labour supply was described as "comfortable"

[147] MS 24661/5, report on AGM, 11 December 1914.
[148] MS 24661/5, report on AGM, 16 December 1915; Consulting Engineer's report 30 September 1917.
[149] The Guildhall series MS 14170 contains details of AGC supplies shipments including quantities sent from ports around the world.
[150] MS 24661/5, AGC annual reports 1915/16/17.

during the war largely due to the slump in the cocoa prices from 1916,[151] and firewood stocks were good. Comments were made for the first time that the mines' timber requirements were leading to deforestation. A reforestation project of 75 acres of teak and 25 acres of the indigenous odoum was extended. [152] This was not done for conservation purposes, but to ensure future supply for the firm.

During the war, the scarcity and expense of paper and labour forced the company to reduce its monthly progress reports to quarterly reports. Monthly returns along with any important news cabled from Obuasi were instead published in the national press. Shareholders with fewer than four shares were offered the market price for their shares to encourage them to sell up in order to reduce clerical costs.[153] This was a further example of head office's speedy response to problems impacting profitability.

Just prior to the signing of the Armistice, the Spanish flu pandemic shut the mine down for twelve days. On 26 October the situation had improved to allow half the planned tonnage to be crushed.[154] The number of African deaths was unknown but 157 were buried in one week alone in Obuasi, an estimated 400 died in total; four whites died.[155]

The company's wartime production performance was a commendable achievement. They were able to pay dividends regularly of between 67% and 75% of paid-up share capital throughout the war. Gold output at the end of 1918, which had been reduced to ore exclusively from the rich Obuasi chute of the Ashanti mine, was slightly higher than the pre-war output levels. Mine development had been halted for the best part of four years and only critical repairs and maintenance were carried out during this time. Extensive rehabilitation was now needed.

Difficult rehabilitation and the origins of labour unrest

The bullion embargo was lifted in July 1919 allowing the company to find any market for its gold and a considerable premium above the par value paid by the Treasury was earned.

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[151] MS 24661/5, Consulting Engineer's report, 30 September 1917.
[152] MS 24661/5, report on AGM, 12 December 1916.
[153] MS 24661/5, letter to shareholders, 12 August 1918.
[154] MS 24661/5, cables from Obuasi, 10, 14 and 26 October 1918.
[155] MS 24661/5, report on AGM, 17 December 1918

The company rightly expected a lag between the end of the war and an improvement in the cost and availability of mine stores. But two unexpected problems arose which seriously hampered production and rehabilitation plans. The unavailability of silver for paying African wages led to a switch to paper currency. High denomination paper currency of £20 and £10 had been introduced during the war without complaint but the addition of £1 notes after the war was strongly disliked by the Africans because the paper was discounted by 1.5% when used to purchase goods or to trade in the area.[156] The silver shortage was attributed by management to the cocoa buyers. It was difficult for the miners to understand why the cocoa farmers received silver from European buyers while they had to make do with lower value paper. This grievance led to industrial action initiated by the hammer boys who went on strike at the end of September 1919. After nine days, they returned on the old terms.[157] However the workers' effort and attitude deteriorated and absenteeism increased.[158] AGC responded by complaining to the government in London and the Gold Coast who admitted that they could not mint silver quickly enough. AGC promised to pay the miners at least half their wages in silver in the future and small quantities of sovereigns were purchased at a premium in London for use in Obuasi. Partial payments were also made in gold. According to the mine's manager, the strike was "mainly caused" by the change to paper currency. "Mainly" shows that there were other grievances. However, these were not elucidated by the mines manager.[159] (See Chapter 5, 'Labour').

The brief but sharp revival of the cocoa market after the war caused labour problems for the company, particularly, but not exclusively, in the firewood department. The discontent with the paper currency and the cocoa boom resulted in the depletion of all firewood stock by June 1919. Anthracite had to be imported at exorbitant prices to operate the Central Treatment Plant. Urgent repairs to the Ashanti Main Shaft necessitated a cessation of underground work in February and March 1920. Two further labour strikes occurred that year in June (the African clerks) and in August (the CTP workers). The reduction in output combined with the expected post-war supply difficulties and the unexpected local labour costs

[156] MS 24661/5, Consulting Engineer's report, 30 September 1919; report on AGM, 11 December 1919.
[157] MS 24661/5, Consulting Engineer's report, 30 September 1919.
[158] MS 24661/5, Consulting Engineer's report, 30 September 1920.
[159] MS 24661/5, circular to shareholders, 13 November 1919.

caused a surge in working costs per ton from 44s/11d in 1916, and 59s/45d in 1919, to 85s/3d in 1920.

The consultant engineer provided a fuller analysis of the labour problems than his mine manager. Mine employment had obviously become a less attractive option – cocoa, timber felling and trading were seen as more attractive. There was at this time no surplus of labour to permit competition for AGC jobs. The "small but regular stream" of northern migrant miners had been lured away in Kumasi by a government recruitment campaign for railway workers.[160] Discontent over payment in paper currency was related to the rising price of foodstuffs. In addition, traders had taken advantage of the new currency to round prices upwards; the scarcity and cost of foodstuffs justified the workers' demand for increased wages. The company therefore appreciated that the labour problems were a combination of AGC-specific employment conditions and external alternatives. Considerable increases in African pay were made in October 1920 to avert a general strike.[161] Attempts were also made to sell food to the workers at cost price. Increased rates were offered for firewood while additions were made to the gas plant to eliminate the dependence on the wood cutters, even though the ratio cost of firewood to imported anthracite was 27: 34 (: 44 for coal). The company saw the labour problem firstly as a fuel problem. Feldtmann's priority was to substitute gas-electricity for wood and he felt this single strategy would "normalise" the local labour issues. Reducing their demand for wood cutters, he hoped, would free them up to take up mine jobs. The continual reference to the labour situation as a "temporary" difficulty suggests that although employment conditions had been recognised as one cause of the unrest,[162] the need to improve the worker's lot to make the miner's job as attractive as the external opportunities was never considered by management. For them the permanent remedy was to "do with less labour".[163] The labour situation improved from 1921 when the prices for cocoa and mahogany fell.

Extensive construction work was needed to re-open the old mines safely and to improve the shaft and haulage systems; boilers, extra gas producer units and a generator, additional machine tools and spare parts were required to overhaul and clean all machines. To finance this the remainder of the authorised share capital

[160] MS 24661/5, Consulting Engineer's report, 30 September 1920.
[161] Ibid.
[162] MS 24661/5, report on AGM, reprinted in *The Mining World* 18 December 1920.
[163] Ibid., p. 2.

was issued on a pro rata basis to existing shareholders and this raised just over £67,000.

If it had not been for the gold premium, the company would have made losses for the years 1921 – 1924 when the cost of stores remained over 100% of the pre-war costs. The gold premium at the end of 1920 was 40% above the pre-war price; its value was determined largely by the US/UK exchange rate. It was thought that more than half of all mines globally had ceased operations because of the uneconomical working costs. Feinstein calculated that in the period before 1933 most of South Africa's gold mines would not have remained viable had it not been for the direct and indirect coercive measures used to obtain cheap black labour.[164] The fact that AGC were able to withstand these difficult times is a measure of the geological richness of the Obuasi mines and the cost-consciousness of management.

For years after the war the rich Ashanti mine was still the only mine being worked at Obuasi. The main shaft had reached 1,800 feet below ground. The fuel cost problem led the consulting engineer to look for more fuel-efficient means than roasting to treat Ashanti's refractory ores. It was hoped that the fuel cost savings from wet crushing this ore would be greater than the loss of income from reduced levels of gold recovery (81.2% from wet crushing compared to 93% from roasting). A new wet crushing plant was erected next to the CTP for this purpose. The Cote d'Or treatment plant was restarted to experiment between oil and water concentration processes with a view to shipping the concentrated ores to London for treatment there. Further experiments were commissioned to test wood-gas producers which burnt waste wood such as sawmill waste and had been successfully employed in South Africa. A separate experiment using pulverized coal for the roasting furnaces commenced. A mechanical and electrical engineering consultant was sent to the mines to review the entire energy supply system and to make economising recommendations.

Supply costs started to fall from 1922 which was timely because the gold premium was also diminishing – it was completely removed in April 1925 when Britain returned to the gold standard. Diesel oil was found to be a cheaper fuel for the gas plant than anthracite, and equally efficient. And so it was decided to revert to roasting again in December 1924. (Discussions to obtain Udi coal from Nigeria

[164] C. H. Feinstein, *An Economic History of South Africa: Conquest, Discrimination, and Development*, Cambridge: Cambridge University Press, 2005, pp. 110-111.

came to nothing because of costs). Other working costs however, still remained too high to reopen the other mines.

Labour relations remained fundamentally unaddressed. This is seen in the flash strike that occurred for five days from 20 June 1925 affecting over- and underground staff. No comment was made about it whatsoever by the consulting engineer perhaps because the efforts to substitute other fuel types for wood had successfully reduced the mine's labour needs. Management was dismissive of the strike. The language used in regard to African labour suggests a reactionary view to unrest and a growing disengagement between management and the workforce.[165] (See Chapter 5, 'Labour').

A return to Growth

Feldtmann resigned as consulting engineer at the end of the 1925 financial year after twenty years' service. He was replaced by J. S. Watkins who had previously served as chief metallurgist (1905 –1911) and as the Obuasi General Mines Manager (1911- 1920). The completion of the Timber Way shaft in the Ashanti mine in 1925 allowed greater tonnage to be hauled from there as the Timber Way was used for men and materials, freeing the Main Shaft for ore haulage. Working costs in 1925 were back to the 1914 levels. The wood-gas producers successfully produced electricity at a cost of less than 1d per unit which was comparable to the UK's public electricity supply costs. This permitted the electrification of all underground equipment including miners' lamps. Plans were made to erect a central power station. The wood-gas producers could operate with soft woods so it was decided to add 68 ½ acres of cedar and senna to the teak and odoum reforestation project.

In 1927 AGC bought 66% ownership of the Bibiani Mine and Timber Concession company which was located about fifty miles northwest of Obuasi. The remaining share was kept by the British vendors who had ceased work there in 1913 because of transport problems. Mining operations commenced at Bibiani soon after July 1927 when a new motor road between Bibiani and Dunkwa was completed. It was not a high-grade mine but the mining and treatment methods were straightforward. AGC managed Bibiani from the same London head office.

[165] MS 24661/5, Consulting Engineer's report, 30 September 1926.

The Batty era, 1930-45

J. H. Batty was described as a reserved, seclusive man.[166] He had lived in the Gold Coast for fourteen years from 1888 working for the Millers trading firm. He held interests in Millers and other West African companies and was a founding director and chairman of the African and Eastern Trade Corporation. Batty's initial involvement with AGC was through the Ashanti-Obuasi Trading Company established in 1904 in which Millers held shares.[167] Batty joined AGC's board in 1921 becoming chairman in 1930.

In the early 1930s geological experts reported on the downward development of the Ashanti reef.[168] Norman Junner, a geologist and future director of the Gold Coast Geological Survey, assisted the company with this. (He would be retained by AGC on and off until 1968). The Ayeinm and Justice's mines were reopened in 1933, the Cote d'Or and Obuasi mines were restarted around this time. Development for new reserves increased sharply from 14,571 feet in 1934 to 28,748 feet in 1937.[169] As a result ore reserves in the same period rose from 584,818 tons averaging 24 dwt to 1,311, 485 tons averaging 22.3 dwt.[170] These efforts led to the opening up in 1937 of Level 29 in the Ashanti Mine (approximately 2,900 feet below the surface), which proved to be very rich. Development focussed more on vertical than lateral extensions. Integration work was completed at this time to connect all shafts using aerial ropeways to the CTP. The development surge was financed by new share issues which raised the authorised share capital from £250,000 to £1m.

By 1937 development of the Cote D'Or reef, reached via the South Shaft, contributed the largest proportion of tonnage and the highest grade ore. To fully exploit this area of the mine work started on the construction of a new shaft.[171] The existing South Shaft went down to Level 18, and the Main Shaft, accessing the Obuasi and Ashanti Reefs, had reached the lowest point in the mine, Level 29. An exciting discovery that year was that the Obuasi, Ashanti and Cote d'Or reefs appeared to meet near Level 23, but the Main Shaft would need to be sunk much

[166] SPRS 3/1/34, an obituary by Major Gen. W. H. Grey, *African Affairs*, n.d. but 1946.
[167] MS 14164/2, minutes, 5 and 31 October 1904.
[168] Turner (1932), p. 6.
[169] Turner (1947), p. 13.
[170] Ibid.
[171] AGC annual report, 1938.

deeper to explore the prospect. The indications though were that the life of the mine would be longer and richer than hitherto anticipated.[172]

The firewood roasting units in the treatment plant were gradually being replaced with gas-firing roasters. A pilot flotation plant was erected in 1935 along with the construction of a Residue Retreatment Plant (completed in January 1939) which together could handle 20,000 tons per month, once in operation. The aim of the flotation process was to concentrate the gold ore before cyanidation to increase gold production capacity and improve recovery levels. The technology had been first developed at the turn of the century. AGC had themselves considered it back in 1921. The process is outlined below in Table 3.6. An Australian expert, T. B. Stevens, was recruited to manage the experiments.[173] The following year, results from the pilot justified the decision to build a new flotation plant capable of handling 1,000 tons per day. A South African metallurgy expert in this field, Chad Norris, was retained to assist the firm to successfully implement the technology on a large scale.

Table 3.6: The flotation process

- Ore crushing and grinding in primary and secondary mill
- Water is added to produce a slurry.
- Chemicals are added to the slurry to attract the gold.
- Air is passed through the slurry from the bottom of Denver flotation cells; as the air rises the gold-trapped chemicals attach themselves to the air bubbles creating a froth. The froth contains gold.
- The froth is collected, filtered and dried.
- This concentrated ore is then roasted.
- Cyanidation and extraction.

De-watering and shaft preparation work started in order to re-open the Ayeinm, Justice's and Sansu mines.[174] At Sansu erection of a new shaft and requisite air station and power supply started.

[172] Turner (1947), p. 13.
[173] Ms 14170/63 , Batty to Turner, 20 March; Turner to mine manager, 26 June; Secretary to mine manager, 21 August 1934.
[174] *The Times*, 7 February 1938.

AGC benefited when the official gold price was increased by 65% from US$20.67 to US$35 in 1934. This heralded a new era of profitability for gold producers globally. AGC's pre-tax profits for the first time exceeded £1m in the financial year ending September 1937. Despite this improvement in the industry's economics, the firm resisted demands for wage increases.

It had been a policy for the company to hold extensive shares in other African gold mining companies and in all those producing in the Gold Coast.[175] These investments throughout the 1930s appreciated in value and earned steadily increasing dividend income. AGC's largest shareholdings were in the Tarkwa and Abosso Mines and the Bremang Gold Dredging Company.[176] Other substantial shareholdings were in Ariston Gold Mines (1929) Ltd and Gold Coast Selection Trust Ltd (GCST), on whose board J. H. Batty served as a director.[177] GCST controlled nearly all the concessions and mines along the gold belt between AGC's property to the north and Ariston in the south. Unlike Bibiani, which was actively managed from AGC's head office, these other interests were only portfolio investments.

GCST also owned the West African Gold Corporation (in which AGC had a stake as well as board representation).[178] The West African Gold Corporation, established in 1933, provided technical advice to many mines in the colony. AGC often took advantage of the experts available from this company to resolve specific metallurgical, mining and engineering issues.[179]

The Gold Coast mines were loosely grouped into three by financial analysts of the sector. The AGC Group comprised AGC, Bibiani and Tarkwa and Abosso (in which AGC held substantial shares). This group had a high market reputation for being well-managed companies offering good, long-term stocks. There was the Consolidated Gold Fields Group of mines comprising the GCST, Ariston, Konongo and Lyndhurst. These had a reputation for sound technical management.

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[175] In 1938 these were Amalgamated Banket Areas Ltd, Ariston Gold Mines (1929) Ltd, Bibiani (1927) Ltd, Bremang Gold Dredging Co Ltd, Consolidated Gold Fields of South Africa Ltd, General Mines Investment Ltd, Gold Coast Selection Trust Ltd, Konongo Gold Mines Ltd, London and African Mining Trust Ltd, Lyndhurst Deep Level (Gold and Silver) Ltd, Marlu Gold Mining Areas Ltd, Tano Gold Dredging Ltd, Tarkwa and Abosso Mines Ltd – SPRS 3/1/5 Schedule of shares and stocks held in other companies, 15 December 1938.

[176] *The Times*, 7 February 1938.

[177] SPRS 3/1/5 Schedule of shares and stocks held in other companies, 15 December 1938; The Mining Manual, 1934, pp. 203, 600; 1935, p. 44.

[178] The Mining Manual, 1933.

[179] MS 14164/7 minutes 23 January 1933; 28 March 1934; MS 14170/70, Turner to G.W. Thompson of WAGC, 10 May 1939; vol. 71, Secretary to mine manager, 31 August 1939.

And then there was the Latilla Group of less well regarded mines such as Amalgamated Banket Areas, Bremang and Marlu Gold Mining. These were viewed as excessively capitalised companies with fair-weather shares.[180] There were several director relationships criss-crossing these groups, for example, H. G. Latilla and J. H. Batty were both on the board of GCST.[181]

World War II halted the remarkable period of year-on-year growth in output, reserves, development and profitability since 1924.

World War II

At the outbreak of war AGC was fortunate to have good stocks of critical materials at the mine. The earlier erection and extension of power engines that consumed either firewood, gas or fuel oil also stood them in good stead by reducing the demand for imported fuel.[182] Firewood, although relatively cheap, was sensitive to labour supply problems and variations in quality which affected ore roasting and gold recovery results. In addition, the government was increasingly conscious of deforestation and AGC feared future restrictions would be imposed on tree cutting.[183] These factors had motivated diversification in power generation. Tonnage and gold output held up in the first year of the war.

Work to re-open the outside mines at Ayeinm and Sansu that had commenced in 1939 had to be abandoned in 1941 to concentrate resources on gold production from the Ashanti group of mines. The production policy followed throughout the war was to maximise yields with minimal tonnage by mining the highest grade ore from the Cote d'Or, Obuasi and Ashanti reefs. Exploration, stope development and shaft sinking ceased.

In February 1943 a gold concentration scheme was put in place by the British government. The lack of fuel oil necessitated the closure of six gold mines in the colony, leaving eight, including AGC, to operate on a limited basis in line with the shortage of supplies.[184] The mines that were permitted to continue production paid into a fund to allow the closed mines to be kept on a care-and-maintenance basis.

[180] SPRS 3/1/36, enclosure in Argenti Sechiàri and Co to Spears, 26 July 1945.
[181] The Mining Manual, 1933, 1939, 1945.
[182] AGA annual report 1939.
[183] *The Times*, 7 February 1938.
[184] Gold Coast Mines Department Annual report 1945-6; CSO 19/2/101, Reopening of Gold Mines, 1944-6.

The lack of human and capital resources during the war also contributed to the drop in production from 242,865 tons milled in 1940 to 161,870 tons in 1944.[185] Increased rations of imported fuel and de-concentration of the sector occurred in November 1945 and March 1946, respectively.[186] Throughout the war AGC maintained dividend payments of between 34% and 80% of paid-up share capital.

It was not easy to resume the pre-war rate of growth after the cessation of hostilities. Rich ore reserves at the more accessible higher levels of the Ashanti mine had been steadily depleted as a result of the high grade strategy. The Main Shaft and Timber Shaft were in poor condition with inadequate capacity for lateral or vertical expansion.[187] Surface plant and equipment had again fallen into a poor state of repair. In order to return to, and exceed, pre-war growth a new, modern, deeper shaft was needed to the north of the Main Shaft with hoisting ability from the surface to Level 42, and potentially beyond. This shaft was planned from the end of the war, it would make the Main Shaft redundant and would not be completed to Level 42 until 1955.[188] The shaft would be called the Eaton Turner Shaft (ETS) after G.W.E. Turner a New Zealander who had been employed for many years as Obuasi's general manager and then as consultant engineer (see Appendices 4-7 for lists of AGC's key historical personnel). The South Shaft, which gave access to the Cote D'Or reef and had reached Level 20 before the war, needed to be extended to Level 33 to supplement the hoisting capacity of the aged Main Shaft until the completion of ETS. Before the war a rich ore shoot off the Obuasi South Reef at Level 20 had been discovered. To mine this area construction had started for a new West Shaft, this needed to resume.[189] Since the company's future lay to a large degree in the deeper mine levels it became imperative to provide good ventilation. Planning and construction of a Circular Ventilation Shaft (CVS) commenced in 1945. A refrigeration scheme was also researched,[190] although nothing came of this. To provide a second outlet to Level 42 for machinery and men a Sub-Vertical Shaft between Levels 31 and 42 was

185 The Mining Manual, 1942-46.
186 CSO 19/2/101, Reopening of Gold Mines, 1944-6.
187 SPRS 3/1/106, R. D. Power, consultant engineer, report on the Ashanti mine, 22 December 1952.
188 MS 14170/98, consultant engineer to GM, 19 February 1954.
189 MS 14170/98, Park to Edwards 22, 23 December 1953.
190 SPRS 3/1/106, Power, report on the Ashanti mine, 22 December 1952, p. 7.

started soon after the war (the Outen Shaft).[191] Each of these shaft construction programmes necessitated reorganization and expansion of the electricity supply, air supply and pumping schemes.

Another priority was to complete the new flotation plant, the Pampora Treatment Plant, to allow greater milling capacity (from a war time average of 17,000 tons per month to 30,000) and better economy from reductions in the use of wood for roasting. While this extensive and expensive shaft rehabilitation programme centred on the Ashanti group of mines was carried out it was planned for increased tonnage to be supplied in the interim from the low grade outside mines at Ayeinm, Sansu, Justices and Blackies (re-opened in 1947, 1948, 1949 and 1952 respectively). Although tonnage would start to increase from 1945, the gold recovered would not exceed the pre-war levels until 1957 because of this increased reliance on the low-grade outside mines. By comparison, four to five tons of outside ore yielded the same gold as one ton from the Cote d'Or group of mines.[192]

The reforestation scheme continued during the war and covered an area of 6.5 square miles of wood suitable for lumber, stoping and fuel by 1945.[193] However, labour shortages for cutting and the breakdown of locomotives to transport the wood had created acute problems by the end of the war which also needed attention.[194]

Obuasi's immediate problem, along with other Gold Coast mine companies, was to seek government help to expedite import licences for machinery and for the Overseas Manpower Board to provide Certificates of Essentiality to allow the speedy recruitment of skilled British workers to enable the redevelopment work to commence.[195]

In 1940 there had been 140 white workers and AGC estimated they needed 180 to complete the flotation plant, which had been left 80% finished when the war started.[196] The type of labour and qualifications requested (for example, for a general fitter and an assistant fuel superintendent) could have been filled

[191] Consultant engineer's report in AGC annual report, 1949.
[192] SPRS 3/1/106, Power, report on the Ashanti mine, 22 December 1952, p. 6.
[193] Chairman's address reported in *Financial Times,* 30 April 1946; ARG 7/5/60/1 GM, to DC Obuasi, 3 January 1941.
[194] Chairman's address reported in *Financial Times,* 30 April 1946.
[195] Ibid. See also CSO 19/5/35, GM, to acting Colonial Secretary, 11 October 1945.
[196] CSO 19/5/35, GM, to Colonial Secretary, 5 July 1946.

conceivably by trained Africans, but the company deemed it essential to recruit UK workers.[197]

During the war the African labour that remained at the mines was mostly skilled.[198] It was at this time that conversations started with the government and Gold Coast Chamber of Mines about training Africans at a proposed mine school in Tarkwa "for advancement to the duties of Assistant Shift Boss and, possibly, Shift Boss."[199] Such was the low height of aspiration and confidence in African aptitude.

The Spears era, 1945-68

J.H. Batty stepped down as AGC's chairman in 1945, assuming the unpaid, advisory role as the company's President for a year until his death.[200] Major General Sir Edward Spears (1886-1974) was his named successor for the chairmanship. In February 1950 Spears took on the joint role of managing director and chairman. Spears had served with distinction in both World Wars. He had been a Liberal and a Conservative MP. During World War Two he had been appointed as Britain's Minister in Syria and Lebanon and he also represented Winston Churchill to the French government. His business career really took off after the war with AGC, and besides his dynamic role at the mine, he made a significant contribution while President of the Institute of Directors.[201]

Similar to the aftermath of the First World War, mine economics became a difficult balancing act after the Second World War. AGC became even more cost conscious. There were many incidents in the company records where even small inconsistencies in accounts and reports, mistakes and other irregularities would be chased up with explanations demanded and measures put in place to prevent reoccurrence.[202] After the war the level of cost-consciousness bordered on penny-pinching when London decided that UK recruits should have their inoculations

[197] CSO 19/5/35, GM, to Chief Inspector of Mines, 28 November 1945.
[198] CSO19/2/10, Notes of meeting held at government house on 18 September 1945 to consider the de-concentration of the mining industry in the Gold Coast.
[199] Ibid.
[200] AGC annual report, 1944, Chairman's address reported in *Financial Times,* 30 April 1946.
[201] M. Egremont, *Under Two Flags: The Life of Major General Sir Edward Spears,* London: Orion Publishing Group, 1997, pp. 283, 295-6.
[202] For examples see MS 14170/ 82, Secretary to acting mine manager, 18 September, and Secretary to GM, 18 December 1946.

administered in the Gold Coast rather than London to save money.[203] Medical advice later forced a turn-around on this policy.

The price of gold remained fixed by the Bank of England who compulsorily purchased 100% of AGC's output until November 1951. Thereafter 40% of production could be sold on the free market; and 100% from May 1952.[204] The sterling devaluation of September 1949 was welcomed because it increased the price of gold from 172s/3d to 248s a fine ounce.[205] However, the 44% increase was outstripped by greater rises in the cost of mine supplies,[206] and frequent increases in the salaries and wages of Europeans and Africans. Between 1946 and 1951 African nominal wages doubled.[207] A favourable change in taxation for mines saw the abolition of the gold duty and a change in the minerals duty to off-set the amounts paid as royalty (see Chapter 6, 'Capital').[208] However, the ambitious development plans of the African-led government in the colony only increased the likelihood of high taxation. In addition to trying to contain costs and rehabilitating the mine, AGC faced new challenges of a political nature.

The war ushered in changed political circumstances and consciousness in the Gold Coast. AGC appreciated that they were on "the threshold of a profound change in colonial administration, which, under pressure of political and public opinion, made sharper and more sensitive by the war, will tend more and more to subordinate the interests of organized commerce and industry to those of the owners of the soil and the native workers."[209]

Channelled protests against management emanated from various quarters. Chiefs and elders of villages in and around the concession expressed growing concern about the impact of the mine's activities on local rivers, plants and health.[210] By 1940 AGC's operations had made a visible impact on the environment owing to the rapid and extensive tree cutting. With regard to deforestation the company had come to a "gentleman's agreement" with successive chief conservators of forestry that "regard should be paid to the needs of posterity", which, without any explicit translation into rules, left AGC to do as

[203] MS 14170/85, Secretary to acting mine manager, 27 June and 30 July 1947.
[204] AGC annual report, 1952.
[205] Chairman's address reported in *Financial Times*, 15 May 1950.
[206] Ibid.
[207] Chairman's address reported in *Financial Times* 22 May 1952.
[208] AGC annual report, 1952.
[209] GC London office despatch of 25 June 1943, cited in Crisp (1984), p. 71.
[210] For example, ARG 7/5/60/1, a joint the Akrofuomhene, Krotihene, Bamuhene, Gyasihene, Safuhene, Ankobiahene and 3 others to General Mines Manager, dd. 19 November 1940.

it pleased.[211] A Forest Reserve was demarcated in 1949 in the Obuasi rain catchment area to stop erosion of the drainage basin and a 10-year plan put in place in 1954 to maintain forest cover. However, the project administrator conceded that their plans were at the mercy of AGC's actions.[212]

It was over the issue of deforestation that the first signs of organized environmental protest are evident from the archives. In 1953 the Akrofuom Youth Association and Rate Payers Association wrote to their chief, elders, local council president, government agents, press, forestry department and minister of local government in Accra complaining about the grant by their chief to AGC of a concession renewal at a place called Fum. Their grievances were the lack of transparency over the terms and conditions and concern over the mahogany trees - although it is not clear if this concern was about conservation or an equitable share in the economic value of the trees. The latter was probably the case because they went on to highlight the injustice that the chief and his palace would benefit privately from the concession rather than the masses in the form of education facilities and other public amenities.[213] The level of anger is evident from the threat of rioting alluded to in the correspondence.[214] The protestors also raised the folly of signing away natural resources to foreign capitalists on the eve of full self-government.[215] With the success of AGC's reforestation scheme and the change in fuel technology away from wood the Fum concession was not needed after 1957. The firm successfully reduced firewood needs by half through the conversion from wood–gas fired roasters to oil fired ones.[216]

Regarding other forms of environmental damage, the Akrofuomhene recalled in 1940 that just a decade earlier the waters of the River Jimi (less than a mile south of the Ashanti Mine workings) had been pure enough for drinking and

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[211] ARG 7/5/60/1, chief conservator of forests to Colonial Secretary, 3 January 1940; the pre-World War II attitude of the authorities in this respect is perhaps reflected in the instance where AGC's GM, was advised by the DC at Obuasi to seek a firewood concession from the Omanhene of Adansi who would not stipulate any prohibitions on types of tree cut, whereas the Akrokerrihene wanted to impose restrictions on trees such as mahogany – ARG 7/5/59 18 August 1925; MS 14170/73, Batty to Thomson, 10 December 1940.

[212] ARG 7/4/17, 'A working plan compiled by the assistant conservator of forests following Ashanti divisional conference in February 1953'.

[213] ARG 7/5/42 Secretary of the Akrofuom Youth Association to Akrofuomhene and others, 15 July 1953; Rate Payers Association to the Minister of Local Government, Accra and others, 15 September 1953.

[214] ARG 7/5/42 Rate Payers Association to the Minister of Local Government, Accra and others, 15 September 1953.

[215] ARG 7/5/42 Akrofuom Youth and Rate Payers Associations to government agent Obuasi, 2 December 1953.

[216] Chairman's address reported in *Financial Times*, 4 April 1957; AGC annual report, 1956.

washing. However, it had since turned black and foul-smelling owing to coal tar from AGC's works. AGC pumped effluence into the River Pampora, a tributary of the River Jimi.[217] The chief drew attention to clauses 9 and 12 of AGC's 1897 agreement requiring the company "not to foul any river, spring or watercourse" and to comply with all regulations. Other villages also lodged complaints; and besides tar there was concern about cyanide entering water streams.[218]

AGC's response was that coal tar was actually beneficial because it was an antiseptic and warded off mosquitoes![219] The cause of the tar was the wood burning carried out in the gas producer plant completed in 1923. In the absence of any regulatory bite,[220] AGC were not forced to act quickly. A decade later the matter was taken up by the Adansi Banka member of the Legislative Assembly, N. B. Abubekr.[221]

While not publicly admitting liability, AGC's engineering department tried to find a technological solution to separate the tar from the water waste and possibly to reuse it in construction work.[222] The cost of this perhaps explains why nothing came of it and attempts were then made to divert the problem by channelling the effluence through the Obuasi town drainage system. This met with opposition from the Obuasi Urban Council.[223] No permanent solution was found until the use of wood to produce gas was completely abandoned in favour of oil.[224] In the meantime AGC provided Akrofuom with a water pipe and tanks of treated water.[225]

Allegations of air pollution caused by poisonous smoke from AGC's treatment plant were made by local farmers.[226] The central Ashanti Agricultural

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[217] ARG 7/5/60/1 Akrofuomhene to DC Obuasi, 13 September 1940.
[218] ARG 9/5/2 government agent Obuasi to government agent Bekwai 10 August 1953, 13 April 1954.
[219] ARG 7/5/60/1 GM, to Akrofuomhene and others, 26 November 1940.
[220] S. 126 of the Criminal Code and regulation 10 of the Mining Regulations as well as the Rivers Ordinance provided criminal sanctions. The administrators awaited scientific proof of the allegations although AGC's constant talk of action being taken to rectify the problem was in itself admission of pollution - ARG 9/5/2 ministry of commerce and industries to chief regional officer Kumasi, 5 September 1952; government agent Obuasi to chief regional officer Kumasi, 24 July 1953; government agent Obuasi to government agent Bekwai, 10 August 1953.
[221] ARG 9/5/2 'Petition regarding the contamination of the Jimi River by Messrs AGC Ltd', 25 August 1951.
[222] ARG 9/5/2, GM to Chief Commissioner Ashanti, 31 January 1952 and to government agent Obuasi, 26 August 1952.
[223] ARG 9/5/2, 24 December 1953, Obuasi Urban Council to government agent Obuasi; government agent Obuasi to government agent Bekwai, 12 January 1954.
[224] ARG 9/5/2 GM, to government agent Obuasi, 17 April 1953.
[225] ARG 9/5/2, DC Obuasi to DC Bekwai, 25 August 1951; general manger to government agent Bekwai 2, 11 April 1954.
[226] ARG 9/5/2, DC Obuasi to Kofi Fofie and others, 31 August 1951.

Division inspected some of these farms and carried away specimens for testing.[227] Although the acting director commented, "I consider it probable that the smoke from the ore treatment plant is a main cause of the trouble",[228] his department did not publicise its opinion. Instead, another, more specialist, investigation was requested from the West Africa Cocoa Research Institute.[229] The final comment on the matter came from the director of the Ashanti Agricultural Division to the Ministry of Agriculture who rejected the complaints in support of AGC. He cited the existence of "flourishing" food crops near the treatment plant as proof that the PTP was not causing air pollution.[230]

AGC carried out its own assessment of the impact of its chimney waste, principally sulphur dioxide, arsenic trioxide and dust. Not surprisingly they concluded that there was no foundation for the accusations.[231] The company's responsibilities in this regard would not be taken seriously until the 1980s when environmental protection and improvement became a precondition for external finance (see below).

Deteriorating labour relations and nationalism

The Gold Coast government increasingly investigated the labour conditions on mines and the duties of management toward the welfare of their African workers.[232] AGC received heavy criticism in a report from a J. Balfour Kirk to the Colonial Secretary dated 29 October 1942 following his visits to Gold Coast mining areas. AGC's management had, in his opinion, "cleverly avoided" their responsibilities regarding mining health regulations and housing by shifting the onus to the Obuasi Sanitary Board (the precursor to the Obuasi Urban Council) which was a partnership between the government and the firm set up to oversee the town's welfare.[233] Kirk sought legal opinion from the Attorney General to

[227] ARG 9/5/2, Asst. director Agricultural Division to DC Obuasi, 13 September 1951.
[228] ARG 9/5/2, Acting director of Agriculture Division to DC Obuasi, 10 October 1951.
[229] ARG 9/5/2, Acting director of agriculture to DC Obuasi, 10 October 1951.
[230] ARG 9/5/2, Permanent Secretary Ministry of agriculture to Kofi Fofie, 4 April 1952.
[231] ARG 9/5/2, AGC Superintendent Metallurgist Office 14 January 1952 enclosed in GM, to DC Obuasi, 18 January 1952.
[232] CSO 19/9/37, reports from the Chief Inspector of Labour, Captain Dickinson, 1938; CSO 19/1/72, report from J Balfour Kirk, 1942; CSO 19/1/72, Major Orde Browne's memo to the Colonial Secretary, 16 February 1944 and his 1941 Labour Inquiry; CSO 19/1/65, House of Commons question on welfare of Gold Coast mine workers; Secretary of State to Governor, 29 January 1941.
[233] The Board was managed by a committee which included the Obuasi District Commissioner and the AGC GM, – MS 14170/89, Morgan to G. G. Shiel, lawyers, 18 October 1949.

force mines such as AGC to shoulder their responsibilities.[234] While the company reports create the impression that Obuasi was a model town thanks to the company's efforts, it is interesting to note the conclusion of the Gold Coast Labour Officer's inspection that conditions there for workers were an "indictment to [sic] our trusteeship".[235]

Increasing pressure from workers and government for better employment conditions was felt after the war. The rising cost of living caused continual conflict with workers over wages. The most serious bouts of labour unrest coincided with falls in gold production between 1945 and 1956.[236] (For details of the labour unrest and management's responses see Chapter 5, 'Labour').

Government intervention in the form of the Gorman Award for increased wages in 1947 and the Report of the Mines Labour Enquiry Committee in 1953 forced AGC to address welfare.[237] The company attempted to win over the support of the Asantehene and local chiefs to help improve relationships with African staff.[238]

While the mercantile companies responded to the political changes towards Independence by implementing Africanisation policies, the mining sector was slower to react. AGC was the slowest of all, and the colonial administration doubted their commitment. In 1953 the highest African position in the mine was that of shift boss.[239] The mine argued that Africanisation was in their interest because of the salary costs savings, and that the slow rate of progress was caused by the lack of enthusiasm on the part of the Africans for English and maths evening classes and the basic mining school established in 1946 and 1947.[240] Greater efforts to Africanise would start after Independence, but even then, the small number of senior African staff were restricted to clerical and support roles. The most influential technical management positions remained firmly in expatriate hands until the 1980s.[241]

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[234] CSO 19/1/72, report from J Balfour Kirk, 1942.
[235] 'Report by I. G. Jones on labour conditions at AGC', 20 March 1942, Ghana National Archives file no. 1211 S.F. 23, cited in Stockwell (2000), p. 177.
[236] See Appendix 3; Stockwell (2000), p. 167.
[237] Regarding impact on wages see AGC annual report, 1948.
[238] Egremont (1997), p. 281.
[239] Stockwell (2000), p.172.
[240] Ibid.
[241] Interviews, Sam Jonah, London, 15 January 2004, and Johannesburg, 15 December 2004.

Stockwell writes that Spears opposed the political changes towards Independence more than any other businessman in the Gold Coast.[242] His racialist opinions undoubtedly affected this viewpoint. He believed that "there was no advance in Africa for thousands of years until the arrival of Europeans on the continent."[243]

Spears started publishing the *Ashanti Times* in 1947 as a propaganda tool for the purpose of advancing AGC's interests.[244] The benefits of the gold mining industry and the importance of Europeans in it were recurring themes in the papers articles.[245] Spears's own public statements at times criticised Nkrumah's CPP (he described them as "revolutionary", an "extremist" party), while supporting the chiefs and Ashanti interests.[246] Spears instructed B. C. Freestone, the *Ashanti Times* editor, to inform the Asantehene that he and any chiefs who were in favour of Anglo-African commercial partnerships had AGC's backing. Freestone was to put across the Asantehene's views anonymously in the newspaper.[247] After emphasising his longstanding friendship with the Asantehene, Spears was reported in the *Financial Times* to have pressed Prime Minister Nkrumah for an Upper House to include the chiefs and industrial interests such as a representative of the Chamber of Mines.[248] Such comments suggest support for the National Liberation Movement (NLM) and the old African elite whose powers were being eroded by legislative changes.

However, Spears was an astute diplomat. His prime concern was AGC's fortunes and a more credible assessment of his stance on NLM and CPP politics was that he had to hedge his bets. He himself stated: "The opposition of the Ashanti to the C.P.P. is very deep. All I would say is that I believe both sides realise the part we have to play in the country and our political impartiality."[249] And on a later occasion he added, "Both the Government and the Opposition,

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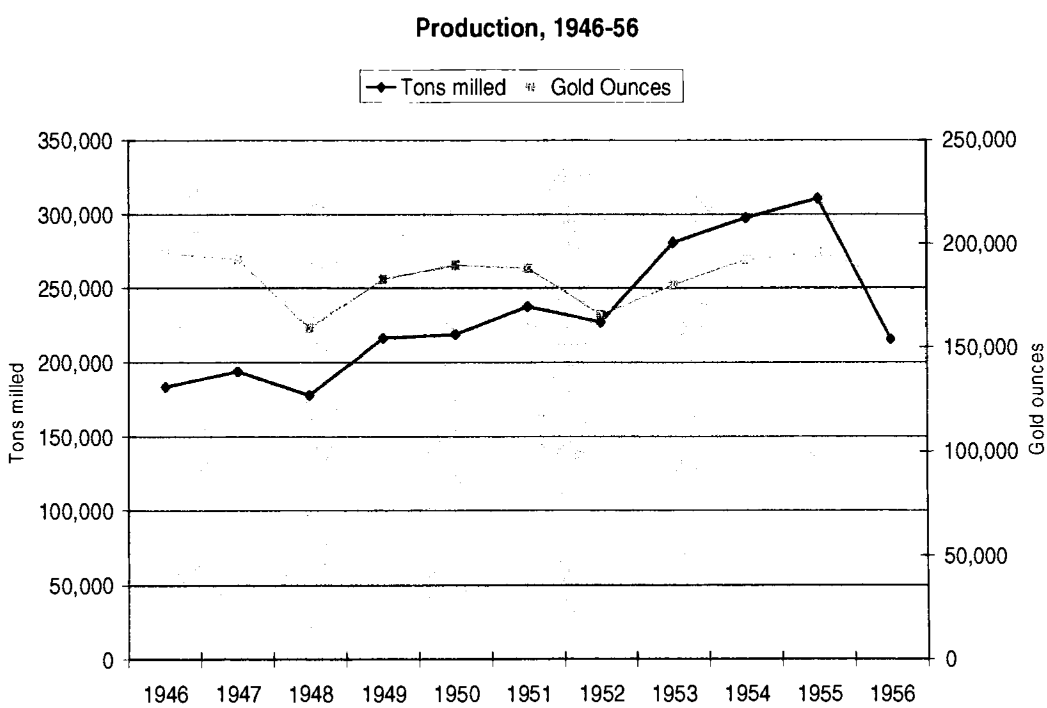
[242] Stockwell (2000), p.168.
[243] Chairman's address reported in *Financial Times,* 22 May 1952.
[244] MS 14170/85 Spears to Gale, 8 October 1947.
[245] See for example, MS 14170/88, Secretary to Freestone, 25 March 1949 and enclosure; unsigned by Spears to Freestone, 4 April 1949; vol. 89, Spears to George, 30 December 1949.
[246] Chairman's address at AGM, 12 May 1950; Spears's biographer states that his support for Busia – Spears's "protégé" who came to lead the CPP opposition party, the NLM - stopped short of any financial assistance: Egremont (1997), pp. 306, 311.
[247] MS 14170/89, Spears to George 30 December 1949.
[248] Chairman's address reported in *Financial Times,* 28 April 1955.
[249] Ibid.

which is strongest in Ashanti, are well disposed towards the Corporation".[250] He soon learnt to get on with Nkrumah.[251]

As Independence neared, a major concern for mines in the Gold Coast was the matter of compensation should mining land be forcefully acquired by the soon-to-be independent government. The mining companies in the Gold Coast appointed an Accra Representative, Donald Sutherland, who had previously worked in the Gold Coast Colonial service as the permanent secretary responsible for mining activity, to liaise with and promote the industry's interests to the newly independent African government and local chiefs.[252]

The operational performance of the mine between the end of World War II and Independence was virtually flat in terms of gold ounces produced, as seen in the graph below. This was due in part to the series of strikes over the period and the fact that a heavy programme of shaft sinking over this decade absorbed labour from mine production. The decade 1946-56 had been difficult both politically and operationally (see Chapter 5, 'Labour'). But by 1957 the mine's infrastructure had been adequately improved to support significant expansion in output.

Figure 3.7



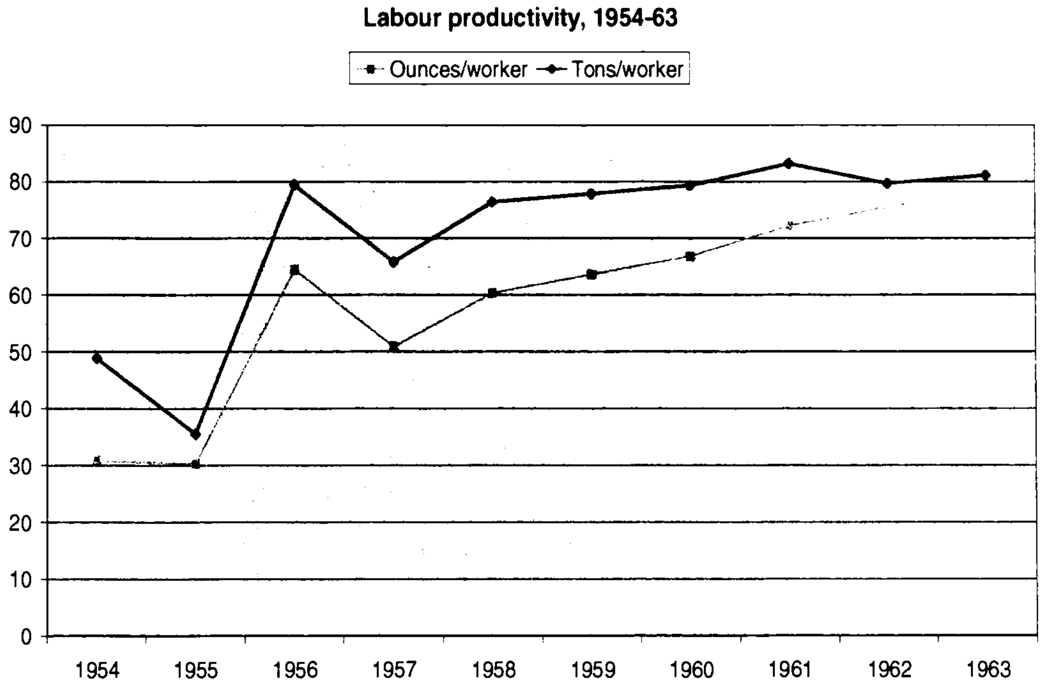
[250] Chairman's address reported in *Financial Times,* 4 April 1957.
[251] Egremont (1997), p. 306.
[252] Stockwell (2000), pp. 174-5, 193-4.

Gold production from 1957 to 1972 showed year-on-year increments and improvements in labour productivity. Completion of the post-war redevelopment projects (in particular the ETS, CVS and the sub-vertical Outen Shaft) allowed lateral and vertical development.

The appointment of Production Engineering Ltd, a mining services company between October 1954 and March 1957 made a significant impact on productivity.[253] The remit for these consultants was to improve productivity and reduce costs. Through the introduction of different work organization, particularly underground, it was possible to reduce underground staff numbers by 31.6% during this time. Total staff numbers reduced by 23.5%. Productivity underground increased by 72%, and 54% for surface workers.[254] Although African wages had increased between 1954 and 1957 by 17.5% the wage cost per ton and per ounce produced had fallen.[255] Cost control systems were introduced especially to monitor Sunday and overtime working. Labour control innovations such as crush barriers underground to monitor the comings and goings of workers were implemented with resistance but helped to improve worker discipline. At the same time incremental technical improvements were made to enhance grade control in mining and metallurgical results in the treatment plant.

[253] Chairman's address reported in *Financial Times,* 4 April 1957.
[254] Ibid.; SPRS 3/1/180 African labour productivity table, 1953-57.
[255] Chairman's address reported in *Financial Times,* 4 April 1957; SPRS 3/1/180 African labour productivity table, 1953-57.

Figure 3.8



Spears later described his relationship with Nkrumah as "extremely friendly".[256] Assurances that the firm would not be nationalised were continually sought. Nkrumah in fact took a pragmatic line with respect to foreign investment and during his government only ailing mines whose foreign owners were about to pull out were nationalised to save them from closure because of the consequent job losses.[257] There came to be six such firms: Tarkwa, Prestea, Dunkwa, Ghana Main Reef, Bibiani (acquired from AGC by the government in 1961), and Konongo (acquired in 1965). Bibiani's geology made it a more marginal mine than AGC; after suffering losses following increased labour costs AGC accepted the Ghanaian government's offer for all Bibiani shares.[258] These mines were grouped under the State Gold Mining Corporation. Spears endeavoured to meet with the President once a year during his annual trips to the mine, usually every January/February.

Government relations focused on tax issues. The colonial administration had started the trend of higher taxation for the mining sector (see chapter 6, 'Capital'). Spear's reminded Nkrumah of AGC's large foreign exchange contributions and

[256] MS 24661/7, Spears report on visit to Ghana, May-June 1964.
[257] Konings (1980), p. 9.
[258] MS 14170/112, Secretary to GM, 12 January, cable 7 February; Spears to head office cables received 6 and 20 February; D. Waley, director, to Spears, cables, 15 and 20 February 1961.

the company's inability to raise new capital for growth because of the (in his opinion) "crippling" corporate and personal tax burden.[259] The latter inhibited the employment of expatriate staff. The company was aware of the new government's growing budgetary problems and therefore it did not realistically expect any tax reductions. In response, AGC threatened to slow down their expansion policy.[260]

The company's UK Overseas Trade Corporation status provided relief from double corporation tax and income tax on dividends until 1966, when it was progressively removed.

The increase in the Ghanaian cost of living affected white and black staff during the 1960s. The high turnover of general mine managers at Obuasi may reflect the living difficulties. Between 1962 and 1967 there were four.

Spears's patronising accounts of his annual visits and his continual praise for his firm's contributions to Obuasi life border on the delusional. These visits involved meetings with department heads, consultants and the General Mines Manager followed by royal-like tours with his wife,[261] on one occasion in his Rolls Royce shipped from London for the duration of his stay.[262] His description of Obuasi as a "beautifully ordered and impeccably maintained" town was not accurate according to those who lived there in the 1950s and 60s.[263] Spears may have confused AGC's pristine senior staff residential estates with the town itself, which was and still is, as would be expected of most mining and industrial towns, very shabby. Konings, conducting fieldwork in Obuasi in 1975, described it as a shanty town.[264] Spears's true feelings for the African is perhaps captured in his comment concerning a local chief, "The best way to treat these people is as if they are children" he wrote in 1968.[265] In 1965 there were still no senior African technical staff, the most senior Ghanaian post being that of the Chief Welfare Officer and Chief Cashier. Many long-serving Africans resigned in 1965 in protest at the withdrawal of gratuities. The firm took this decision in order to

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[259] MS 24661/7, report on AGM, 3 April 1964.
[260] Ibid.
[261] Egremont (1997), photograph 31.
[262] Ibid., p. 309.
[263] Interviews, Victor Jonah, Tema, 7 May 2004, and Reverend Arthur Garnett Prah, Obuasi, 8 May 2004.
[264] Konings (1980), p. 18. On my own recent visits in 2004, although shabby, the town looked rather similar to other medium-sized towns in southern Ghana, except there was a noticeable lack of multi-storey buildings. This is because of the control the mine used to exercise over building permits: tall buildings were undesirable because of the risk of subsidence affecting underground operations. Obuasi is by far more orderly and cleaner than Tarkwa.
[265] Cited in Egremont (1997), letter to directors, 12 July 1968, Spears Churchill College 1/109.

reduce total wage costs after the introduction of employer social contributions in 1964.[266]

Production the following year was affected by the loss of their experience. In addition, output fell because of increasing absenteeism, a drop in productivity and a strike in December 1966 which lasted for four days. The company reports are characteristically mute about the details, but the strike was likely related to the difficult living costs combined with the mine's attempts to make savings on staff perks. When wages were negotiated upwards with the Mine Workers Union the following March the company planned to further reduce staff numbers in order to meet the increase.

The main reefs worked at this time were the Ashanti (which had reached Level 41), Cote d'Or, Obuasi and Ayeinm. The treatment process using flotation tanks and roasting furnaces had not changed significantly since the completion of the PTP in 1947, but it was continually refined. A new metallurgy research laboratory was constructed near the PTP in 1964. Mechanised felling and transportation of timber from the firm's timber concessions were introduced in 1964 to save on labour costs. From September 1965 AGC became the Volta River Authority's second largest electricity customer, allowing the company's power stations to act as standby.[267]

AGC's cautious and experimental approach to the adoption of innovation applied not only to mining technology but also to administrative technology. A case in point being the adoption of a computer for the accounting department in Obuasi. Discussions started in January 1967. This was followed by the firm seeking external advice from their auditors. The auditors were asked to visit Obuasi to assess the department's actual needs. They then produced a report on the competing IBM and ICT models along with recommendations. It was suggested that an initial trial be conducted using a rented computer. Training was given to internal staff and the manufacturer chosen for the eventual purchase was contracted to provide after-service. An accounting computer was finally installed about two years from the start of the investigation process.[268]

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266 AGC annual report, 1965.

267 MS 14170/121, consultant mechanical engineer to GM, 21 September 1965; AGC annual report, 1966.

268 MS 14170/124, consulting engineer to GM, 13 January 1967, Secretary to GM, 3 March and 28 June 1967; vol. 125, Secretary to acting mine manager, 5 October, 29 November 1967; vol. 129, cable received from Obuasi 28 August 1969.

Spears was in Obuasi at the time of the 24 February coup, 1966. Mounting difficulties in obtaining import licences and clearing stores held at the docks as well as unpaid remittances due from the Bank of Ghana since November indicated to Spears that Nkrumah's government had gone bankrupt.[269] The coup was met with "excitement and jubilation" by the Obuasi workers.[270] Before Spears left for London he paid a courtesy call on General Ankrah and his deputy Mr Harlley of the National Liberation Council (NLC).

The NLC were viewed by the firm as pro-West and pro-capitalist.[271] Some regulatory changes made by the NLC were welcomed such as the devaluation of the new cedi from 2: £1 to 2.86 in 1967 which reduced the cost of stores. Availability of sterling to AGC became speedier.[272] The NLC gradually reduced and eventually removed withholding tax on dividends. However the budget of July 1967 increased income tax from 45% to 50%.

Following the NLC coup, plans were made to further increase milling capacity. The motivations for this were to exploit the outside mines which were of low grade, as well as the low grade sulphide ores in the Ashanti group of mines at levels 31-33 and Ayeinm levels 9 and 11.[273] Phenomenally high gold values were also proved at Ayeinm Levels 20, 21 and 29 – at level 20 the ore body assayed 109.9 dwts for 1,220 feet at a width of over eight feet.[274] It was felt that an ambitious growth strategy, especially to develop the outside mines would put the company in a more favourable light to discuss with the government an extension of the mine's lease, which was due to expire in 1987.

Two approaches were contemplated. A modest growth target of 600,000 tons per annum and a more ambitious one of 960,000 over a 5-year window. The lower option was affordable; to achieve the upper option it was felt that outside finance may be necessary. It was a Professor Reddaway (director of Applied Economics at Cambridge University who acted as an advisor to the Ghanaian

[269] MS 24661/7, report on Spears's visit to Ghana January - March 1966.
[270] Ibid. Spears wrote that there was "no doubt whatever of the enthusiasm with which the new regime was welcomed".
[271] SPRS 3/56/4 chairman's address AGM, 4 April 1967.
[272] MS 14170/123, Secretary to GM, 30 December 1966.
[273] SPRS 3/55/3, memo from Power to Spears, 6 June 1968; MS 14170/126 consulting engineer to GM, 21 June 1968; SPRS 3/56/4, chairman's address AGM, 4 April 1967.
[274] SPRS 3/56/4, chairman's addresses AGM, 4 April 1967 and 4 April 1968; see Taylor (2006), pp. 82-3.

government and had also been retained by AGC to independently assess their mining strategy) who recommended to AGC that they should contact the International Finance Corporation (IFC), an arm of the World Bank.[275] Two unexpected developments then obviated the need for external investment: the cedi devaluation by 43% in July 1967 (however, some of the benefits of this were eroded when sterling was devalued by 17% to the US dollar in November 1967 and the new cedi remained unadjusted). Second, in the same year the NLC reduced withholding tax from 20% to 12.5%, with plans to abolish it completely over three years.[276] The sterling devaluation translated into an increased gold price of US$40 (from US$35) which made previously unpayable low grade ores economic to mine. These measures improved the firm's profitability and cash flows enough to allow the higher output goal of 960,000 tons per annum by 1974 to be adopted and paid for from internal earnings.[277] This level of milling would produce 585,000 fine ounces of gold and it was planned that the average mine grade would gradually be reduced from over 19 dwt in 1967 to around 12 dwt in 1974.[278]

Towards this target, Blackies and Old Chief mines were re-opened, the Sansu shaft was dewatered and the mine redeveloped.[279] Modifications to the PTP would be needed to handle the increased throughput as well as the low-grade ore. This included the extension of the crusher section, additions to the Fagergren flotation cells, additional Edwards roasters, the introduction of rod milling, stage flotation and the use of higher cyanide strengths.[280] Plans were made to modify and partly mechanise stoping operations and ore removal with a view to greater productivity, output and lower working costs.[281] Trials were started with hydraulic backfilling of stopes, rock bolting, and Eimco underground rock shovels.[282] Corresponding increases were made in haulage, shaft, waste and filling capacities.

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[275] SPRS 3/57/8, memo to Spears from Secretary, 1 April 1968; Secretary to Accra Representative, 28 March 1968.
[276] SPRS 3/56/4, chairman's address AGM, 4 April 1968.
[277] SPRS 3/57/8, memo to Spears from Secretary, 1 April 1968; Secretary to Accra Representative, 28 March 1968.
[278] SPRS 3/56/2, 'Operations and valuation', report by Turquand and Youngs and Co, 16 October 1968.
[279] MS 14170/127, consultant mechanical engineer to GM, 9 August 1968; consultant engineer to GM, 30 August 1968.
[280] MS 14170/124, P. A. Pozzoni for consultant mechanical engineer to GM, 27 June 1967; vol. 126, consulting engineer to GM, 21 June 1968; SPRS 3/55/3, memo from Power to chairman, 6 June 1968.
[281] MS 14170/122, London manager mining, to acting GM, 18 February 1966.
[282] MS 14170/122, London manager mining, to acting GM, 18 and 25 February 1966; P. A. Pozzoni for consultant mechanical engineer to acting GM, 25 January 1968;

Mining on the main reef in 1966 had reached Level 41, but exploration was underway up to Level 50. There was sufficient geological confidence to start considering the extension of the sub-vertical Outen shaft to ultimately reach between Levels 52 and 72.[283] Construction started for a loading station at Level 52, and approval was given to construct the mine's most advanced shaft system from the surface to Level 54, the Spears Shaft, to carry men, materials, ore and waste.[284] The capital expenditure for the 5-year growth plan between 1969-74 was estimated to be £3.512m.[285]

In 1967, with twenty years remaining on the mine lease, and a government perceived to be more conducive to western private investment, AGC decided to broach the issue of a lease extension. Although by the end of that year the currency devaluations had removed the need for AGC to ask for finance from the IFC for the expansion programme, it was felt that it would be politically useful to involve the World Bank in the form of the IFC in any lease renewal proposal.[286] The thinking here was that IFC partnership would protect AGC from undue government interference in the future.[287]

The proposal put to the NLC government was as follows. A new subsidiary company, either domiciled in Ghana or the UK (depending on tax implications) would be created. AGC in London, the parent company, would manage its operations and the marketing of gold for a fee of £150,000 per annum plus costs. Mining strategy, consulting services, capital expenditure, dividend policy, recruitment and purchasing would remain in the control of the parent company.[288] The new subsidiary would seek from government an open-ended mine lease of at least 60 years or until the exhaustion of ores. The Ghanaian government would be offered 10% -15% ownership in fully paid-up shares in the new company and one directorship. The exact level of ownership would depend on the tax concessions the government could guarantee for the firm. The IFC would be sold 5% – 15% of the equity and also offered one directorship. The IFC would pay for their shares

[283] MS 14170/122, consultant engineer to GM, 4 April 1966; vol. 124, consultant mechanical engineer to general manger 3 January 1967; SPRS 3/56/4, chairman's address AGM, 4 April 1967.
[284] MS 14170/124, consultant mechanical engineer to general manger 3 January 1967; consultant engineer to GM, 6 April 1967; vol. 126, consultant engineer to GM, 24 May 1968; vol. 127, Secretary to GM, 24 July 1968.
[285] MS 14170/126, Power to GM, 21 June 1968.
[286] SPRS 3/57/8, unsigned but Spears to Foden, 10 April 1968.
[287] SPRS 3/57/1, report from company auditors, Turquand, Youngs and Co to chairman and board of directors, 26 February 1968.
[288] SPRS 3/57/1, 'Ashanti Goldfields Corporation Ltd negotiations with Ghana Government /IFC March 1968, requirements basic to corporation's case'.

(£1.5m for 15%, valuing the company at £10m). Valuing the company was a difficult exercise since a lot depended on whether the mine life remaining was twenty years or more if the lease was extended. AGC valued its assets in Ghana at £5m, and proved and probable reserves could generate £50m to £100m of gold.[289] The existing AGC shareholders were to be promised a minimum regular dividend. A critical part of the proposal was that the Ghana government were to cap all taxes to 50% of pre-tax earnings. Reassurances would be sought that no Africanisation legislation would be imposed, which, in the company's opinion, would risk efficiency. From the point of view of shareholders the consideration they would receive for diluting their shares in order to allow government participation would primarily be the tax concessions and minimum dividend promise, as well as the extension of the mine lease itself.[290] Of prime importance to Spears and his board was that the UK shareholders should not be worse off.[291]

AGC's staff manager, Anthony Orchard, who spent a considerable amount of time in Accra as acting Accra Representative appears to have had a more realistic and pragmatic assessment of the political climate than Spears and the other directors in London. He sent a memo providing a Ghanaian perspective on these proposals. In his opinion it was unlikely that the Ghanaian government would accept participation below 15%, advising that 25% would be more attractive. Ghanaianisation of the proposed company's domicile, management, and the chairmanship would be very important to the Africans, much more than London realised. (An internal document confessed that London wanted "the Board of the new Company [to] be virtually powerless.")[292] The Ghanaian government would be looking for a joint venture not a silent, minority partner role. The management charge would be questioned and compared to the costs of running the State gold mines. The government would quickly calculate that the dividends offered with 10% ownership in exchange for tax caps would not be attractive, especially since they had the prerogative to increase taxes as they saw fit.[293]

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289 SPRS 3/57/1, 'Notes on proposal submitted by Turquand Youngs and Co', 26 February 1968.
290 SPRS 3/57/1, report from company auditors, Turquand, Youngs and Co to chairman and board of directors, 26 February 1968; 'Ashanti Goldfields Corporation Ltd negotiations with Ghana Government /IFC March 1968, requirements basic to corporation's case'.
291 SPRS 3/57/1, Spears to James Raj of IFC, 8 January 1968; report from company auditors, Turquand, Youngs and Co to chairman and board of directors, 26 February 1968.
292 SPRS 3/57/1, 'Ashanti Goldfields Corporation Ltd negotiations with Ghana Government /IFC March 1968, requirements basic to corporation's case'.
293 SPRS 3/57/1, Orchard to Miss Maurice, Spears's personal assistant, 5 March 1968.

Orchard also offered some practical suggestions to be included in a new lease such as explicit and guaranteed timber rights and immigration quotas.[294] In addition, AGC had for several years strongly disapproved of clauses (referred to as Legislative Instrument 554) in the Mines and Minerals (Conservation and Development) Act no. 278 of 1965. L.I. 554 gave the Chief Inspector of Mines the power to "prescribe the quality of minerals to be mined" and required his approval of all mining programmes with regard to ore reserve positions.[295] AGC felt these provisions dangerously removed their managerial freedoms. They were dissatisfied both with the verbal reassurances given by the government that the clauses would not be used arbitrarily and with a suggested amendment giving mines the right of appeal. Orchard advised the firm to insist that any lease extension should provide written exemptions for AGC from these L.I.554 clauses.[296]

London's unmodified proposals were put to a formal delegation of representatives of the Ghanaian government and the IFC at the offices of AGC's external auditors, Turquand Youngs, on March 18 and 19, 1968. In attendance for Ghana were R. S. Amageshie the new commissioner for lands and mineral resources; J. V. L. Phillips the outgoing commissioner who had been in first contact with AGC; a Mr. Cooke of the Ghana National Investment Bank; a Mr. Quershi and Michael Dixon both of the IFC. AGC's delegation was led by D. Garrett, an accountant from Turquand Youngs, and included the consultant engineer, R. D. Power, and the company secretary, E. W. Morgan.

The Ghanaians found the proposals unacceptable and withdrew from the talks. The package was simply not in their interest. For a start the dividend income from a 10% stake would need to exceed the government's current minerals duty and royalty income to make the government better off under this proposal than the status quo. But such an outcome could not be guaranteed. The Ghanaians wanted more day-to-day management. Furthermore, Amageshie's team did not understand the involvement of a third party in the shape of the IFC when AGC's presentation of 7-year forecast figures clearly showed that they were not in need of any external funding. They had objections to AGC being treated in an exclusive way when it came to matters of taxation and foreign exchange guarantees which

[294] Ibid.
[295] Ibid.; SPRS 3/57/1, 'Ashanti Goldfields Corporation Ltd negotiations with Ghana Government /IFC March 1968, requirements basic to corporation's case'.
[296] SPRS 3/57/1, to Miss Maurice, Spears's personal assistant, 5 March 1968.

were national issues. As for AGC's abhorrence of L.I. 554 the Ghanaians thought the company was totally overreacting and that the appeals amendment provided sufficient protection for mines to carry out economic mine planning and maximize production without regulatory interference. The IFC were also surprised to learn during the conference that they had no business rationale for involvement as AGC did not need their money. If they injected £1.5m they would simply be repaying shareholders funds, whereas they had been enticed originally by the idea of investing in expansion and new projects. The proposal would have to be presented in a completely different way if they were to participate.[297]

Spears was under the illusion that the Ghanaian government needed AGC more than they needed them. He wrote to James Raj of the IFC, "I think sooner or later the Ghanaians are bound to come to the conclusion that it is much more in their interests than in those of Ashanti to prolong the lease".[298] The more sensitive antennae of Orchard had rather advised AGC to take the initiative and conclude lease extension negotiations while the NLC remained in office before the elections for a civilian administration (planned for 1969).[299] But Spears did not want to make the first move to restart negotiations. He, rather arrogantly, attempted to get the IFC to instigate further talks, but the IFC declined because AGC had stubbornly refused to put on the table any additional offer to the Ghanaians.[300] Spears's attitude is captured in this comment he made to a fellow director regarding the negotiations, he wrote that they had been, "a very useful exercise in educating the Ghanaians in the facts of life. When they realised that we could manage perfectly well without them and that if the Ashanti shareholders' interests were to be safeguarded they could not have more than 10% of the equity in a Ghanaian company, they were greatly dismayed but could not avoid accepting the position."[301]

Although the conference records noted that the March meetings had ended amicably, it seems some bitterness lingered.[302] It was during this no-love-lost stalemate that the London and Rhodesia Mining and Land Company (Lonrho) arrived in Ghana.

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[297] SPRS 3/57/8, telex to Ghana, 'Notes on talks with Ghanaian government', 20 March 1968; Foden to Spears, 3 April 1968.
[298] SPRS 3/57/8, 10 April 1968.
[299] SPRS 3/57/8, Orchard to Secretary, 27 May 1968.
[300] SPRS 3/57/8, Spears to Raj at IFC, 10 April and 21 May 1968; Raj to Spears, 15 May 1968; unsigned by Spears to Orchard, 6 June 1968.
[301] SPRS 3/56/5, unsigned but Spears to Martin Rich, 8 May 1968.
[302] SPRS 3/57/12, Amageshie to Spears, 16 December 1968.

Despite AGC's constant complaints about tax, it was making decent profits. In 1967 AGC made pre-tax profits of £3.04m of which it retained a still considerable 25% (£757,000). The *Financial Times* commented that AGC had been given a "reasonably fair deal even during the difficult days of the Nkrumah regime."[303]

The tax burden and political upheavals did not make the firm any less attractive to Lonrho. No doubt this interest was enhanced by the existence of a free gold price alongside the official price from 18 March 1968, and in anticipation perhaps of the collapse of the Bretton Woods system.[304]

Another company had targeted AGC for a friendly merger. In May 1968 an approach was made by William Baird and Co Mining Company. This company, like AGC, had a single mining operation in West Africa, an iron ore operation in Sierra Leone. It also operated a metal broking and merchanting company, a shipbrokers, a travel agency and an overseas recruitment agency. William Baird hoped a merger with AGC would allow synergies in recruitment, procurement and African training, as well as the spread of commercial and political risks by diversification in commodities and the geographic location of activities. The proposal was rejected because AGC had no desire to increase their exposure in Africa which they felt would be too risky.[305] CAST had also tried to take over AGC but had been rejected because AGC did not want to lose its independence by becoming a subsidiary of the Selection Trust.[306]

Lonrho's approach to AGC was more determined. In autumn 1968 the Obuasi general manager informed London that there had been a series of visits to Ghanaian mines by large mining houses.[307] One team from Lonrho had stopped at AGC as part of a tour to the State gold mines, CAST, the African Manganese Company and the Volta Dam. AGC's Accra Representative, Foden, was asked to find out their intentions.[308] From his government sources nobody appeared to

[303] Cited in Egremont (1997), p. 310, Chairman's address reported in *Financial Times*, 26 October 1968.
[304] A.G. Kenwood and A.L. Lougheed, *The Growth of the International Economy, 1820-2000,* fourth edition, London, 1999. p. 275.
[305] SPRS3/55/1 memo produced by James Campbell, director William Baird, 7 May 1968; correspondence to Spears 31 May; from Spears 23 May and 6 June 1968.
[306] SPRS unsigned but Spears to Foden, 9 October 1968.
[307] SPRS 3/56/2, GM, to Secretary 26 September 1968.
[308] SPRS 3/56/2, Foden to Spears, 27 September, 9 October 1968.

know anything, it seemed Lonrho's discussions had been held with the minerals commissioner Amageshie alone. Amageshie confessed to Foden that he was encouraging Lonrho with respect to various large-scale projects in Ghana, including a brewery in the Northern Region. Foden's comment to Amageshie that no foreign investor would be interested in Ghanaian mines while L.I. 554 remained on the statute books must have grated with Amageshie since he was well aware of the interest being shown by foreign mining companies including Lonrho.[309] Foden's remark followed earlier threats made by AGC to cancel their 5-year expansion plans if L.I. 554 was not amended to their satisfaction.[310]

At the end of September, Lonrho's chairman, Alan Ball, contacted one of AGC's directors, Martin Rich. Lonrho themselves revealed to Rich that they had been offered the management of five State gold mines as well as an exclusive deal to grow all of Ghana's sugar needs.[311] Ball added that his firm were interested in buying AGC.[312]

There had been a connection between AGC and Lonrho through Harley Drayton, a well known City financier who served on Lonrho's board as well as AGC's, the latter between 1954 and 1966.[313] Whether through their City contacts or from Amageshie (details of the growth strategy were not published in the annual reports), Lonrho had possibly learnt of AGC's 5-year growth plan, which, if realised, held out the promise of £10m gross revenue each year. AGC was a very attractive target being debt free, highly liquid and a regular payer of dividends.[314] It was exactly the sort of 'cash cow' that Lonrho at the time needed to support their acquisitive strategy throughout Africa.[315] Under the managing directorship of Roland 'Tiny' Rowland, Lonrho had been revitalised from an ailing conglomerate focussed in white southern Africa to an aggressive one targeting newly independent black African countries with ambitious projects in a variety of sectors from agriculture and mining, to manufacturing and hotels. Although Lonrho was growing fast in terms of gross revenue (in 1968 it had

[309] SPRS 3/56/2, Foden to Spears, 9 October 1968.
[310] MS 14170/127, Secretary to GM, "we will not go on with our plans for expansion until the Regulations under L.I.554 are modified...If no settlement is reached in at the most 6 months time we would have to stop work", 9 August 1968; 13 September 1968.
[311] SPRS 3/55/4, Martin Rich to Spears, 30 September 1968; Konings (1980), p. 11; Cronjé et al (1976), p. 54
[312] SPRS 3/55/4, Martin Rich to Spears, 30 September 1968.
[313] Executive Intelligence Review, *Tiny Rowland: The Ugly Face of Neocolonialism in Africa*, Washington D.C., 1993, p. 37; AGC annual report 1966.
[314] SPRS 3/55/4, unsigned but Spears to Foden, 9 October 1968.
[315] Cronjé et al (1976), p. 94.

operations in fourteen countries with over 80,000 employees grossing £100m income) it was not nearly as profitable as AGC with pre-tax profits in 1967 of £3.6m compared to AGC's £3.04m, nor was Lonrho as liquid as AGC.

Ball's first proposal to Rich was well received. Ball presented an outline of their intentions: a loan stock plus shares offer versus a cash one at 16s/9d per AGC share (which had not reached this height since 1961); Spears would be made president of AGC; Rich would be offered the deputy chairmanship and Ball the chairmanship with Rowland as managing director). In Rich's opinion Lonrho had relevant mining experience, Rowland had an excellent relationship with African politicians and he described him as "able and decent", ideal to be Spears's successor.[316] Spears was less enthusiastic. The loss of independence was a prime concern for him. Lonrho gave assurances that although they would put Ball and Rowland on the AGC board the mine would continue to operate under its own board for five years and AGC would not be merged with any other Lonrho subsidiary.[317] The possibility of retrieving the IFC/Ghana government partnership in a Ghana-based company now seemed more attractive to Spears.[318] The position taken by the Ghana government would be decisive in AGC's response to Lonrho.

A week after the initial approach, Rowland informed Spears of the Ghana government's support for their bid for all of AGC's shares.[319] The Accra Representative by this time was able to add that General Ankrah, the leader of the NLC, had corroborated this.[320] Working against AGC was the government's disappointment with the breakdown of lease extension talks earlier in the year. The company had also been unnecessarily threatening regarding L.I.554 – Lonrho's eagerness to invest in Ghanaian mines confirmed government's opinion that AGC's fuss over this regulation had been unwarranted and imperious. In addition, Lonrho offered assistance with the State mines, the development of other industries and greater state participation in AGC than Spears had offered.

According to Spears's biographer, it was Rowland who gave the NLC government the idea to end AGC's 90-year lease and replace it with a Lonrho lease of 50 years in exchange for 20% ownership of the new company and the option to buy a further 20% for £1 a share. Appealing to the Ghanaians' sense of

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316 SPRS 3/55/4, Rich to Spears 30 September, 1968.
317 SPRS 3/55/4, file note, unsigned and undated, likely written by Rich, September 1968.
318 SPRS 3/55/4, unsigned but Spears to Foden, 9 October 1968.
319 SPRS 3/55/4, Rowland to Spears, 7 October 1968.
320 SPRS 3/55/4, Foden to Spears, 11 October 1968.

ownership of their natural resources, Rowland offered four directorships to Africans and requested that Lonrho be paid a management fee in cedis and not hard currency. Lonrho presented themselves sensitively as merely custodians of the gold mine. Rowland got on very well on a personal level with the commissioner for mines, Amageshie, whereas the minister had clashed with Spears in March 1968 (and would do so again).[321]

Another version of events is that Spears threatened to flood the mines rather than make greater contributions to the government. Consequently, Amageshie made it known that the Ghanaian government were actively looking for new investors for the mine and Lonrho responded to this.[322] Konings writes, erroneously I think, that it was Nkrumah who had originally refused to negotiate a new mine lease.[323] But the timing is wrong: Nkrumah had been in exile for two years before Lonrho appeared on the scene.

In any case, when Lonrho's formal public offer was made for the company on 23 October 1968, Amageshie's announcement on 24 October that AGC's lease would not be renewed forced AGC to accept Lonrho's deal.[324] Amageshie remarked at a press conference his delight, "especially for the opportunity which such a move [Lonrho's takeover] would offer in the revision of the Agreement made with Ashanti Goldfields Corporation in 1897 which would normally have come to an end in 1987."[325]

Spears consoled himself in the knowledge that AGC's bankers and board members supported the transaction, he did not have a successor and the takeover would resolve that problem. Furthermore, the status quo would have given just seventeen years of production on the original mine lease.[326] Rowland added a sweetener by offering Spears a seat on Lonrho's board in addition to his new role as President of AGC.[327] Assurances were given to the mine's African and European staff about job security.[328]

An unconditional offer for AGC was made on 8 November 1968. The original terms of 23 October were improved on 6 November when each AGC

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[321] Egremont (1997), p. 310.
[322] AGC website: http://www.g-ir.com/ashantigold/culture/agchistory.jsp?subsection=3, accessed 10 November 2004.
[323] Konings (1980), p. 9.
[324] SPRS 3/55/4, speech by R. S. Amageshie at press conference, 24 October 1968, Accra.
[325] Ibid.
[326] SPRS 3/55/4, Spears to unnamed, 23 October 1968.
[327] SPRS 3/55/4, Spears to unnamed, 23 October 1968.
[328] SPRS 3/55/4, Rich to Spears, 30 September 1968.

share was valued at 20s which exceeded the share price of 18s/6d on 23 October and was far greater than the share price had reached at any time in the previous seven years, although it was considerably short of AGC's auditors' valuation of 32s per share.[329] The consideration would be paid in ordinary Lonrho shares (one Lonrho share for every three AGC shares) and 7½% convertible unsecured loan stock. There were 14,982,696 AGC shares; at 20s each this made the cost of the all-share purchase of the company just short of £15m. The loan stock option would potentially generate an additional £5.99m. Ashanti's net tangible assets totalled £4.4m. AGC had already declared a dividend earlier in the year and this would be paid along with Lonrho's final dividend. In addition, AGC shareholders would receive a special interim dividend. AGC directors advised shareholders to accept the terms based on Lonrho's successful record in Africa and the Ghanaian government's support of the deal.

AGC would become Lonrho's single largest asset and increase Lonrho's post-tax profits by 50%. While AGC's share price increased between April and October that year by 17%, Lonrho's bid for the company caused its share price to surge 150%.[330] The acquisition was back dated to 1 October 1968. AGC as a wholly-owned private subsidiary of Lonrho was de-listed from the London Stock Exchange.

Discussions then started with the Ghana government for a new mine lease. These discussions involved the Adansi stool. The Adansi stool had served a writ on AGC late in 1968 challenging the 1897 agreement along with specific complaints about AGC's collection of ground rent in Obuasi, the pollution of streams, the denudation of vegetation caused by PTP fumes and the extension of underground workings beyond the concession boundaries.[331] The commissioner for land and minerals, Amageshie, took part in these legal discussions between AGC and the Adansis. The government encouraged an amicable solution rather than a legal dispute. An increase in payments to Adansi chiefs and representation on the AGC board were mooted for inclusion in any new mining lease negotiated

[329] MS 24661/7, circular to shareholders, 8 November 1968; SPRS 3/56/2, 'Operations and valuation', report by Turquand and Youngs and Co, 16 October 1968.
[330] MS 24661/7, circular to shareholders, 8 November 1968.
[331] SPRS 3/56/2, Spears to GM, 15 November 1968; 3/55/4, board minutes, 19 November 1968; 3/55/3, J. J. Peele and Co, solicitors for Adansi stool, to GM, 6 December 1968.

with Lonrho.[332] The Adansihene and his aide travelled to London with Amageshie for these talks with Lonrho.[333]

During the lease negotiations the contrast in attitude towards Africans between AGC and Lonrho became stark to Amageshie. In a frank letter to Spears, copied to Lonrho, the commissioner accused Spears of rudeness compared with Lonrho's friendliness and courtesy. Spears had apparently found the suggestion of Ghanaian directors on AGC's board "utterly repugnant" as well as the idea of paying compensation to the Adansi traditional authority for environmental damage caused by the mine. "You showed little respect for my Government and the people of Ghana", Amageshie wrote, and a lack of concern for people living in the area outside the mine. This was not the first time Amageshie had experienced such an attitude from Spears and he recalled the occasion of the March 1968 conferences. "I wish to point out to you clearly that the people of Africa and particularly the Government and people of Ghana, in this day and age, will not tolerate this sort of disrespect and insult from persons of your type." Amageshie was angry enough to seek permission from his government to prevent Spears and his personal assistant, Miss Maurice, from entering Ghana.[334] Spears wrote back regretting the misunderstanding.[335] However, in raising AGC's Africanisation policy in his defence as proof of his good intentions towards Ghana Spears showed just how out of touch he was with African needs and sentiment. AGC's achievements in this regard were pitiful.[336]

The terms of the new lease dated 15 April 1969, but granted from 1 January 1969 for 50 years, were as follows.[337] AGC's existing lease was surrendered and extinguished. The parties to the new lease were the Government of Ghana, AGC and Lonrho. The government claimed entitlement to "the freehold reversion of the said premises".[338] It would appear that the legal basis for such sovereign rights lay in the Minerals Act 1962 which vested in the government all minerals and

[332] SPRS 3/55/3, J. J. Peele and Co, solicitors for Adansi stool, to GM, 6 December 1968.
[333] SPRS 3/56/2, Foden to Secretary, 10, 11 December 1968.
[334] SPRS 3/57/12, to Spears, 16 December 1968.
[335] SPRS 3/57/12, Spears to Amageshie draft reply, n.d. but December 1968.
[336] Compare Stockwell (2000), pp. 170-6.
[337] 'Agreement and Lease dated April 15 1969, The Government of the Republic of Ghana in trust for the people of Ghana and Ashanti Goldfields Corporation Limited and Lonrho Limited', Lonmin, Grosvenor House, London.
[338] Paragraph 2.

waterways.[339] Lonrho's lease covered the area of "approximately" 100 square miles, the mines and mineral substances and timber.

There were two parts to the consideration. The first part was 20% equity capital fully paid-up (3,745,674 shares valued at £1 per share) with the option for a further 20% at no more than £1 a share;[340] the second part was occupational rent of ¢30,000 (about £120 per square mile) per annum to be paid half-yearly.[341] It is possible that the government made a distinction between state ownership of the minerals and the Adansi ownership of the land because it seems that this rent of ¢30,000 was to be paid to the government on behalf of the Adansis (see below). However, there is no mention whatsoever in the lease document of the Adansihene or Bekwaihene.

If the 20% dividend income in any year amounted to less than 5% of the gross revenue from mineral sales (the equivalent of the 1897 royalty terms) then AGC were to pay the deficit. If no dividends were paid in any one year then the 5% gross value would be payable in full. The government would not charge tax on its share of dividend income.[342]

Critical additions to the lease compared with the 1897 document (for details of the 1897 document see Chapter 4, 'Land') was the requirement for AGC to give the State Gold Mining Corporation technical guidance and assistance when required by the government without charge, except out of pocket expenses. In addition, the company had to submit within eighteen months a detailed training scheme for Ghanaians with particular emphasis on skilled tradesmen, supervisory posts, senior professionals and management roles.[343] At the end of each year the lease terms required AGC to account for and pay full compensation for damage and injury to "owners, lessees and occupiers" as well as workers caused by their mining activities.[344]

At the signing ceremony on 15 April 1969 a marked contrast to the approach and tone of AGC's aborted lease negotiations in March 1968 was apparent. Lonrho made endearing comments to the Ghanaians recognising their sovereignty and the changed conditions in Africa. They expressed content at the mutually beneficial lease terms and berated the former AGC board for its tardiness with

339 The Minerals Act 1962, Act 126, Laws of Ghana.
340 Paragraphs 1, 6.
341 Paragraph 1.
342 Paragraphs 2B1 and 2.
343 Paragraph 2H.
344 Paragraph 2Q.

Africanisation.[345] The new lease was capitalised in AGC's balance sheet at £15.2m.[346]

On 2 September 1969 a Supplemental Agreement was concluded which, besides refining some definitions, limited Lonrho's timber rights by permitting the government to grant to third parties timber licences on AGC's concession, while allowing AGC to cut wood only for mine use.[347] A clause was also added requiring all reasonable measures to be taken "to minimise the pollution of rivers and water courses."[348] Paragraph 2F spelled out the government's right to acquire land not being mined for public purposes without compensation. The government would also nominate not more than four (out of a possible ten) directors to the AGC board.[349] An accurate survey and plan of the land was also demanded.[350]

The supplementary changes had been partly in response to negative public reaction to the April 1969 lease. Lonrho's Rhodesian connections and Ghana's sanctions against that country were highlighted by the press.[351] A *Ghanaian Times* editorial criticised the military NLC government for concluding any agreement instead of waiting for the victors of the planned democratic elections.[352] Other grievances were over the initial inclusion of timber rights and the absence of protections for indigenous surface rights. It was also felt that the government had missed an opportunity to take over the refining and marketing of gold, indeed to buy AGC outright.[353]

AGC workers were also unhappy. The takeover seemed to benefit the company, the government, the Adansi stool – everyone but them. The mine experienced a severe strike culminating in riots in March 1969 when police shot and killed strikers, wounding others.[354] Konings explains that the immediate cause of the unrest was the workers' demand for some form of bonus related to the

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345 SPRS 3/60/1, ''Speech for Signing Ceremony – 15 April 1969', the speaker was probably Rowland.

346 AGC annual report, 1969, note 6.

347 Supplemental Agreement to 15 April 1969 lease dated 2 September 1969, paragraph 2Ci, Lonmin, Grosvenor House, London.

348 Supplemental Agreement, paragraph 2E.

349 Supplemental Agreement paragraph 3.

350 SPRS 3/62/2, 'statement by the Minister of Lands and Mineral Resources on the new agreement/lease with Lonrho Ltd and Ashanti Goldfields Corporation Ltd', n.d.

351 SPRS 3/56/2, telexes received from Foden 24, 29, 30 October 1968; Foden to Secretary 29 October 1968.

352 SPRS 3/62/2, n.d. but March 1970.

353 SPRS 3/62/2, n.d. but March 1970; 3/62/2, 'Statement by the Minister of Lands and Mineral Resources on the new agreement/lease with Lonrho Ltd and Ashanti Goldfields Corporation Ltd' n.d.

354 Crisp (1984), p. 151; SPRS 3/60/1, file note by Spears, 9 September 1969; Egremont (1997), p. 310.

takeover. Uncertainty over job security and the age-old resentment over management's lack of concern for welfare issues also played a part.[355] The strike ended when Lonrho made an ex-gratia payment equivalent to three months' pay (termed in the profit and loss statement as "Goodwill award to employees").[356]

Konings and Cronjé et al write that the Adansihene after 1969 received an increase in annual rent to £100,000,[357] from £66. However, this is not stated in the lease agreement. As mentioned above, the Adansihene and Bekwaihene were no part of the 1969 lease. The only rent mentioned in the document was ¢30,000 (about £12,000). It seems that this was paid via the government to the Adansis.[358] The recently enstooled Bekwaihene later made claims directly to AGC for rent.[359] AGC's response suggests that the rent in the 1969 agreement was ultimately for Adansi alone. The company informed the Bekwai stool that no provision had been made in the 1969 agreement to pay him rent and that Bekwai land only covered six square miles of the concession, which they were prepared to surrender as no mining took place there.[360]

The £100,000 cited by Konings and Cronjé et al is inaccurate. This number may have been confused with the ¢100,000 (just over £40,000) compensation for environmental damage awarded to the Adansi traditional authority in an out-of-court settlement of their writ.[361]

This payment is shown in the 1969 annual report as "Compensation for damage arising out of past mining operations", an amount of £40,816. This appears to have been a one-off payment (and not an annual assessment as suggested by Paragraph 2Q of the April 1969 lease agreement). Nevertheless, it reflects the changing expectations from the Ghanaian government of the mines' new owners, as well as Lonrho's greater appreciation than the previous AGC board of their corporate responsibilities.

Four Africans were appointed as non-executive directors: A. Karbo, M.K. Mensah, A. J. Prah and Nana Kwaantwi Barimah II, the Adansihene.[362] Spears

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[355] Konings (1980), p. 89.
[356] AGC annual report, 1970 p. 3.
[357] Konings (1980), p. 10; Cronjé et al (1976) p. 56.
[358] SPRS 3/62/2, 'Statement by the Minister of Lands and Mineral Resources on the new agreement/lease with Lonrho Ltd and Ashanti Goldfields Corporation Ltd' n.d.
[359] SPRS 3/6/2, board minutes, 20 October 1970.
[360] Ibid., SPRS 3/6/2, file note, 30 September 1970.
[361] SPRS 3/60/5, unsigned but Spears to Rich, 28 February 1969; 3/62/2, 'Statement by the Minister of Lands and Mineral Resources on the new agreement/lease with Lonrho Ltd and Ashanti Goldfields Corporation Ltd' n.d.
[362] AGC annual report, 1970.

found it difficult to deal with the Africans on the board.[363] For all of Lonrho's rapport with African statesmen he was disappointed with the new owners' inability to receive assurances from government concerning the deterioration in the foreign exchange, import licence and tax situation.[364] Busia's government that came to power in September 1969 imposed temporary tax increases of 5% on corporation tax and on machinery as well as an import surcharge on general import licences. Over £300,000 pounds of general and specific import licences requested by AGC were outstanding and delays were once again experienced in receiving sterling.[365]

Spears had at first been impressed by Rowland, whom he had found, along with Ball, "very pleasant to deal with".[366] However he soon felt that the was being sidelined in important decisions despite his long experience.[367] Without Spears's knowledge, and to his irritation, for example, the consulting engineer, R. D. Power, had been given greater responsibility by Lonrho to give direct instructions to the general manger (previously he was only the conduit of instructions from the board of directors).[368]

In March 1971, Spears was asked to retire at his 85th birthday that August.[369] On his resignation he would be appointed a non-executive, ex-officio, honorary president for the rest of his life. Although his remuneration remained the same he was prohibited from giving instructions to any AGC staff in the UK or in Ghana. Spears in exchange was to cease complaining about Lonrho and to promote the firm's success. He accepted these terms,[370] but found it difficult to keep his voice out of executive decisions. For example, he opposed the rearrangement of AGC's London office early in 1972 with the abolition of the London manager role and the merger of AGC's and Lonrho's purchasing departments.[371] By June that year AGC's London office was completely absorbed into Lonrho's Head Office

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[363] Egremont (1997), pp. 310-11.
[364] SPRS 3/60/1, file note by Spears 9 September 1969; 3/62/2, minutes of board meeting, 20 October 1970.
[365] SPRS 3/60/5, unsigned but Spears to Rich 12 February 1969; 3/62/2, minutes of board meeting, 20 October 1970.
[366] SPRS 3/55/4, unsigned but Spears to Foden, 9 October 1968; Spear to W.B. Reddaway, director of Applied Economics Cambridge University, 4 November 1968.
[367] SPRS 3/60/1, file note by Spears, 9 September 1969.
[368] SPRS 3/60/5, 'secret and confidential' note, unsigned but Spears, n.d., likely March 1969.
[369] SPRS 3/63/1, Duncan Sandys, AGC director, to Spears and reply, 12 and 23 March 1971.
[370] Ibid.
[371] SPRS 3/63/7, Spears to unnamed, 26 April 1972.

organization.[372] Lonrho's set up was in Spears's opinion disorganized and the changes would lead to inefficiencies.

Busia's Progress Party was toppled in January 1972. The newcomers, Colonel. I. K. Acheampong's military government, the National Redemption Council (NRC), partially nationalised AGC (see below). The delicate expropriation discussions gave an ostensible reason to keep Spears away from Ghana.[373] The final severance from AGC, though, came when Spears provided evidence against Rowland in a court case brought by Rowland in 1973 to maintain his place on the Lonrho Board.[374] A majority on the Lonrho board voted for Rowland's removal. Even though Rowland lost his court case, he succeeded in putting the matter to a shareholder vote that supported him to stay. The eight boardroom mutineers, including Spears, resigned.[375]

Spears's name was removed from the schools, roads, buildings and other areas in Obuasi town and from the mine: the Spears Shaft was renamed the Adansi Shaft, the Spears School the Ashanti Goldfields Primary School, Lady Spears Memorial Child Welfare Clinic the Ashanti Goldfields Children's Clinic, General Spears Road the Onyinase Road, and Lady Spears Estate the Onyinase Estate. It was explained to him that the changes had been requested by the Ghanaian commissioner of lands and mineral resources.[376] Spears, however, believed it to be Rowland's retaliation.[377]

Spears never appreciated the fact that AGC was not looked upon favourably by the populace. He was genuinely shocked to read the mines union comment in the Ghanaian press that "the Spears era was one of misery and suppressed anger which cannot be allowed to return".[378] Spears had served on the AGC board since 1937 and as chairman from 1945. He had a romantic affection for Obuasi and belonged to a management era when leadership was prized above technical knowledge.

AGC's performance in the first few Lonrho years was marked by serious labour discontent. An unofficial strike in 1969 was followed by another that

[372] SPRS 3/63/6, board minutes, 20 June 1972.
[373] SPRS 3/63/10, Spears to a Christine Mensah of the Military Hospital, Accra, 22 February 1973.
[374] Cronjé et al (1976), ch. 6.
[375] Cronjé et al (1976), p. 131.
[376] Board minutes, GH, 25 June 1973, reference to the Ministry of Land and Mineral Resources letter of 9 May 1973.
[377] Egremont (1997), p. 313.
[378] SPRS 3/63/8, Spears to Ian Corner, GM, 19 July 1973; memo GM, to heads of department, 31 May 1973. The GM, denied sending this memo to Spears, letter dd. 13 August 1973.

started on 14 June 1970 in protest at the lack of publication of the Bedu Commission report into the previous year's strike and fatalities. Additional demands were for a further post-takeover ex-gratia payment and the release of arrested agitators. The TUC, Ghana Mine Workers Union, Ghana police and the government supported AGC's management during the strike. Management made no concessions and the strike was broken on 5 July. The daily loss of production equalled 1,900 tons and 1,400 fine ounces; in money terms that was £20,500 gross revenue and £7,000 profit per day.[379]

Working costs per ton averaged £5.65 in the four years leading up to the takeover, this rose to £6.59 in the following four years,[380] partly due to the increased indirect taxes and the minimum wage under Busia's government. A further devaluation of the cedi in December 1971 helped to offset this somewhat as did the gradual rise in gold prices from the last quarter of 1971. However the first four years of Lonrho's era were less profitable than the preceding four years with return on capital employed averaging 17% compared to 44%.[381] Lonrho attempted to accelerate the expansion programme's target of 960,000 tons per year by 1974 by two years to reach that output in 1972.[382] This was constrained by the mine's infrastructure as well as frequent hiccups in obtaining import licences and foreign exchange.[383] Shareholders wrote to Spears of their regret of the takeover, expressing concern too with Lonrho's aggressive and diversified expansion.[384]

Partial Nationalisation

Soon after Colonel Acheampong came to power Rowland met with the new head of state and Major Baah, the new commissioner for lands and mineral resources.[385] The meeting was described as "very cordial".[386] The government's

[379] SPRS 3/62/2, diary of a strike; 3/62/5, note on miners' strike by R.D. Power, 17 June 1970; Power to Spears, 9 July 1970.
[380] See Appendix 3.
[381] See Appendix 3.
[382] SPRS 3/56/2, 'Operations and valuation', report by Turquand and Youngs and Co, 16 October 1968; 3/60/1, note by Spears, 9 September 1969.
[383] SPRS 3/60/1, note by Spears, 9 September 1969.
[384] SPRS 3/63/10, correspondence with a John Birrell, former AGC shareholder, Easter Monday and 5 April 1972; 3/62/3, a Mr R. Perry, former AGC shareholder from 1934-68, to Spears, 19 March 1970.
[385] SPRS 3/63/6, board minutes, 21 March 1972.
[386] Ibid.

chief concern was the lack of progress with Africanisation and the managerial centre being in London rather than Ghana. The role of the AGC Accra Representative reflected both of these grievances – there was no obvious reason why this post was filled by a European who flitted between the UK and Ghana. At the meeting Lonrho agreed to publish statistics on the reduction of expatriates, to retire the English Accra Representative, and in future to do more from Ghana with Ghanaians. Lonrho also made some management suggestions for the State gold mines to which the government was receptive.[387]

In keeping with these promises AGC released Management Directive 52. This created a new post of General Manager (Ghana) to sit above the Obuasi general manager and the Accra Representative. The General Manager (Ghana) would interface with the consultant engineer and London. George Cappendell, who had been employed by AGC since 1940 and acted as an assistant consulting engineer, was appointed as the first General Manager (Ghana).[388] The Accra Representative was replaced by a Ghanaian, David Awotwi, from 1 July 1972.[389] Lonrho also promptly delivered to the NRC a technical report and recommendations on the State mine at Tarkwa and declared their readiness to act as consultant engineers and to manage purchases and recruitment for this mine.[390] They publicised their policy towards Ghana as one that was integral to the whole economy, not an isolated interest in AGC.[391]

Rowland and Ball travelled to Ghana on several occasion for discussions with the government. They had demonstrated their willingness to satisfy government concerns perhaps with the motive to ward off nationalisation. Nevertheless, on 6 December 1972 the NRC issued Decree No. 132 (NRCD 132). This was a fundamental tool in Acheampong's policy to capture "the commanding heights of the economy", [392] namely those extractive industries dominated by large foreign enterprises. Lonrho's mining lease was cancelled. Effective from 1 October 1972, the company's assets were transferred to a new Ghanaian entity, Ashanti Goldfields Corporation (Ghana) Limited, 55% owned by the state and 45% by Lonrho.

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[387] Ibid.
[388] SPRS 3/63/6, board minutes 14 April, 20 June 1972.
[389] SPRS 3/63/6, board minutes 30 October 1972.
[390] SPRS 3/63/6, board minutes 20 June 1972.
[391] Ibid.
[392] Text of speech by Col. I. K. Acheampong, May 1973.

The precise details of the partial-nationalisation were to be discussed in a "White Paper on State Participation in the Mining Industry" which was issued simultaneously with NRCD 132.[393] Negotiations intensified in January 1973. The meetings were chaired by F.W. Beecham, deputy secretary to the NRC. Among the government team were the commissioner of income tax, the principal state attorney and the minister for trade and tourism. For Lonrho were the finance director, F.A. Butcher, R.D. Power the soon-to-be appointed managing director of AGC (Ghana) Ltd, George Cappendell and David Awotwi as well as an accountant and administrative officer.[394]

The government's chief concerns were the size, method and period of payment for the additional 35% shares expropriated; the management arrangement for the new company; obtaining management services; and employment conditions. Lonrho's priorities were compensation, the regulation of the new company, safeguarding their minority rights as well as the management arrangements.

On the matter of management the Ghanaian team proposed that Lonrho should nominate a managing director for appointment by the board of AGC (Ghana). Lonrho suggested that the managing director should remain their employee to ensure his services to them after the end of his Ghanaian assignment, and to enable his salary to be kept secret to avoid friction about salary disparities. Both teams agreed that the deputy managing director should be a Ghanaian nominated by government, but with Lonrho's consultation. The Ghanaians were adamant that his role should be meaningful, someone in the line of command, actively involved with operations and being groomed to eventually fill the managing director post.[395] However, Lonrho confessed that the line of technical communication would necessarily have to be between the general manager at Obuasi and the managing director who had the expertise and the experience.

Decree 132 stated that Lonrho would be responsible for technical management. Lonrho were happy to do this provided that the government gave undertakings for the timely receipt of foreign exchange. Lonrho were currently pre-financing purchases until remittances were released by the Bank of Ghana.

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[393] Konings (1980), p.11.

[394] SPRS 3/64/3, ' Negotiations with Messrs Lonrho Limited on the outstanding issues of NRC Decree 132 for government participation in the Ashanti Goldfields Limited Obuasi', minutes of the first meeting held on 22 January 1973.

[395] SPRS 3/64/3, third lease negotiations meeting.

The Ghanaian negotiators agreed that any such pre-financing should receive interest at the same rate as Lonrho's London overdraft.[396] Both parties were able to agree on the definitions and scope of a technical management agreement (see below for details).

Lonrho sought minority protection from a wide array of corporate changes such as acquisitions, capital expenditure and dividend policy. Unlike the government, who had both commercial and political concerns, Lonrho's only concern was profitability and hence their strong demands for minority protection.[397] The Ghanaian negotiators felt sufficient protections were available in Ghana's Companies Code 1963.[398] Nevertheless they conceded that the new company's regulations should specify the need for at least 75% of the board of AGC (Ghana) to agree on certain corporate changes. These were the disposal of assets, assignment of rights, acquisitions and the creation of companies, asset transfers, any purchases not made at market prices, committee appointments, powers of attorney, and the appointment and removal of auditors.[399]

The thorniest issue was the matter of compensation. Decree 132 stated that compensation would be based on the net book value of assets for tax purposes. Lonrho wanted liabilities to be considered, as well as assets not considered for income tax purposes such as the ore reserves.[400] The fact that Lonrho had capitalised the new lease as an asset worth £15.2m in the accounts was irrelevant as far as the government was concerned since the lease had been unilaterally cancelled. Furthermore, as the government pointed out, it would be wrong to include the lease value in the compensation calculation because although Lonrho had paid for the right to the concession that was "a right which the Government already has and need not pay for."[401] Lonrho argued that a better basis for compensation would be future profits or the replacement cost of their assets, rather than the taxable values.[402] At the least, Lonrho had paid £15m for all of AGC's shares in 1968. The government's 20% was then worth £3m, on this basis a further 35% would be worth £5.25m. Besides the issue of the amount owed, Lonrho hoped to secure payment in sterling plus interest of 6.5% on deferred

[396] Ibid.
[397] SPRS 3/64/3, seventh lease negotiations meeting.
[398] SPRS 3/64/3, second lease negotiations meeting.
[399] SPRS 3/64/3, eighth lease negotiations meeting.
[400] SPRS 3/64/3, second lease negotiations meeting.
[401] Ibid.
[402] Ibid.

amounts by making deductions from dividends due to the government in the future.[403] However no assurances were given that this would be the payment method – the government wanted to pay in cedis and at 2.5% for deferred amounts, and the funds would not necessarily come from future mine income.[404]

No agreement could be reached between the parties on the appropriate compensation amount. In the meantime a capital suspense account appeared in the balance sheet to represent the 35% expropriated on the basis of the net written down assets subject to income tax. This totalled just ¢7.6m (£2.4m at the official exchange rate) and the amount appeared in the new company's balance sheet as a special reserve.[405] Compensation settlement and the reinstatement of the mine lease would remain under negotiation for over a decade.[406]

The new company, AGC (Ghana) Ltd, was inaugurated by the Head of State on 26 January 1973. On 11 April 1974 a Technical Management Services Agreement was signed by the government and Lonrho, whereby Lonrho managed the mines in exchange for annual fees initially set at £200,000, and reimbursement of agreed costs incurred in the course of executing the management duties.[407] The scope of management services covered all the existing mine operations.[408] Lonrho's responsibility for Africanisation was given prominence in a separate clause.[409] Paragraph 2 stated that the board's role was to determine policies, capital expenditure, the mining programme and general operational guidelines. Day-to-day management and the implementation of board policies was the responsibility of the managing director and his deputy.[410] The management agreement and fee would be reviewed every five years.[411]No taxes were payable by AGC (Ghana) Ltd on the transfer of assets from AGC.[412] Arbitration from the World Bank's International Centre for Settlement of Investment Disputes was provided for.[413]

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[403] SPRS 3/64/3, memo from F. A. Butcher, Lonrho finance director, 12 December 1972.
[404] SPRS 3/64/3, fourth lease negotiations meeting.
[405] AGC annual report, 1973.
[406] AGC annual reports 1972, Note 1, 1974, p.7; Rowland to PNDC Secretary for Finance and Economic Planning, 12 September 1984, Lonmin, Grosvenor House, London.
[407] Special Services Agreement, 20 December 1974 between Ashanti Goldfields (Ghana) Limited and Lonrho; board minutes, GH, 1 April and 29 November 1974.
[408] Agreement on Management Services for Ashanti Goldfields Corporation (Ghana) Limited made 11 April 1974, Lonmin, Grosvenor House, London.
[409] Paragraph 9.
[410] Paragraphs 4 and 5.
[411] Paragraph 6.
[412] Paragraph 8.
[413] Paragraph 14.

A further Special Services Agreement was concluded in December 1974. This stated that Lonrho were to provide consultancy and other special services such as inspecting purchases made in the UK and recruiting expatriates.[414] The December agreement also put greater detail on some of the Technical Management Services Agreement clauses such as the timing of payments for the management fee.[415]

In 1974, nearly two years after the Decree, the capital situation was formalised. The government allocated 5,500,000 'A' shares of no par value to itself and 4,500,000 'B' shares to Lonrho. Both parties paid a token cedi each for these shares.[416] AGC had effectively become a state-owned enterprise.

After the decree, AGC's registered office was changed from Cheapside, London to Diamond House, Airport Residential Area, Accra. The auditing firm associated with the company since 1897, Turquands, was replaced with local firms, Tettey Ussher and Partners and Pannell Fitzpatrick and Co. The accounts would henceforth be presented in cedis at the official (overvalued) rate. Further changes were made to the board. The 'A' shareholder, the government, was allowed to appoint six out of eleven board positions, including the chairman and two executive directors, one being the deputy managing director. The first chairman of AGC (Ghana) Ltd was J. H. Frimpong-Ansah, the former Governor of the Bank of Ghana. The firm's bankers were also Africanised: Standard Bank Ghana Ltd, Ghana Commercial Bank, and the National Finance and Merchant Bank Ltd.

George Cappendell, referred to the change as a "new joint venture".[417] Rowland allegedly remarked, "I am totally in sympathy with this type of revolutionary capitalism (the partial takeover of national resources). If you have that, you won't get nationalization".[418] The mine was rich enough, particularly with a free gold market price, to provide decent minority shareholder income in spite of the expropriation, the cancellation of the mine lease, the import shortages, and the increased expenditure on new priorities such as junior (African) housing

[414] Special Services Agreement, 20 December 1974 between Ashanti Goldfields (Ghana) Limited and Lonrho, paragraphs 4a – 4d.
[415] Ibid.; Board minutes, GH, 29 November 1974 and 31 January 1975.
[416] Board minutes, GH, 26 July 1974.
[417] AGC annual report, 1973, p. 20.
[418] Cited in Konings (1980), p. 13, from L. Cliffe, 'Lonrho', *Review of African Political Economy,* 8, Jan. - April 1977, pp. 130-133.

and the 98% increase in the minimum wage in 1974 followed by a reduction to a five-day working week from 6 October 1975.[419]

With the new emphasis on Ghanaianisation statistics appear for the first time in the annual report showing the number on scholarships, in training and the ratio of black to white senior staff.

In 1974 the government obtained the equivalent of 55% of the gross bullion revenue of £23m through taxes, levies, minerals duty, royalty and dividends.

The rising gold price dictated further expansion in tonnage of lower grade ore. However, this could not be easily achieved - even the original 960,000 tons per annum target by 1974 was delayed by difficulties in obtaining plant and machinery, chemical reagents, cement and other materials caused by import and foreign currency restrictions and world inflation.[420] Retention of expatriates and experienced Africans was an added problem because of the rising cost of living and, for the Africans, dissatisfaction with housing provision.[421] In 1975 the target of 954,438 tons was reached, one year behind schedule. A million tons was treated both in 1976 and 1977. However, further growth in output could not be sustained. The policy set by the board was "to mine with the minimum of costs" with respect to stores and capital expenditure.[422]

Hikes in the annual average gold price from US$64 in 1972 to US$595 an ounce in 1980 enabled the company to earn pre-tax profits up until 1982 despite difficulties in obtaining mine stores and maintaining machinery. The financial year ending in 1982 was the first since the start of operations that a pre-tax loss was made, despite a buoyant gold price.[423] The loss was due to failure to meet ore production targets, caused by the dilapidated state of mine equipment and infrastructure and inflationary rises in working costs.[424]

The mining strategy adopted each year was a function of the gold price and working costs. The rising gold price from the 1970s led to a deliberate and rational reduction in the grade of ore mined.[425] This led to a fall in the output of gold recovered, so the reduction in gold ounces alone is not an indicator of poor performance between 1972 and 1986. Ideally, a surging gold price should have

[419] AGC annual report, 1974, p.8; 1975, p. 8.
[420] AGC annual report, 1974, Board minutes, GH, 27 October 1973; 1 April 1974.
[421] AGC annual report, 1974, Board minutes, GH, 27 October 1973; 23 January 1976.
[422] Board minutes, GH, 30 July 1976.
[423] Board minutes, GH, 18 November 1982.
[424] Board minutes, GH, 17 February 1983.
[425] Board minutes, GH, 1 April 1974.

resulted in a reduction in the grade of ore mine while *the tonnage of ore mined remained at least constant, if not increased.* Such a strategy was successfully employed by AGC until 1976 when tonnage peaked at 1,044,576 tons. A decline in tonnage after 1976, however, suggests that production was below optimal. The completion of the Adansi Shaft (formerly the Spears Shaft) in the Ashanti mine to a depth of 5,400 feet in December 1974 (the largest capital project since the construction of the Pampora Treatment Plant in 1947) should have facilitated sustainable expansion in tonnage. Exceptional profits could have been earned from the gold price surge of the 1970s and early 1980s had output been maximised. The problematic supply of inputs and foreign currency made it difficult to increase production and there was no comprehensive capital reinvestment programme for a decade from 1974.[426]

The Ghanaian economy's difficulties at the end of the 1970s were perhaps reflected in an increase in the incidence of gold theft at the mine.[427] Two armed robberies at the PTP were recorded in 1975. By 1979 there was an "almost total absence of consumer goods" which aggravated employee relations.[428]

Following the partial nationalisation, the inclusion of labour representatives on the board of directors, such as the TUC General Secretary in 1972 and then a Workers Defence Committee and a Senior Staff Association representative in 1983, did not stop the occurrence of protracted and violent (albeit unofficial) strikes (see Chapter 5, 'Labour').[429]

Ironically, it was under a self-proclaimed "revolutionary" government of the left, Flight Lieutenant J. J. Rawlings's People's National Defence Council (PNDC), that the most drastic economic reforms in the country's post-colonial history were embarked upon. In 1983 Ghana began to implement a series of IMF-assisted Structural Adjustment policies. These aimed at creating a free market economy and highlighted export industries, such as gold mining, which could be rehabilitated.

Rehabilitation and Rapid growth

[426] Board minutes, GH, 4 April 1984.
[427] AGC annual report, 1975, p. 8.
[428] AGC annual report, 1979, p. 4.
[429] Board minutes, GH, 26 January 1973, 19 May 1983, 14 February 1994. A major strike in 1979 lasted from 3-16 October.

In 1984 the government established a Minerals Commission to oversee the rehabilitation of the mining sector. AGC's Ghanaian deputy managing director, Sam Jonah, joined a committee set up by the Commission to review the state of Ghana's mining laws and to make recommendations. A new Minerals and Mining Law was passed in 1986 in consequence. The aim of the Act was to encourage new investment in Ghana's mining sector as well as making it easier to make and distribute profits.[430]

The Jonah era, 1986-2004

Coinciding with the bold, national economic changes, a management revolution occurred at AGC with the appointment of the first Ghanaian managing director in September 1986, Sam Jonah.[431] Contrary to the expectation that expropriation in December 1972 would lead to Africanisation of management and control, this did not occur for fourteen years. Practical impediments were quickly understood by the board. For example, although expatriates were more expensive than African equivalents and their retention was difficult, which added to costs, it was calculated in 1976 that only 3% of the senior African staff had the educational qualifications to really allow them to advance. Of this minority there was a general lack of experience in comparison with expatriate candidates.[432] The African-dominated board responded by increasing the monitoring of progress of the African training policy.[433]

Prior to 1973, the highest technical appointments at AGC had always been the General Mines Manager in Obuasi and the Consulting Engineer who was based in London and would visit the mine once or twice a year. Neither had a seat on the Board. But following the Technical Management Agreement between the government and Lonrho it was decided that Lonrho would second an employee to act as AGC (Ghana) Ltd's managing director. From 1973 these were all technically qualified men, unlike before when AGC's MDs had no technical experience but relied on the services of Consulting Engineers (with the exception of John Daw when he took over Cade's MD role for two years between 1903 and

[430] PNDC Law 153, The Minerals and Mining Law, 1986. See Chapter 2 for details.
[431] Board minutes, GH, 1 October 1986.
[432] Board minutes, GH, 23 January 1976.
[433] Ibid.

1905). Nevertheless, the MDs were European and the driving force for mine strategy remained the London-based Consulting Engineer supported by Lonrho's Technical Department in London.[434]

The Accra head office was mostly occupied with obtaining import licences and foreign exchange through the official procedures, as well as the government liaison activities of the old Accra Representative post. There was a parallel or duplicate management structure in London and at the mine. For example, there were both an Obuasi and a London office surveyor, chief geologist, chief sampler and personnel manager. But only those in Lonrho's London office could authorise any technical or operational decisions.[435]

Sam Jonah had been nominated by the new PNDC regime for the deputy MD position in 1982.[436] That year, AGC's' managing director, George Cappendell, began consultations with the IFC regarding loans for much-needed capital expenditure.[437] Jonah, as deputy MD, participated in the IFC discussions. When Cappendell fell ill in 1986, it was the head of the IFC team, John Pott, who recommended to Rowland the appointment of Sam Jonah as MD.[438] Jonah had worked at Obuasi for thirteen years, he was technically qualified, the beneficiary of AGC scholarships to the Camborne School of Mines and the Royal School of Mines at Imperial College. Jonah started work underground at Ayeinm as a student learner in 1969.[439] He had grown up in Obuasi and so could look on the mine from a citizen's perspective as well as that of an employee. As managing director he would become a Lonrho employee seconded to AGC.

Jonah's appointment represented a departure not only in his race, but more significantly, in the locus of management power. It was his opinion that the London consultants were an unnecessary layer, expensive, distracting and ineffective. Their periodic trips to the mine in a Spears-like manner did not help morale either. To align authority with responsibility he put a stop to the daily correspondence between Accra and London and the department heads in Obuasi were instructed to make their own decisions. Jonah describes a positive change in

[434] Interview, Sam Jonah, Johannesburg, 14 December 2004.
[435] Ibid.
[436] Taylor (2006), pp. 97-99.
[437] Board minutes, GH, 20 January 1982.
[438] Telephone conversation, John Pott, former head of IFC Africa desk, 6 June 2005; Taylor (2006), pp. 97-99.
[439] Taylor (2006), pp. 53-4, 66-7, 89.

attitude as managers took ownership for the first time over their actions.[440] According to him, it was from this time that daily operational decisions were taken at Obuasi with strategic decisions being made in Accra. It seems that it was from 1986, with Jonah's appointment as managing director that remote management ended and the location of power shifted to Ghana.

Following the adoption of Structural Adjustment, the IFC were actively looking for investment opportunities in Ghana.[441] In 1985 AGC successfully arranged the first of three syndicated loans from international commercial banks led by the IFC to modernise and expand Obuasi.

Rehabilitation and expansion

In the course of negotiations to lend AGC money, the IFC insisted that the outstanding compensation dispute from the 1972 partial-nationalisation be settled. Lonrho's chief executive therefore accepted a nominal £1.7m to allow the loan discussions to proceed.[442] The IFC demanded that the suspended mining lease be reinstated and that the Ghana government provide a sovereign guarantee for any loans agreed.[443] Once all these conditions had been met, the IFC led in 1986 a commercial syndicated loan of US$45m, the Standard Chartered Merchant Bank lent US$40m and AGC contributed US$75m from retained earnings for a 5-year rehabilitation and expansion project.[444] The funds were used to improve underground infrastructure for the central and southern parts of the mine. Ore and waste haulage systems, ventilation and compressed air facilities were updated or built. The George Cappendell Shaft (GCS) complex at Blackies mine had been started in the early 1980s. It could now be completed to exploit the resources to the south of the property from the surface down to Level 50. Construction commenced for a new shaft system, the Kwesi Mensah Shaft (KMS) at the Justice's mine area to also reach Level 50. The Eaton Turner Shaft, the most northerly shaft in operation following the closure of the old Main Shaft, was

[440] Interview, Sam Jonah, Johannesburg, 14 December 2004.
[441] Telephone conversation, John Pott, 6 June 2005.
[442] Rowland to Botchwey, PNDC Secretary for Finance and Economic Planning, 12 September 1984, Lonmin, Grosvenor House, London.
[443] Board minutes, GH, 5 December 1984.
[444] James Capel flotation document 1994, p. 21.

refurbished.[445] Table. 3.9 and Figure 3.10 show the operations and location of the shafts in 1994.

Mechanised equipment to increase productivity at the mine face (for example, scrapers and electric load-haul-dump vehicles) were purchased. The old treatment plant, the Pampora Treatment Plant was updated and a Tailings Treatment Plant was commissioned. The tailings from extracting gold from the high-grade ore mined over the decades had been dumped in tailings dams. These could now be economically processed to extract more gold using a low cost tailings treatment process.

Sansu Project

The Rehabilitation programme achieved its target increase in production of 400,000 ounces in 1990, two years earlier than planned.[446] The operational success led to a second IFC-led project. The new goals were to develop surface mining in the Sansu area, exploit lower grade ores underground, boost exploration and improve efficiency. To treat surface ore and lower grade ore cost effectively a heap leach operation commenced and an oxide treatment plant was built. Heap leach technology involves placing an impervious lining on a suitable site, dumping the ore on it and spraying a dilute cyanide solution over the ore; the solution passes through the heap and dissolves gold in the process, the gold-containing solution at the bottom of the heap is then drained or pumped to a gold recovery facility. The Sansu Oxide Plant was designed for surface-mined and underground ores with oxidised properties. The technology is relatively simple: the ore is crushed and milled, put into carbon tanks where the carbon attracts the gold, cathodes are used to strip the gold off the carbon (called electrowinning), the cathodes are then smelted to produce doré bars.[447] The result of diversification in grades of ore extracted and treatment facilities resulted in a greater degree of production flexibility, increased production volumes and increased levels of gold recovery. Production reached 654,298 ounces in 1992. Funding for the Sansu Project came from a new IFC loan of US$60m, and US$33m from retained

[445] Ibid., pp. 27 – 30.
[446] Appendix 3.
[447] James Capel flotation document 1994, p. 54.

earnings.[448] According to AGC's former CFO, standby loans arranged in case of cost overruns in the Rehabilitation and Sansu Projects were never drawn on.[449]

Ashanti Mine Expansion Project (AMEP)

The IFC supported AGC with a third, more ambitious project in November 1992. The total costs were estimated at US$305m: US$140m provided by banks and the remainder from retained earnings.[450] AMEP aimed to build on and sustain the growth trend established in the previous seven years by fully exploiting the mine's untapped lower grade resources, particularly underground lower grade quartz and sulphides and surface sulphides. Open pit (surface) production was expanded and infrastructural improvements over- and underground, particularly mechanisation and improving shaft access to allow the use of large machinery, were made. Although several attempts at mechanisation had been made at various periods in the past, the scope of this had always been constrained by the underground architecture. Under AMEP access ways and haulage capacities were significantly increased to allow fully mechanised stoping: for example stope lengths of 15m were extended up to 400m.[451] AMEP also provided for further treatment plant developments. A Sulphide Treatment Plant was designed to treat AGC's sulphide reserves more effectively. Part of this plant included the BIOX process. The traditional treatment of refractory sulphide ores involved roasting the crushed ore, which releases arsenic compounds into the atmosphere. A South African company had patented a process using bacteria under controlled temperatures, pH and nutrients to breakdown refractory ores. The process takes place in tanks where the action of Thiobacillus Ferro-oxidans bacteria feeding on the ore separates the gold, arsenic and sulphides. This allows the gold to be extracted in orthodox ways (the arsenic, in a separate process, is transformed into a stable, insoluble state for storage).[452] AGC was one of the first mines to use this new technology on a large commercial scale. The funds made available from AMEP were also put towards

[448] Ibid., p. 21.
[449] Interview, Mark Keatley, London, 17 April 2004.
[450] AGC annual report, 1992; James Capel flotation document 1994, p. 21.
[451] James Capel flotation document 1994, p. 27.
[452] Ibid., pp. 37-40.

human resource development, safety and loss control, a cost reduction drive and environmental improvements. The IFC put particular emphasis on the latter.[453]

Environmental tests conducted in 1981 by the University of Science and Technology, Kumasi, revealed arsenic poisoning at Obuasi.[454] It was appreciated by the board back then that new technology would be needed to eliminate arsenic from being released into the atmosphere. Research showed that a market existed for arsenious oxide which could be precipitated from the PTP's flue dust. Experiments for large-scale arsenic recovery were conducted.[455] Installation of a commercial arsenic collection plant started at the end of 1982.[456] Due primarily to financial difficulties this project could not be completed until IFC funding was allocated as part of AMEP.[457] A new department for the protection of the environment was established in 1991 with three environmental officers and a labouratory to analyse air, water and dust quality.[458] Periodic reports and action plans were produced for the IFC, the Minerals Commission and Ghana's fledgling Environmental Protection Agency.[459]

Since gold is a finite resource, a statistic producers and analysts focus on is the ratio of output to new reserves identified each year. Newly proved reserves should ideally match the gold produced as an indicator of future output. Exploration to identify new resources is therefore an important mine operation. Up until 1986 Obuasi had focused exploration underground - about 90 years of detailed geological sampling results had accrued and this gave a high level of certainty on the position and direction of the main underground ore body. Financial constraints, however, prevented further exploration of the concession. AMEP funding allowed exploration to commence on the surface, along the strike and to greater depths of the main ore body, as well as in other parts of the concession. Greater use was made of more expensive but more accurate diamond drilling equipment. Over the years land adjacent to the original concession had been acquired and in 1993 a mining licence was obtained for an additional 65 square miles, bringing the total concession area to 190 square miles.[460] These outlying areas of the concession were divided into separate exploration projects

[453] Board minutes, GH, 15 May 1991.
[454] Board minutes, GH, 21 January, 10 June 1981.
[455] Board minutes, GH, 20 January 1982.
[456] Board minutes, GH, 18 November 1982.
[457] Board minutes, GH, 10 December 1985, 20 February, 15 May 1991.
[458] Board minutes, GH, 20 February 1991.
[459] Board minutes, GH, 15 May 1991.
[460] 65 square miles plus the original 100 square miles, plus 25 square miles acquired in 1909.

and extensive geochemical sampling employing a computer database commenced. Anomalies would be followed up with trenching, drilling and geological mapping.

AMEP set a target annual gold production of one million ounces by 1994/5.[461] The funds allowed the latest technology to be deployed to profitably extract gold from very low-grade surface soils and old tailings dams. Within a year AMEP's changes appeared to be working: surface mining contributed 40% of gold production at a cash cost of about US$100 per ounce employing 800 employees (compared to 60% of production from underground operations at a cash cost of US$215 per ounce using 4,200 employees). Total cash costs of US$173 per ounce placed the company among the lowest in the global industry.[462] The financial year ending 1993 produced 770,410 ounces of gold.

Growth during these three IFC-led projects was due to capital investment, the exploitation of previously unpayable low-grade ore sources and technological improvements in production methods (the increase in mechanisation and the addition of new treatment processes). The changes allowed the cut-off grade which had historically been about one ounce per ton to be reduced significantly to 0.2 ounces per ton.[463] Growth in terms of output and productivity was impressive even bearing in mind the low starting point: an increase in gold output of over 300% between 1986 and 1993, and 700% in ore output. Productivity measured by gold ounces produced per employee rose from 25 ounces in 1986 to 80 in 1993. The amount of exploration undertaken shot up from 605 metres of drilling in 1988 to 53,000 metres in 1990.[464]

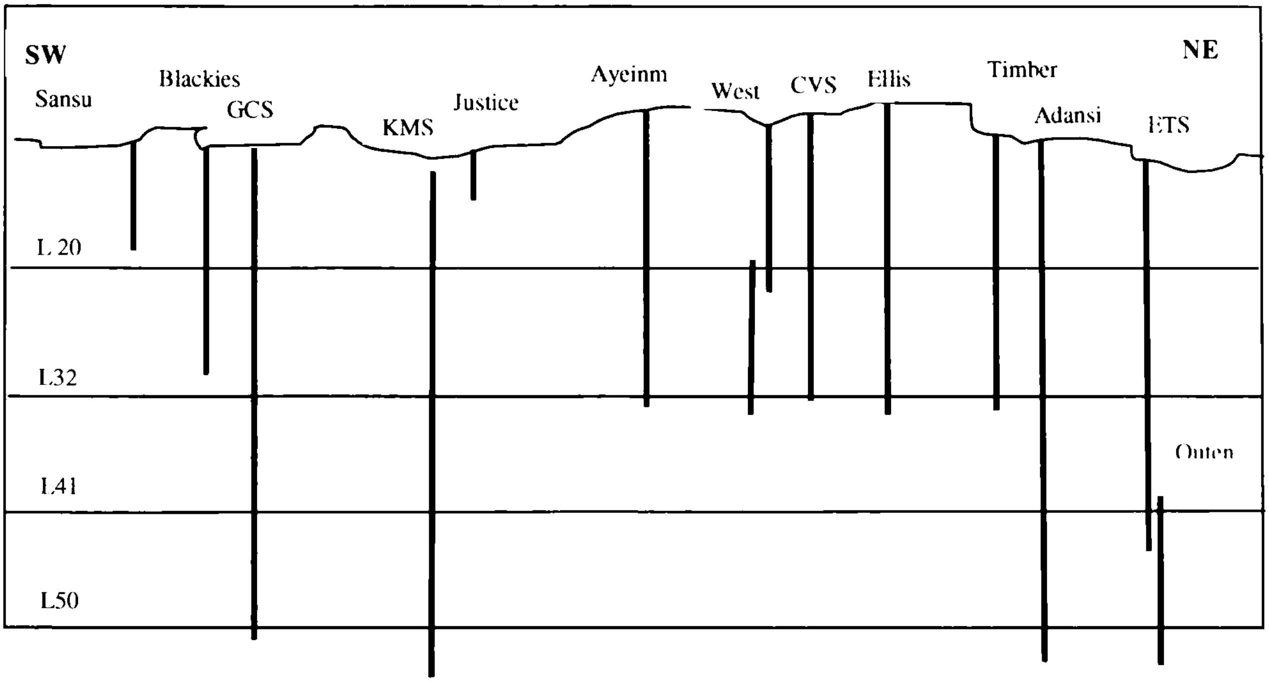
Table 3.9: Major operating shafts in 1994

Shaft	Purpose	Hoisting capacity
GCS	Men/Materials/Hoisting	30,000 tons per month
KMS	Men/Materials/Hoisting	138,000 tons per month
South (renamed Ellis Shaft)	Hoisting	57,000 tons per month
Timber	Men/Materials	-
Adansi	Men/Materials/Hoisting	37,000 tons per month
ETS	Hoisting	30,000 tons per month

Source: Ashanti Goldfields Company Limited Company Profile 1994.

461 The company's financial year ran from October to September until 1996 when it was changed to January to December.
462 James Capel flotation document 1994, p. 74; AGC annual report, 1994.
463 James Capel flotation document 1994, p. 2.
464 Appendix 3.

Figure 3.10: Schematic of operating shafts in 1994



Source: James Capel flotation document 1994, p. 27.

In 1994, as part of the government's divestiture and privatisation plans, a reduction was sought in the state's 55% stake of AGC. Private buyers were investigated before it was decided to rather float AGC simultaneously on the London and Ghana Stock Exchanges.[465] The quickest way to have listed on the London Stock Exchange would have been to create a UK holding company, Ashanti Goldfields (UK), with Ashanti Goldfields (Ghana) as a foreign subsidiary.[466] That way Ashanti UK would list its shares on the London Stock Exchange and be subject only to UK law. However the management and the government were adamant not to lose the Ghanaian identity, reflecting the symbolism of the firm to the nation. So it was decided to list AGC in the form of Global Depository Receipts, that is, as an international listing that would allow investors from all over the world to buy, register, sell and transfer shares through a depository such as an international bank without having to worry about cross-border differences in regulation.[467]

[465] Board minutes, GH, 27 May 1992; Taylor (2006), pp. 126-8.
[466] Interview, Mark Bankes, AGC's external corporate lawyer, Norton Rose, London, 16 April 2004.
[467] Interviews, Bankes, London, 16 and 20 April 2004.

It was during the IPO preparations that all parties agreed it would be appropriate to issue the Ghana government a golden share, representing ultimate sovereign rights of control and veto.[468] It proved a politically expedient mechanism to win over public support for the IPO.[469] For the flotation the company name was changed in January 1994 from Ashanti Goldfields Corporation (Ghana) Ltd to the Ashanti Goldfields Company Ltd.[470] Rawlings's transformed political party, the democratically elected National Democratic Party (NDC) expedited statutory changes needed to Ghana's laws to allow the flotation to proceed, including the repeal of NRCD 132.[471] The government provided an undertaking that no past environmental liability would be borne by the newly named company.[472] Importantly, a new mine lease was granted for 30 years from 5 March 1994 for the original concession area and the contiguous plots acquired later.[473]

Organizational changes at senior management level had been occurring throughout the IFC period to ensure effective project management. Further changes were made leading up to the flotation to conform with international governance practices. From 1994 the MD became the chief executive officer, and a chief financial officer and a chief operating officer were appointed. These were not just nomenclature changes but reflected the internal restructuring of reporting lines and some responsibilities. Several committees were established: the chief executive's committee for day-to-day operation and strategy; a management executive committee chaired by the chief operating officer; a strategic planning committee, a finance committee, audit committee, remuneration and nomination committee and a charitable donations committee.[474]

The government initially sold down its 55% to 35% to allow public participation. It would later reduce its stake further to 17.2%. Lonrho maintained their initial stake of 45%, but along with other shareholders, the issuing of new equity over time would significantly dilute their holdings.

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[468] Board minutes, GH, 15 December 1993.
[469] Taylor (2006), pp. 131,183, 252, 256.
[470] Board minutes, GH, 28 January 1994.
[471] Board minutes, GH, 19 August 1993. The amendments included the Companies Code (Amendment) Act 1994; The Minerals and Mining Law (Amendment) Act 1994; Bank of Ghana Exchange Control Act 1961 exemptions were also granted to AGC: Board minutes, GH, 5 March 1994.
[472] Board minutes, GH, 5 March 1994.
[473] Board minutes, GH, 14 February, 5 March 1994; AGC Ghanaian Offer Mini Prospectus, 1994, p. 4.
[474] AGC annual report, 1994, p. 25.

The flotation was supported by approximately 32,000 individual Ghanaians. They accounted for 90% of the shareholders in number, but they held fewer than 100 shares each, their aggregate holdings representing 0.3% of the total issue. Ninety-eight per cent of issued shares in terms of value were held by 47 institutional shareholders including the government of Ghana and Lonrho.[475]

The flotation marked the beginning of AGC's evolution as a transnational in its own right (see Chapter 7, 'Enterprise'). Amep failed to achieve its target of one million ounces from Obuasi in 1995, which had been a key promise in the IPO marketing material. Following this disappointment, five mines in Africa were acquired between 1996 and 1998 – two in Ghana (Ayanfuri and Bibiani) and one each in Tanzania (Geita), Guinea (Siguiri) and Zimbabwe (Freda Rebecca). In 1999 extensive exploration projects were underway in eight African countries (all the aforementioned plus South Africa, Central African Democratic Republic of Congo, Ivory Coast and Mali).

To assist in financing the acquisitions strategy, AGC became the first African operating company to list on the New York Stock Exchange in February 1996.[476] US$250m was raised on this market by the issue of 7-year 5½% convertible bonds.[477] Multinationalisation achieved growth in output, but dented profitability as costs rose to develop the acquired sites which were not yet in production (see Chapter 7, 'Enterprise').

Financial crisis and the end of autonomy

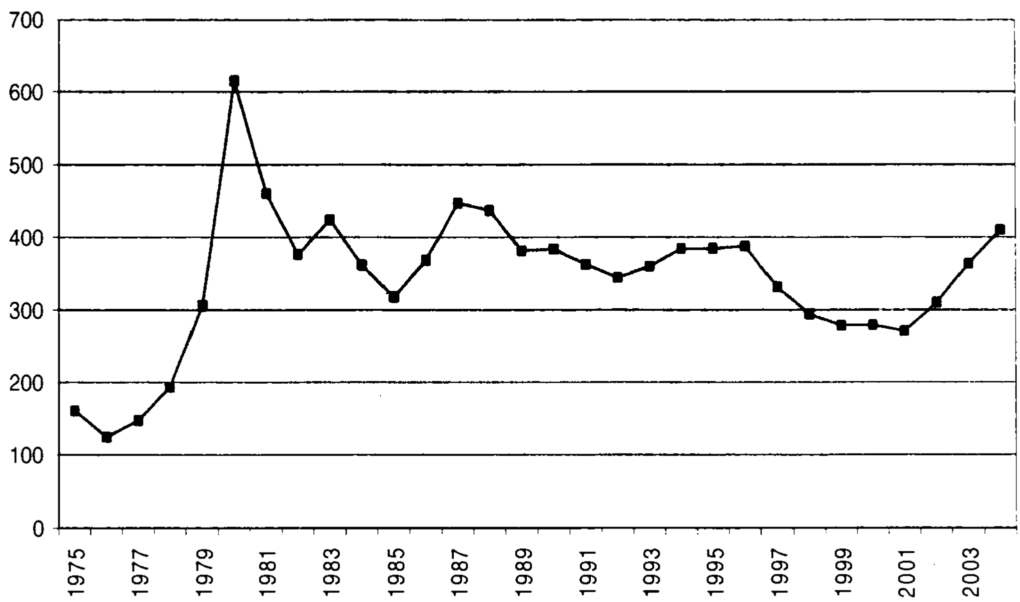
From an all-time high of US$875 an ounce in January 1980 gold had declined steadily to reach a low of US$253.20 in July 1999. While technology and productivity gains in mining and lacklustre retail demand for jewellery brought prices down, the main reason for the decline was the behaviour of gold producers and central banks. Producers sold gold forward which dampened spot prices and falling inflation diminished the use of gold as a store of value. This partly motivated central banks, including the Bank of England, to offload their gold reserves particularly after 1996.[478]

[475] AGC annual report, 1994, p. 58.
[476] Dow Jones, 'Emerging Markets Report', 21 February 1996.
[477] AGC annual report, 1996.
[478] *Financial Post*, 1 September 1999; *Business Wire*, 14 September 1999; *Reuters News*, 14 September 1999, all via www.factiva.com.

AGC had first sold gold forward following Lonrho's acquisition. A small amount of forward sales of gold were made for a short period before gold spot prices started to rise at the end of 1971.[479] AGC did not get involved again in derivatives until 1989 when part of the Sansu Project IFC loan was assumed in the form of a gold loan. AGC borrowed gold which was immediately sold for US$40m to be repaid either in gold or cash, depending on movements in the gold price, bullion lease rates and US dollar interest rates.[480] The first put options (contracts giving AGC the right without obligation to sell gold at a fixed price at a future date) were bought in the second quarter of 1990: 29,424 contracts from Degussa, AGC's gold refiner.[481] As gold prices dropped markedly from 1996 (see Figure 3.11) AGC's hedge book grew in size and complexity.

Figure 3.11

Average annual gold prices, 1975-2004 (US$/troy ounce)



Source: www.nma.org/enumerate/gold/gold.htm

Early in 1999 AGC had estimated that the price of gold would trade in the US$250–US$270 region, and so designed its hedge book to realise an average price of at least US$355.[482] This would cover the cost of production as well as the

[479] SPRS 3/63/1, board minutes, 19 February 1971.
[480] Board minutes, GH, 7 December 1988; 15 February 1989.
[481] Board minutes, GH, 19 August 1990.
[482] Mark Keatley, 'Paper on the management of the hedging portfolio', April 1999.

company's financing and capital expenditure needs. [483] To achieve this, straightforward downside protection was obtained through forward sales (contracts to deliver gold some time in the future at a price specified today) and the purchase of put options. Out of 22.6 million ounces of reserves, 36% (8 million ounces) were protected over the ensuing fifteen years through forward sales and puts. Buying puts provides excellent price protection but they are expensive. To help finance the cost of this downside protection 3.5 million ounces of gold were committed to selling call options - contracts obliging Ashanti to sell gold at a specified price if the holder of the call chooses to exercise its right to buy. On average, the premium earned on the sale of two calls would cover the cost of purchase of one put contract.[484]

AGC's hedge book also committed a further 7.6 million ounces (ultimately of its own but initially borrowed from bullion dealers) to lease rate swaps. The purpose of these instruments was to increase cash flows into treasury, in so doing this increased the average realised gold price of the hedge book. Under these swap agreements AGC committed varying amounts of ounces that converted into dollars either at the spot gold price or at a set gold price. AGC would pay a floating lease rate on these dollar amounts (on a monthly, quarterly or semi-annual basis) in exchange for receiving fixed lease rate income. These fixed amounts ranged between 0% and 2.25%.[485]

AGC had 85% of reserves committed in one form or another.[486] And out of the total amount of ounces contained in the hedge book, 36% could be described as pure protected ounces.[487] The remainder helped to boost the average realised price of gold only indirectly by primarily earning income. The value of these hedges was directly linked to changes in the volatility and price of gold, the bullion lease rate and US dollar interest rate.[488] In June 1999, with the gold price

[483] HSBC International Mining Division, 'Ashanti Goldfields Asset Performance', 6 October 1997, p. 37.
[484] Interview, Srinivasan Venkatakrishnan, former CFO AGC and currently CFO Anglogold Ashanti, Accra, 6 May 2004.
[485] Annual reports 1999, 2000.
[486] 8m ounces pure protected ounces, plus 3.5m ounces issued calls, plus 7.6m lease rate swaps out of 22.6m of reserves – AGC annual report, 1999, pp. 21, 53-7.
[487] Annual reports 1999, 2000; the annual reports themselves distinguish between 'protected' ounces (as in the case of put options and forward sales) and 'committed' ounces (as in the case of the call options sold and the lease rate swaps).
[488] AGC annual reports 1999, 2000; board minutes, GH, 24 March 2000, presentation by Group Treasurer to the board on hedge book status.

fairly stable and below US$265, and with lease rates under 1.4%, the value of Ashanti's hedge portfolio was a positive US$290m.

On 26 September 1999, fifteen European central bankers released a press statement declaring a moratorium on bullion sales, gold leasing and a reduction in their gold derivatives positions.[489] The gold price surged by 20% in response to the announcement, peaking at US$324 on 5 October 1999.[490] Lease rates responded by rising to 9.9% on 29 September 1999 and remained above 5% until mid-October. AGC's hedge book, which had been designed in expectation of low and falling spot gold prices and cheap lease costs, consequently dropped in value from a positive US$290m in June 1999 to a negative US$570m that October.[491]

In the wake of the central banks' moratorium at the end of September every dollar increase in the gold price knocked approximately US$10m off the value of Ashanti's hedge portfolio. Every 1% increase above 2% in the gold lease rate knocked US$20 off the US$355 target realisable price (through the cash outflow effects of the lease rate swaps).

The US$570m paper loss represented how much it would cost AGC to honour all of its hedge contracts on 5 October 1999. Each type of instrument in the hedge book, from the simple instruments to the more exotic structures, dropped in value. But the lease rate swaps were disproportionately responsible for much of the depreciation, followed by the call options sold.[492]

AGC had varying credit lines (or margin free limits) with each hedge bank, totalling US$300m in the aggregate. The banks demanded the difference between the negative US$570m mark-to-market valuation of the hedge book on 5 October and the US$300m permitted credit, that is, they demanded US$270m in margin calls. AGC had US$70m in available cash.[493] AGC's liquidity position was already vulnerable because of high debt servicing obligations accrued in the growth phase. There had also been an industrial strike in May 1999 that lasted for twelve days and reduced revenue and cash flow for the second quarter. The development of a gold mine in Tanzania (the Geita mine) and weather-related

[489] 'Gold Surges on Pledge of Central Bank Sales Restraint', Agence France-Presse, 27 September 1999, via www.factiva.com.
[490] The closing gold price on the trading day before the announcement was $268.40.
[491] AGC annual report, 1999, Chief Executive's Review.
[492] Ibid. See also, Christopher L. Gilbert, 'Derivatives: Use and Abuse', Inaugural lecture given at the Vrije Universiteit, Amsterdam, 26 October 2000, p. 13.
[493] Interview, Venkatakrishnan, Accra, 6 May 2004.

operational problems at the mine in Siguiri in Guinea further contributed to the lack of liquidity.[494]

The inability to satisfy the hedge banks put the company in breach of its other debt contracts. At the worst point of the crisis, total debt, including the US$570m hedge losses, came to just under US$1bn.[495] Any of AGC's creditors could have foreclosed, forcing the company into bankruptcy. The share price dropped from US$7.27 prior to the central bank announcement in September to an intraday low of US$1.62 during the crisis.

By February 2000 an agreement was reached with the company's 23 revolving credit facility bankers and seventeen derivatives counterparties to provide margin-free trading for three years in exchange for warrants over 15% of the firm's equity.[496] These warrants could be exchanged for ordinary shares at a price of US$3 per share within a 5-year time frame. As part of the deal, AGC obtained a loan of US$100m to bring Geita into production. Conditions were attached to the solutions package. Governance changes to strengthen the board's supervision were requested: most critically a new chief financial officer and treasurer were appointed. A new Risk Management Committee and Corporate Governance Committee were set up. No dividends were permitted for three years. AGC's future borrowing and hedging policy needed the approval of the banks. The company was also forced to sell 50% of Geita to reduce its overall gearing. Anglogold, the South African gold mine company created from Anglo-American's gold interests in 1998, won the bid paying US$335m (considerably exceeding AGC's valuation of US$200-250m).[497] Other factors that promoted Anglogold rather than competing bidders were that Anglogold offered a deadlocked joint venture, that is, equal management control over Geita. In addition, the South African company had a significant presence in other parts of Africa, like AGC.[498] A good working relationship was established between the two companies.

The banks demanded as part of the package a change in hedging policy. The main elements of the new policy were to continue price protection but with

494 AGC annual report, 1999.
495 Ibid.
496 AGC annual reports 1999, 2000. There were in fact nineteen derivatives counterparties, but two of these did not impose any margin limits on AGC, and therefore, were not owed anything.
497 Board minutes, GH, 22 February 2000.
498 Board minutes, GH, 24 March, 4 April 2000; Taylor (2006), pp. 229-30.

simpler instruments, strengthened supervision, and decreasing levels of committed ounces.[499]

AGC's balance sheet remained weak even after the 50% sale of Geita in 2000 largely because of the outstanding bond debt issued in New York in 1996. This amounted to US$216m and would mature in March 2003. In 2002 the balance sheet was restructured through a private equity placement with Lonrho raising US$75m. The bankers were also encouraged to exercise their warrants over the 15% of AGC's equity, which raised US$45m. AGC refinanced their existing bank debt with a new US$200m facility on softer and more flexible terms. With these funds totalling US$320m the US$216m outstanding bonds were redeemed at par and in cash, and US$70m of old bank debt was repaid, leaving a balance of US$34m for working capital.[500] Gross gearing consequently fell to a manageable 53% in 2003 from a peak of 164% in 2000.[501] AGC's share price responded by breaching US$6. In 2002 AGC's hedge bank partners, satisfied with the financial rehabilitation of the firm, agreed to extend margin-free trading indefinitely.[502]

As a result of the successful working relationship with Anglogold at Geita, and also because the future development of Obuasi required mining at levels below 5,000 feet with different technological and capital requirements, merger talks with Anglogold, deep level mining experts, commenced late in 2002. Geology tests at Obuasi below Level 50 revealed ore with assay values of 56 grammes per tonne, compared with average values of 8 grammes per tonne above Level 50.[503] These valuable prospects at depth had first been indicated in the late 1960s when approval was given for the construction of the Spears shaft. At that time there were exploration plans to test down to level 72.[504] The structural engineering, ventilation and refrigeration equipment and skills needed to mine to Level 100 (approximately 10,000 feet below the surface) were beyond AGC's means.[505] Besides these operational motives to find a strategic partner, the gold industry was in the process of consolidation in response to rising costs and a need for rationalisation. Out of 26 major gold mining companies existing in 1997 only

[499] Board minutes, GH, 3 February 2000,
[500] AGC annual report, 2002, Financial Review; Taylor (2006), pp. 244-7.
[501] Appendix 3.
[502] AGC annual report, 2002, Financial Review.
[503] Board minutes, GH, 23 April 2001, 27 May 2002.
[504] MS 14170/122, consultant engineer to GM, 4 April 1966; vol. 124, consultant mechanical engineer to general manger 3 January 1967; SPRS 3/56/4, chairman's address AGM, 4 April 1967.
[505] Interview, Joe Amanor, Geology Manager, Obuasi, 29 March 2005.

thirteen remained in 2002. A few had gone bankrupt but most had been absorbed.[506] AGC was the smallest of the world's senior producers by market capitalisation to remain independent. Prior to the crisis, AGC had attempted a takeover of Lonmin (Lonmin was created from the separation of Lonrho's mining and non-mining activities), but the financial crisis had put a halt to that (see Chapter 7, 'Enterprise').[507]

On 17 April 2003 Anglogold offered, in an all paper transaction, 26 Anglogold shares for 100 AGC shares. This valued the company at US$1bn, equivalent to US$7.20 per share and representing a 43.9% premium on the closing share price of the day before.[508] This was in line with recent premiums paid in the acquisition of Acacia by Anglogold, Battlemountain by Newmont and Homestake by Barrick.[509]

A rival bid for the company was then made by Randgold. On 23 September they offered one Randgold share to two AGC, or US$11.14 per AGC share (US$1.5bn in total).[510] Anglogold responded with an improved share ratio of 29:100, valuing AGC at US$1.43bn, intentionally below Randgold's.[511] Randgold increased their offer to the equivalent of US$12.57 per share or US$1.7bn.[512] However, the board continued to recommend Anglogold's offer on the basis that their expertise and cash flow could meet the long-term development of the Obuasi 'Deeps' despite Randgold's offer of a higher initial purchase price.[513]

Based on advice from Société Générale and a parliamentary committee established to consult with the firm, as well as the ministry of mines, the Environmental Protection Agency, the Bank of Ghana and the Mine Workers' Union, the government of Ghana released a public statement on 28 October in support of the board's recommendation for a merger with Anglogold.[514]

The government considered the merger proposal from its dual role as a shareholder and as a regulator. As a shareholder, Anglogold had offered the government an additional 1% of the merged entity, to be called Anglogold

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[506] CIBC report on refinancing options, Board minutes, GH, 27 July 2001.
[507] Taylor (2006), pp. 154-5, 172, 183-4; see Chapter 7, 'Enterprise'.
[508] Board minutes, GH, 17 April 2003, and AGC Press Release, 5 August 2003.
[509] Board minutes, GH, 12 February 2003.
[510] Board minutes, GH, 14 October 2003.
[511] Times Online, 15 October 2003 and FT.com, 16 October 2003.
[512] Board minutes, GH, 27 October 2003; Dow Jones Newswire, 14 October 2003, via www.factiva.com.
[513] Board minutes, GH, 14 October 2003.
[514] Ministry of Information Press Release 28 October 2003; *Daily Graphic*, Ghana, 28 October 2003.

Ashanti. In exchange for this, the golden share would be limited to the Ghanaian assets and liabilities. This 1% represented an additional 2.6m shares on top of the government's 6.3m shares for its existing 17.2% ownership of AGC. The government's total stake in the new company would be 3.4%. The additional shares were worth US$100m on 28 October, and likely to appreciate. If Anglogold paid the same dividend rate as they had in 2002 then the government would earn US$11m, which would be the highest dividend ever paid to the government in Ghana's mining history. Furthermore, Anglogold had committed to spend US$220m on the existing Obuasi mine in the first four years, US$44m on exploration of the Obuasi Deeps, and thereafter, depending on the exploration and feasibility studies, US$570m on the development of the Deeps.[515]

As a regulator, the government was satisfied with Anglogold Ashanti's promises not to implement new job cuts in the first two years. If expansion plans at Obuasi were achieved it was envisaged that more jobs would be created in the future. The merged entity would designate 1% of Ghanaian profits for community works in Ghana, and commitments were given to expand training, health and safety initiatives. Corporate tax revenue stood to increase with Obuasi's growth. The new company's listing on the Ghana Stock Exchange and the creation of low denomination depositary securities especially for the small Ghanaian investor met with approval too.[516]

On 12 February 2004 the Ghanaian Parliament ratified a stability agreement between the government and Anglogold Ashanti. It was agreed to extend Obuasi's mine lease from 2024 to 2054, and to cap Anglogold Ashanti's royalties at 3% and corporation tax at 30% for fifteen years. The company would be exempt from any adverse changes in laws affecting its operations. It would be allowed to retain foreign currency offshore without any restrictions on dividend payments.[517] Other legal approvals from the Ministers of Mines and Finance, the Bank of Ghana, and the Ghana Stock Exchange were also required and obtained.

Significant opposition to the merger and AGC's consequent loss of autonomy was expressed by some politicians, parts of the media and members of the public in Ghana. Mine employees were concerned about their job security as well as the imposition of a South African culture on the firm. AGC implemented

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[515] Details for the foregoing paragraph taken from Parliamentary Debates, 12 February 2004, Col. 1120.

[516] Ibid.

[517] Ibid.

an intensive public relations campaign to convey the merits of the proposal, stressing Anglogold's expertise and wealth that would extend the Obuasi mine's life.[518]

On 26 April 2004 the Ghana High Court announced the cancellation of all Ashanti Goldfields Company Ltd shares, their reissue to Anglogold Holdings Plc, and the creation of Anglogold Ashanti, through a scheme of arrangement (that is on the basis of a minimum of 75% of shareholders approving the merger).

Summary

Between 1897 and 1968 AGC can be described as a free-standing British company with its bi-national, single sector operation.[519] However, unlike many of the company's Victorian contemporaries AGC did not start operations with an inflated capital base suggestive of fraudulent or self-seeking founding directors. It did not have a market reputation for being overly capitalised.[520] A maiden dividend was paid remarkably quickly and the regularity of dividend payments for most of the company's history showed a genuine shareholder-focus (explored in detail in Chapter 6, 'Capital'). The head office was not just a "brass nameplate": in fact the premises were moved several times to accommodate the growing administration needed for the mine.[521] While other free-standing companies failed to evolve appropriate management structures AGC, both at the mine and in London, quickly established roles of responsibility, such as the London commercial manager and departmental managers in Obuasi. The firm also internalised external expertise. Crucially, the role of the consultant engineer, starting with W. R. Feldtmann, was brought in-house. The company availed itself of outsider expertise where necessary, particularly from South Africa. This was seen in the early cyanidation and flotation experiments. The firm kept abreast of industrial research through personal networks with international gold mines and

[518] Taylor (2006), pp. 256-7; 'Project Horoscope Q&A', AGC media crib concerning the proposed merger with Anglogold, Gold House, 2003.
[519] M. Wilkins, 'The Free-standing company, 1870-1914: an important type of British foreign direct investment', *Economic History Review*, 41, 1988, p. 262.
[520] SPRS 3/1/36, enclosure in Argenti Sechiari and Co to Spears, 26 July 1945.
[521] From incorporation until the Lonrho takeover AGC's head office moved from Aldermanbury Postern to larger premises in New Broad Street, Southampton Street, Old Jewry and then London Wall.

subscriptions to relevant journals.[522] General managers and consulting engineers visited other mines in the country and abroad to learn about different operation techniques and equipment.[523] These characteristics help to explain AGC's profitability and longevity which were atypical of the experience of most free-standing companies.[524]

Much of AGC's history was characterised by poor labour relations, lack of corporate responsibility and racism. Changes in the last two areas started to occur from 1969, and not from Independence in 1957. The firm never satisfactorily resolved its tensions with the workforce and experienced strikes in every decade, often protracted and violent. Significant transformations in the management structure and control emerged as late as 1986. Ownership changes in 1972 failed to materially alter the existing chain of power. Change in this regard eventually came from within the firm; it could not be foisted upon it, even by rule of law, and it was practically constrained by the lack of qualified African personnel. Sam Jonah, thanks to his unique set of 'identities' not only as a Ghanaian, but as one brought up in Obuasi, as a career mine engineer, as a Lonrho employee (following his appointment as managing director), and as a personal friend of prominent members of the Rawlings administration,[525] was able to execute corporate changes on an unprecedented level.

The ability to generate decent revenues despite changing industrial and national economics was partly due to Obuasi's geological good fortune. Putting luck aside, Part Two analyses the smartness of management decisions made by looking into four critical aspects of the business: land, labour, capital and enterprise.

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[522] There are many examples, including: MS 14164/6, minutes 9 December 1924 (regarding new Canadian metallurgical research); MS 14170/70, New Consolidated Goldfields to GWE Turner, 24 March 1939 and Turner to GM, 28 March 1939 (new reagents available in USA); vol. 75, Secretary to mine manager, 4 and 12 December 1941 (the Albert Silver process); vol. 97, consulting engineer to GM, 4 December 1953 (research on long hole drilling); vol. 98, consulting engineer to GM, 22 January 1954 (research on new ion exchange process); vol. 116, consulting engineer to GM, 26 February 1963 (on melting gold electronically); vol. 117, Secretary to GM, 14 August 1963 (subscription to Mine Ventilation Society of South Africa),

[523] See for example, MS 14164/7, minutes 28 January 1930; MS 14170/61, directors to GWE Turner, 9 February and 8 March 1932; vol. 79, Turner to GM, 8 September 1944; vol. 116, consulting engineer to GM 31 May 1963.

[524] Compare Wilkins (1988), pp. 263, 264, 271, 275.

[525] Taylor (2006), pp. 101-2, 122-3.

Timeline of key events in AGC's history

1895	Cade's agreements with Biney, Ellis and Brown, the Bekwaihene and Adansihene.
1897	Incorporation of the Ashanti Goldfields Corporation. Concession agreement concluded between Governor Maxwell, the Cote D'Or Company, the Ashanti Goldfields Corporation, and Biney, Ellis and Brown
1898	Mining starts at Obuasi
1900	Maiden dividend paid
1903	Cade's death
1904	Successful adoption of cyanidation
1909	Commissioning of the Central Treatment Plant
1927	Purchase of Bibiani mine
1930	J. H. Batty's appointment as chairman
1933	£1m gross revenue reached
1935	First flotation experiments
1937	£1m pre-tax profit reached
1945	Spears appointed chairman
1947	Pampora Treatment Plant commissioned
1950	Spears appointed managing director
1955	Eaton Turner Shaft completed to Level 42
1961	Sale of Bibiani mine to Ghana government
1968	Lonrho takeover
1969	New mine lease granted
1972	Partial nationalisation, cancellation of mine lease and creation of AGC (Ghana) Ltd
1974	Adansi Shaft commissioned
1976	1m tons milled
1982	First ever pre-tax loss recorded
1984	Partial nationalisation compensation settled and suspended mining lease reinstated
1986	Jonah appointed managing director; Rehabilitation and Expansion Project started
1987	George Cappendell Shaft commissioned

1989	Sansu Project started
1990	Tailings Treatment Plant and Heap Leach Plant commissioned
1992	Ashanti Mine Expansion Project started; Arsenic Recovery Plant installed at PTP
1993	Sulphide Treatment Plant with the Biox process commissioned
1994	New company name, Ashanti Goldfields Company Ltd, and new mine lease granted; flotation on the London and Ghana Stock Exchanges; commissioning of Kwesi Mensah Shaft
1995	10m tons of ore milled
1996	New York Stock Exchange listing; acquisition of Freda Rebecca, Ayanfuri, Bibiani, Siguiri and Geita mines; 1m fine gold ounces produced
1998	20m tons of ore milled
1999	Financial crisis
2000	Sale of 50% of Geita to Anglogold; PTP decommissioned
2002	Balance sheet restructuring concluded
2004	Anglogold takeover

PART TWO

CHAPTER 4: LAND

THE SECURITY OF THE ASHANTI GOLDFIELDS CONCESSION AGREEMENT OF 3 JUNE 1897

The purpose of this chapter is to examine the 3 June 1897 concession agreement which was the legal basis of AGC's operations until 1 January 1969. The mineral rights therein were not the subject of as much debate as were the much less valuable surface rights and other native rights mentioned in the Agreement which were repeatedly questioned by Africans, European traders and government administrators alike. Changes in colonial personnel 'on the spot' and the absence of clear legal direction from London contributed to ambivalent and inconsistent interpretations of the 1897 Agreement. It was in the interest of neither the British government nor the company to seek a conclusive legal ruling on the validity of the Agreement or to obtain amendments to clarify AGC's rights because of the financial sums at stake: the government's royalty payments and AGC's profitability. Contrary to property rights theory it is seen that clearly defined rights were not in practice as important as the company's behaviour in defence of their perceived rights, the establishment of a corporate custom, and political inertia.

The chapter is organized as follows. Two key tenets of property rights theory are stated as a useful test for the historical experience of AGC. The contents of the 1897 Agreement and the ambiguities in the contract are then discussed. (The complete agreement can be found in Appendix 10). This is followed by an account of the problems and protests that arose over time concerning AGC's security of title in relation to the rights of others to occupy, farm, trade, and even to mine on AGC's concession where the firm was not actively conducting operations.[1]

Property rights theory suggests that:

[1] ARG7/5/68, Acting Colonial Secretary to Acting Chief Commissioner Ashanti, 10 October 1923; see also AGC general mines manager (GM) to DC, 19 May 1904; and ARG7/5/68, Acting Colonial Secretary to Acting Chief Commissioner Ashanti, 10 October 1923.

1) to maximise private gain title holders will attempt to increase and enforce the exclusivity of their property rights, and
2) well defined property rights are critical for the promotion of economic activity.[2]

Property rights from an economic perspective are broader than formal legal rights. AGC's concession agreement of 1897 as a formal, legal document was therefore only one dimension, although a fundamentally important one, of their claim to property rights. Other factors that would affect the security of their title included the existing land legislation, the actions of government, the establishment of habit, or path dependence based on AGC's own behaviour. The discussion below assesses all these dimensions with a view to test the theoretical statements above in order to determine just how secure AGC's property rights were.

The 1897 Agreement

On 3 June 1897 after extensive discussions in London (see Chapter 3) an agreement was signed, with the approval of the Secretary of State for the Colonies, Joseph Chamberlain, ratifying Cade's 1895 transactions. There were four parties to the Agreement: first, the governor of the Gold Coast Colony, Sir William Edward Maxwell; second, the African entrepreneurs, Biney, Ellis and Brown; third, the Cote D'Or Company that had financed Cade's initial expedition; and fourth, the Ashanti Goldfields Corporation, a better capitalised company, newly formed to take over Cote D'Or's interests.

In order for Cade to be confident of the security of the transfer of the concession held by Biney, Ellis and Brown and originally granted to the Africans by the King of Bekwai on 3 March 1890, he had written three separate but related agreements during his 1895 expedition. On 1 August 1895 he made the Africans confirm their title by signing a new agreement with the King of Bekwai. On 15 August 1895 he got the Africans to enter into an agreement with the King of Adansi realising that the 1890 concession also covered Adansi land. Cade then followed this with a third agreement between himself, on behalf of the Cote D'Or Company, and Biney, Ellis and Brown dated 27 August 1895.

In the second paragraph of the 1897 Agreement the original contract between the Africans and the Bekwaihene granted on 3 March 1890 is described

[2] Eggertsson (1990), pp. 35, 40.

as an "Indenture" paying a yearly rent of £100. This was increased to £133 on 1 August 1895. The 15 August 1895 agreement with the Adansihene allowed for an annual rent of £66. The agreements between the Africans and chiefs dated 3 March 1890, 1 August 1895 and 15 August 1895 were referred to collectively by the British government as "the Concessions".

On 27 August 1895 Biney, Ellis and Brown sold these Concessions on to Cade's Cote d'Or Company. The 1897 Agreement goes on to say that it was Biney, Ellis and Brown and the Cote D'Or company who invited the Governor of the Gold Coast to enter into a new agreement with them. The justification given for this was that the territories of Bekwai and Adansi had come under British protection. Interestingly, the Governor did not use his authority to validate the Concessions. Rather, the seventh paragraph of the 1897 Agreement reads,

> *Whereas the Governor does not admit the validity of the Concessions or any of them but has in exercise of his authority agreed at the request of the said parties...to authorise the Company [AGC] to occupy the said land as being part of the unoccupied lands of the said Protectorate.*

In other words, the British Government was granting fresh and new authority for AGC to use the land based on the principle that it was 'unoccupied land' and by inference that the Governor, on behalf of the Queen,[3] held legal rights to 'unoccupied land'.

The Concessions agreed in 1890 and August 1895 were surrendered and cancelled. A new agreement, new rights, and new authority to occupy the area was then granted by the British government for 90 years from 1 January 1897. The boundaries of the 100 square mile plot were described. Without any formal survey it must be pointed out that the exact physical limits of the plot could only be estimated diagrammatically. Due to the measurement costs the exact boundaries of AGC's 100 square miles were not delineated even as late as 1969. It was seen in Chapter 3 how this later gave rise to disputes with local chiefs and rival concessionaires.

The remainder of the 1897 Agreement consisted of seventeen conditions for AGC to comply with, of which the following are noteworthy. Condition 1 was financial. AGC were to pay 5% gross royalty to the colonial government and £133

[3] See paragraph 6 of the Agreement.

per annum to the Bekwaihene and £66 to the Adansihene via the Colonial Treasurer. Condition 2 set the scope of AGC's activities. These were broad enough to be described as the grant of an 'imperium in imperio' because the Agreement allowed for mining operations in addition to trading and the cultivation of agricultural goods.[4] To these ends the company could build townships and fell timber and "use any waters". These powers were then laid subject to a very broad and undefined concept of existing African rights:

> *This Agreement is to be subject in every respect to the existing rights of any native or natives in respect of the said land or any part thereof and accordingly every operation hereby authorised must be conducted so as in no way to affect or interfere with any such rights.*

The governor retained rights in Condition 3e to take possession of any land needed for public works. There was an obligation imposed on AGC to employ at least one native per acre of the land used for mining purposes.[5] Although given water rights, AGC were ordered not to foul any waterways.[6] Within the scope of Condition 2 the company was permitted to under-lease.[7] Written consent from the governor could be sought to permit activities not expressly mentioned in the Agreement.[8]

The 1897 Agreement covered both AGC's private rights as well as the communal rights of natives and, to a lesser extent, the government's rights. The coexistence of different types of ownership rights (private, communal and state) is not unusual, however with respect to the company's private rights and those of the Africans in particular, the document lacked clarity and specification. It is easy to see how the ill-defined partitioning of different rights held by different agents to the same plot of land could give rise to future problems.

Before assessing the specific ambiguities of the 1897 Agreement it would be useful to understand the state of Ashanti land law at the time.

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[4] D. Kimble, *A Political History of Ghana: the Rise of Gold Coast Nationalism, 1850-1928*, Oxford, 1963, p. 24.
[5] Condition 8.
[6] Condition 9.
[7] Condition 11
[8] Condition 10.

The indigenous land tenure system and the state of land law in Ashanti and the Gold Coast at the end of the 19th century

No land legislation had been passed by the British for Ashanti by June 1897. Following the invasion of Kumasi in 1896 and the removal of Ashanti's central authority structure there was a period of confusion regarding land rights.[9] The critical question was whether Ashanti lands, and not just Kumasi, now belonged to the British government or remained in the hands of private, indigenous owners. In other words, could the government grant concessions or simply recognise those obtained from African owners? Governor Maxwell's initial actions show that in his mind he had personally replaced the Asantehene as paramount chief with direct dominion over Kumasi as well as Ashanti's wider territories.[10] Maxwell had instructed the Kumasi Resident on 10 February 1896, just weeks after the invasion, not to recognise any concession in any part of Ashanti "but that every concession to be valid must be sanctioned by the Governor, and he caused all the kings of Ashanti to be warned that they must not grant any rights without the Governor's authority."[11] Maxwell also wrote to Chamberlain advising that the British "assert exclusive control over the mining lands".[12]

Maxwell had a particular vision for the gold industry involving a handful of very large, "really powerful" companies with rights over whole regions such as Ashanti and Wassaw.[13] These companies would be given tax collection powers on behalf of government and be made responsible for constructing roads and towns. Another aspect of this oligopolistic scheme would be that land owners would receive rent but none of the tax revenue nor company profits. These ideas must have influenced the negotiations between Cade and the government that culminated in the 3 June 1897 Agreement.

In addition to the AGC agreement, Governor Maxwell personally made another direct concession of land to a certain Mr Russell.[14] This set a regrettable precedent for the Colonial Office that other concessionaires would later attempt to

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9 Hamilton (1978), p. 198.
10 Wilks (2000), pp. 45, 48.
11 PRO CO 879/57/578, Chamberlain to Hodgson, 20 February 1900.
12 PRO CO 96/271, Maxwell to Chamberlain, 9 March 1896, cited in Hamilton (1978), p. 228.
13 PRO CO 96/280, Maxwell to Chamberlain, 10 December 1896, cited in Hamilton (1978), pp. 230-1.
14 PRO CO 879/57/578, Chamberlain to Governor F.M. Hodgson, 'Position of the colonial government in regard to lands in Ashanti', 11 August 1899.

rely on, but unsuccessfully.[15] AGC themselves were surprised and confused when the Colonial Office refused in 1900, after two years of preparatory work and negotiations, to grant them a concession similar to that obtained in June 1897 to work King Prempeh's mines near Kumasi. Chamberlain advised the company that their request was beyond the Gold Coast government's powers.[16] He later wrote that AGC's Obuasi agreement was "not to be taken as a precedent", although he failed to explain why not.[17]

Could it be argued that the Colonial Office negotiated the AGC contract in a legal vacuum? Nearly three years after the Kumasi invasion Chamberlain wrote: "The future permanent arrangement, however, for Coomassie and the adjacent territory which had been under the direct dominion of Prempeh *was, and still is, left undetermined*" (italics mine).[18] The quote leaves open the suggestion that the colonial administration left the Ashanti land question unresolved on purpose. Delaying the establishment of a definitive position for one thing removed future criticism for the unique treatment of AGC.

The British did have the Gold Coast land laws to provide guidance, and there was also the indigenous land law of Ashanti (which matched those of the Gold Coast) that could have been applied. After several failed attempts to impose English-type land legislation, however, the colonial administration had by 1897 accepted that indigenous law should govern land transactions in that coastal territory.

In the 1890s the British considered declaring unoccupied or waste land in the Gold Coast Colony as Crown land. As African objectors repeatedly pointed out there was no such thing as waste land since all land had an owner be it an individual, a family or a chief.[19] The motives for seeking to possess Crown lands were two-fold: to allow for European plantation cultivation for cash crops and to allow total control over gold production. To these ends the Crown Lands Bill was drafted in 1894. In October 1895 African opposition led to the rejection of the Crown Lands Bill which would have permitted government control of all 'waste

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[15] Ibid.
[16] PRO CO 879/57/578, C.W. Mann, AGC Secretary to Colonial Office, 15 December 1898; Chamberlain to Hodgson, 24 August 1899; Colonial Office to AGC, 20 March 1900; Cade to Colonial Office, 3 April 1900; Colonial Office to AGC, 24 April 1900.
[17] PRO CO 879/57/578, Chamberlain to Governor F.M. Hodgson, 11 August 1899.
[18] Ibid.
[19] Kimble (1963), p. 336.

lands, forest lands, and minerals'.[20] The African protestors were those who stood to gain from controlling land use, mainly the chiefs but also would-be concession brokers and entrepreneurs.

Government then proposed a new bill to deal with the problems of concession speculation and uncertainty of title. The Lands Bill of 1897 significantly trimmed the British government's involvement from Crown ownership to regulator of land use. However, the Lands Bill would allow the government in the Gold Coast, with retrospective application, to grant Government Land Certificates which superseded African rights of ownership. The Government could also declare that any piece of land had no owner, and then authorise its occupation.[21] Although the government's arguments for these provisions were that they provided regulation against the exploitation of Africans by European concessionaires the Bill encountered heavy local opposition. The African argument again centred on the non-existence of 'unoccupied' land, and the fact that the Bill subjected every holder of a government Land Certificate to English Law which would have marked a revolution of the indigenous land system rooted in matrilineal inheritance.[22] A recurring argument in the African petitions was the point that the Gold Coast Colony had not been acquired by the British through conquest, cession or treaty, therefore the British had no inherent rights to land. Furthermore, previous legislation such as the 1876 Public Lands Ordinance, amongst others, never implied that Gold Coast land (nor minerals) belonged to the Queen.[23] Faced with opposition from both European concessionaires and Africans against government's encroachment in private land transactions, Chamberlain withdrew the Lands Bill.[24]

What is surprising, then, is that these debates - in which opposition to government ownership of land and therefore the government's right to grant concessions was so effectively expressed - coincided with Cade's negotiations for his Ashanti concession. Indeed the draft Lands Bill stipulated, as the 1897 Agreement did for AGC, a 5% *gross* royalty on mineral products. The role of J. P.

[20] Phillips (1989), pp. 59-61; R. Howard, *Colonialism and Underdevelopment in Ghana,* London: Croom Helm, 1978, p. 40; Kimble (1963), p. 339.
[21] Kimble (1963), p. 340.
[22] Speech of the APRS solicitor to Chamberlain, 5 August 1898, cited in Kimble (1963), p. 353.
[23] Kimble (1963), p. 337-8.
[24] Kimble (1963), p. 354. Besides African and European opposition, external rebellions in South Africa and Sierra Leone and the threat of the same in the Gold Coast as well as the Bill's dilution of chiefly powers and the uninhibited growth of cash crops based on the existing land rules all played a part in the withdrawal of the Lands Bill-Howard (1978), p. 42.

Brown is worth highlighting here. He was a leading member of the Aborigines Rights Protection Society (ARPS) established in the Gold Coast in 1897 primarily to contest the Lands Bill,[25] and he was also a party to the AGC Agreement of June 1897. Brown may have failed to note the contradiction: the AGC Agreement was a government-granted concession, the very idea vehemently opposed by the ARPS. Or perhaps he assumed that Ashanti territory would be treated differently to the Gold Coast.

Maxwell's influence (and that of Cade's personal connections) must have been considerable to have successfully persuaded Chamberlain to allow the governor to grant AGC's concession while at the same time preventing such action from being legalised in the Gold Coast. In retrospect, Chamberlain admitted that concerning Ashanti territory "it was not contemplated that any concessions would be granted by the Government".[26]

So AGC were undoubtedly given special treatment. Possible reasons for this could have been the opportunity to experiment with Maxwell's model of oligopolistic gold production; the hope that AGC would generate considerable tax revenue for the administration; while the credentials of Frederick Gordon and the Earl of Bessborough must have helped. The ad hoc and inconsistent treatment of Ashanti concessions between 1896 and 1900 can also be explained by the absence of a class of educated Ashanti lawyers, journalists and landowners who could have organized themselves as the Gold Coasters did to protect their indigenous rights.[27] The Ashantis did express their displeasure though – according to Hamilton the confused award and recognition of concessions to some and not others was a contributory factor in the origins of the Yaa Asantewaa war of 1900.[28]

Some order and clarity was introduced to the Ashanti land rights situation following the successful passage of the Gold Coast Concessions Ordinance 1900. This aimed to regulate European owned concessions while preserving African 'freehold' property rights and freedom to make grants. Although it limited the size of concessions to five square miles for minerals and to a maximum of two concessions per concessionaire, in practice this could be overcome by acquiring

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[25] Kimble (1963), p. 341-4

[26] PRO CO 879/57/578, Chamberlain to Governor F.M. Hodgson, 11 August 1899 referring to his Despatch 478 of 23 December 1898.

[27] Hamilton (1978), p. 197.

[28] Hamilton (1978), p. 227; PRO CO 879/57/578, Hodgson to Chamberlain, 9 September 1899.

contiguous concessions under different corporate names. The ordinance limited lease and option periods to definite time limits to prevent granted lands from lying unused. Before this law was passed Chamberlain agreed that it should be fundamentally replicated for the whole of Ashanti including Kumasi, with some added provisions.[29]

African chiefs, those involved with concessions broking and others with an economic interest in land use complained amongst other things about the long lease period of 99 years which would not allow usufruct rights to return to a stool within a lifetime.[30] After such a long timeframe the rights of the original grantor could be open to contest. But the significant difference between this law and the failed predecessors was that the Concessions Ordinance did not grant the colonial government ownership rights in minerals or 'unoccupied' lands. The British had no general rights of compulsory acquisition of lands, except in limited circumstances for public utility purposes when compensation had to be paid. The policy established in the Gold Coast was essentially to leave land ownership to the indigenous tenure system.

While it is reasonable to presume that the Gold Coast Colony laws would have directed the Colonial Office in their considerations for Ashanti, the strongest reason to suggest that British land policy would differ between the Gold Coast and Ashanti was the fact that the Ashanti, or more accurately, Kumasi, had been successfully invaded by a British army. The Ashanti Order-in-Council (1901) declaring the annexation of the territory stated that the Queen's army had conquered the land.[31] However, Bekwai and Adansi, where Cade's concession was located, had agreed to British protection and had become British allies before the fall of Kumasi in 1896; they could therefore argue that their lands were not conquered.[32] Chamberlain himself recorded,

> *It was decided not to annex even Prempeh's dominion – much less the rest of Ashanti, whose chiefs accepted British protection, and entered into treaties with the Queen.*

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[29] PRO CO 879/57/578, Chamberlain to Hodgson, 20 February 1900.
[30] Howard (1978) p. 48.
[31] K Bentsi-Enchill, *Ghana Land Law: An Exposition, Analysis and Critique*, London: Sweet and Maxwell, 1964, p. 18.
[32] Bentsi-Enchill (1964), p. 18, fn. 20.

It seems to me, therefore, that there is no ground for treating these kings and chiefs in the matter of land concessions differently from the chiefs in the rest of the Protectorate. They were not conquered, and, even if their Paramount Chief was conquered, the British Government waived any right of conquest over them which could be implied therefrom by entering into treaties with them.[33]

Thus, by 1900 it was eventually decided that the legal position regarding land for Ashanti was to be the same as in the Gold Coast Colony.[34] In both Ashanti and the Gold Coast Colony land tenure was to follow the indigenous system which was based on community ownership along with individual or familial rights of use, rather than private ownership. The communal, or stool, land was controlled by a chief (the Omanhene) who was not supposed to take decisions concerning land use independently of his elders. In the few occasions where land was alienated it could rarely be further sold on, and if it was not being used then the land would revert to the original grantor.[35] While land tenure was limited to usufruct rights, the crops grown on land were privately owned. Recognition of the landowner (the stool) was a condition of enjoying use-rights.[36]

Pressures on land from cash crop production and other economic opportunities such as foreign mineral production led to transformations in indigenous property ownership, starting in the coastal region. For example, according to indigenous law, minerals were owned communally by the stool; those permitted to extract minerals were obliged to hand over to the stool chief a share (usually a third) of the output. But by the end of the nineteenth century foreign mining interests had successfully persuaded chiefs to accept annual rent instead of a share of the output. Indigenous land law was dynamic, and stool boundaries were also changeable.[37] That said, the 1897 Agreement did not fall

[33] PRO CO 879/57/578, Chamberlain to Governor F.M. Hodgson, 11 August 1899.
[34] This was in marked contrast to the situation in the Northern Territories, where a 1904 ordinance vested all the land and minerals in the Crown. The Concession Ordinances for the Gold Coast (1900) and Ashanti (1903) were not applied retrospectively to any existing concession such as AGC's. S. Berry, *Chiefs know their boundaries: Essays on Property, Power, and the Past in Asante, 1896 –1996*, Portsmouth: 2000, pp. 5, 6.
[35] Howard (1978), p. 38.
[36] G. Austin, *Labour, Land and Capital in Ghana: From Slavery to Free Labour in Asante, 1807-1956*, Rochester: University of Rochester Press, 2005, p. 99.
[37] Berry (2000), pp. 6, 7; Austin (2005), pp. 100, 258-61.

within indigenous land law; nor did it comply with the limited rights of government to land according to existing Gold Coast legislation at the time.

Peculiar aspects of the 1897 Agreement

Some immediate legal issues and inconsistencies are apparent in the 1897 contract. First, the owners of the land were *not* party to the contract, that is the Adansihene and the Bekwaihene. Yet, the contract stipulates that rent is to be paid to them. This consideration acknowledged the chiefs' land ownership rights while simultaneously excluding them from the Agreement.

Second, the Agreement states that the British government had the authority to grant the occupation of land as if it had come into Crown possession. The basis of this authority is unclear; if it was due to conquest then why did the Agreement attribute rental income to the chiefs rather than to the Crown? This is inconsistent and contradicts the existing indigenous Ashanti land laws and the British laws for the Gold Coast Colony at the time.

Third, the Agreement labels the parcel of land as "unoccupied". The meaning of this was unspecified and the reality of this was quite the opposite. AGC's first manager, John Daw, found Africans at the location chosen for the start of operations.[38]

Fourth, while granting wide rights of use to AGC, the Agreement made this "subject in every respect to the existing rights of any native or natives in respect of the said land or any part thereof". These native rights were left undefined, yet they were given superiority over AGC's activities. With the passage of time AGC was confronted with events on the ground, particularly in connection with this native rights clause, that threw the irregularities of the 1897 Agreement into sharp focus.

Existing occupation rights

When Cade, Daw and their European workers arrived at Obuasi, a location chosen because of the existence of indigenous mine pits and workers, Daw wrote that they had to throw Africans living there off the land along with about a thousand

[38] MS24669, John Daw, report on expedition, 12 December 1898.

gold workers.[39] It is interesting that the future Concessions Ordinance, although not applicable retrospectively to AGC, expressly called for compensation to be paid to natives with regard to giving up their habitation, otherwise the government could withhold the certificate of validity.[40] In 1904 the AGC manager wrote to the Chief Commissioner of Ashanti acknowledging the right of Bekwais and Adansis to settle on the property without paying any ground rent; that would only be charged to outsiders.[41] In 1924 when AGC's general manager, G.W.E. Turner, asked the District Commissioner (DC) of Obuasi for help to evict unwanted settlers he admitted that the 1897 agreement did not give the firm powers to evict, and hence the need for the government's support in the situation - which, it would seem, was forthcoming.[42]

Existing ownership rights

Out of the 100 square mile plot AGC initially only mined a small two square mile area. In the early 1930s activities had only reached seven square miles. As the mine expanded its use of the land, not for mining, but to cut timber for fuel purposes and later to establish reforestation plantations,[43] they faced increasing complaints from locals.

By 1929 the £66 paid to the Adansi Omanhene was being shared equally between him, the Akrokerrihene and the Edubiasihene. Obuasi village itself was Akrokerri land. The mine workings at Sansu and Ayeinm villages were Edubiasi land. The Adansihene likely agreed to share his rent with these sub-chiefs because from the company's arrival in 1897 AGC was visibly conducting mine operations first at Obuasi and then at Ayeinm.

In 1932 the Ayasihene, another sub-chief of Adansi, protested to the DC that AGC were cutting his trees without permission or consideration near the Rivers Jimi and Pampora.[44] The reply he received, to his astonishment, was that AGC was within their rights as that land lay in their 1897 concession. If that was the case, the Ayasihene enquired, then why did he not receive a share of AGC's

[39] Ibid.
[40] Concessions Ordinance (1939) pgh. 8, s. 12.
[41] ARG 1/5/1/2, Daw to Chief Commissioner Ashanti, 19 May 1904.
[42] ARG 7/5/59, notes to DC from G.W.E. Turner, 2 December 1924.
[43] ARG 7/5/60/1, AGC GM to DC regarding reforestation plans of about 4 square miles a year, 3 January 1941.
[44] ARG 7/5/60/1, Ayasihene to DC, 3 August 1932.

rent or royalty?[45] The Akrofuomhene later made a similar protest. Eight of his villages had "been included in the concession lands of the Ashanti Goldfields Corporation Ltd, Obuasi without being sold by my predecessors, or leased to the aforesaid Mining Company. And that my Stool has never had a share of the Concession Rents..." [46] Other Adansi claimants, the Adontenhene and Dompoasihene, would later state their cases.[47]

Ayasi land lay between Edubiasi and Akrofuom. AGC's pumping station was wholly on Ayasi land.[48] The DC's advice to the Ayasihene was to appeal to the Adansihene for a stake in the rent, and not to AGC.[49] The problem was that the three chiefs already sharing the Adansi rent of £66 refused to share it further.[50] Disputes between Adansi division chiefs over their entitlements to AGC rent and royalty would rage for decades.[51] Adansi differed from other Ashanti polities in that it had a long history of relative decentralization, with the Adansihene being only marginally more powerful than the leading sub-chiefs (unlike the Mamponhene, for example).

From 1939 until 1956 Adansi's £66 rent was held by the treasury in Kumasi until the chiefs could establish their claims either amicably or, it was suggested, through the Native Court at Fomena, to decide how to distribute it equitably amongst them.[52] It is interesting to note that one of the driving forces behind the restoration of the Ashanti Confederacy Council and the return of the Asantehene from exile was the hope that a revived central authority would help to settle such divisional disputes. In Adansi's case this failed. A possible explanation for this could be that the Asantehene only added to the list of claimants for a share

[45] ARG 7/5/60/1, DC to Ayasihene, 6 August 1938.
[46] ARG 7/5/60/1, Nana Osei Bonsu, Akrofuomhene to DC, 17 September 1939.
[47] ARG 7/5/60/1, Adansihene, Kwaku Nkansah II, to Edubiasihene and Akrokerrihene, 21 March 1940; Adansihene to DC, 2 February 1941.
[48] ARG 7/5/60/1, Ayasihene to DC, 23 January 1940.
[49] ARG 7/5/60/1, Assistant Treasurer Obuasi to the District Treasurer Kumasi, 6 February 1929; District Commissioner Bekwai to DC, 9 February 1929; Akrokerrihene's linguist to the DC, 9 February 1929; Edubiasihene to DC, 11 February 1929; memo, Assistant Treasurer Kumasi to Sub- Accountant Obuasi, 3 May 1933; DC to Ayasihene, 26 January 1940.
[50] ARG 7/5/60/1, Ayasihene to DC, 22 August 1930.
[51] ARG 7/5/60/2, see Akrokerrihene to Government Agent Obuasi, 18 January 1954; Government Agent Obuasi to Government Agent Bekwai, 22 November 1954; Government Agent Obuasi to Government Agent Bekwai, 27 April and 15 May 1955; Berry (2000), pp. 8, 9.
[52] ARG 7/5/60/1, DC to Adansihene, copied to claimants, 30 October 1940.

of AGC's fortunes, and could therefore have been perceived as a rival rather than a helper.[53]

AGC were largely shielded from these chieftaincy conflicts thanks the to the stipulation in the 1897 Agreement that the Colonial Treasury would be the medium through which the rent was received. The company was thus spared the anger of the local chiefs evident in the extensive correspondence between them and the government administrators. Throughout the suspension of Adansi rent distribution the company's conscience was clear as it continued to make yearly payments to the Kumasi Treasury. The impasse was broken in 1956 when the Adansi council, created by the Local Government Ordinance (1954), started to receive the rent as well as the arrears held in Kumasi.

The underlying problem in these disputes was the fact that the rightful owners of the entire 100 square mile plot were not party to the 1897 agreement. For the Omanhene of Adansi to prove his legal claim to the whole £66 it was realised that the parties to the contract (which did not include him) would have to go to court on his behalf, including the Governor.[54] But there was no obvious incentive for the parties to the original contract to start litigation for the Adansihene's benefit. As Governor Maxwell had assumed authority to grant occupation of the land no efforts had been made to ascertain who the occupants and owners were back in 1897.[55]

Most of AGC's gold workings were in Adansi territory: the £133 to £66 division of rent between Bekwai and Adansi inadequately reflected this. It was only in 1942 that the Adansihene learnt that Bekwai, owning less than one tenth of the AGC concession area (and where no mining was undertaken) received

[53] ARG 1/4/5/10, draft letter Chief Commissioner Ashanti to Colonial Secretary, n.d. but likely 1931; c.f. J. Dunn and A.F. Robertson, *Dependence and Opportunity: Political Change in Ahafo*, Cambridge: Cambridge University Press, 1973, pp. 53-55, 259.
[54] ARG 7/5/60/1, Adansihene to DC, 25 November 1940 and 5 February 1941.
[55] It could be argued that the Omanhene of Adansi was the sole owner, and the sub-chiefs only custodians of their smaller areas, but according to indigenous land practice sub-chiefs held allodial, or 'absolute' rights of transaction, so long as the Omanhene received a share of the benefits. The Concessions Ordinances of 1900 and 1903 recognised this and required notice of proposed concessions to be given to all occupants and local chiefs. In compliance with this, AGC negotiated with the appropriate sub-chiefs when seeking firewood concessions neighbouring the 100 square miles plot: see for example ARG 7/5/42, AGC GM, to District Commissioner Bekwai, 24 August regarding separate payment of firewood concession royalties to Bekwai, Adansi and Akrokerri Native Authority Treasuries; 26 January 1954 firewood royalties receipt for Akrofuom local council from AGC to Assistant Government Agent. Local stools made more money out of firewood concessions which paid rent and royalties than from mining rent and royalties. For example, Akrofuom firewood royalties in April 1953 totalled just under £90 whereas they received nothing from AGC: ARG 7/5/42, 27 April 1953.

twice as much rent as him.[56] AGC did react in a small way to the inequity by granting a 'voluntary yearly bonus' to Adansi of £34 from 1932 which was paid directly to him.[57] By framing the additional money as a bonus, rather than rent, AGC maintained the terms of 1897 intact. As a later DC observed, the allocation of rent according to the 1897 Agreement was not based on land ownership.[58] The Akrokerrihene rightly voiced to AGC, "neither the Edubiasihene's name nor mine is embodied in the Agreement, but there is no earthly reason why the actual owners of the land should not be signatories to an agreement which covers their land."[59]

In a draft letter to the Colonial Secretary, probably written in 1931, the Chief Commissioner of Ashanti expressed his own opinion that the Adansi rents from AGC were "meagre," "inequitable" and anomalous.[60] He stated that other mines in Ashanti paid more to native landowners than AGC. As a remedy, he suggested that the government make a contribution of about £20,000 out of the royalty payments received (totalling £36,000 in 1931) to the Golden Stool as a special fund out of which the Adansis could receive a fair income and Ashanti as a whole would benefit.

Existing farming rights

An existing native right that the 1897 Agreement surely meant to uphold is what is termed in Twi *didi asaseso* - the right given by stools to their subjects, and even to aliens, to grow food. As Austin explains with respect to food farming "cultivation rights were virtually a free good."[61] As AGC initially concentrated mining activities in a small area the encroachment of *didi asaseso* was gradual.

AGC received approval from local administrators to impose a farm rent of one penny per bearing cocoa tree within the 100 square miles,[62] which was the standard rate paid to landowners in Ashanti in this period.[63] By the 1940s AGC

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[56] ARG 7/5/60/1, Adansihene to DC, 20 May 1942; Acting DC to AGC GM, 14 September and reply 19 September 1944.
[57] MS 14170/61, Secretary to acting mine manager, 9 August 1932; ARG 7/5/60/1, AGC GM, to the sub-accountant, Obuasi 22 February 1946.
[58] ARG 7/5/60/2, Government Agent Obuasi to Government Agent Bekwai, 27 April 1955.
[59] ARG 7/5/63, Akrokerrihene to GM, 1 March 1951.
[60] ARG 1/5/4/10, draft letter Chief Commissioner Ashanti to Colonial Secretary, n.d. but likely 1931 as it mentions the death of Asantehene Prempeh.
[61] Austin (2005), p. 103.
[62] ARG7/5/59, AGC GM, to DC, 12 February 1922.
[63] Austin (2005), pp. 263-4.

was issuing farming permits to those farming within their boundaries at a cost of one shilling a year. These fees were strongly protested by the Adansihene and sub-chiefs because they were the landowners (not tenants) who ought to have been receiving such rent.[64] AGC's motive was not the income from the cocoa trees and farms but rather to reaffirm their 1897 rights. The company claimed that only out of good grace and "not of right" that they paid some compensation to farmers when they cleared land within their concession.[65] The DC by this time wrote to AGC questioning the application of farm charges since "the Adansis had existing farming rights on the area when the concession was taken out."[66] The local administrators continued to receive complaints from Africans and requests for compensation for the destruction of crops. One case detailed by a linguist of the Akrofuomhene on 22 April 1947 to the DC mentioned that although AGC had paid £9 compensation for an area of one square mile the company had destroyed cocoa trees along with food plants (plantain and cocoyam) and failed to allow them the chance to harvest, leading to hunger.[67] AGC were adamant that they were not touching working farms, but this did not include abandoned farms.[68] Therein lay the confusion. What may have looked to the European eye as abandoned may not have been. AGC likely did not understand the land rotation cultivation practices used for food crops nor the method of planting crops irregularly without fenced boundaries that was customary. Cocoa farmers may also have left trees infested with capsids temporarily to return to them at a later date, as this was one method of dealing with this pest.[69]

The company had an ever-increasing need for wood fuel until the 1950s when greater use started to be made of oil-generated electricity. Prior to this there were yearly extensions of tramways deeper into the forest to extract wood. In 1941 it was decided to start a reforestation programme in areas closest to mine operations to reduce wood transport costs.[70] The General Mines Manager wrote with assurances to the DC that the company would pursue reforestation without

[64] ARG7/5/59, Adansi Omanhene to DC, 27 September and 6 November 1922; ARG 7/5/62, 28 July 1943 and 30 August 1943 from Odikro of Kwapia to DC.
[65] ARG 7/5/62, AGC to DC, 23 November 1942.
[66] ARG 7/5/62, DC to AGC, 14 September 1943.
[67] ARG 7/5/62; for another example see K. K. Benyin to DC, 21 October 1947.
[68] ARG 7/5/62, Acting AGC GM, to DC, 15 April 1944.
[69] Austin (2005), p. 81.
[70] ARG7/5/60/1, AGC GM, to DC, 3 January 1941.

affecting any food farms and that they would only take over 'abandoned' cocoa farms.[71] At least by their words AGC was aware of native rights to grow food.

With the growing level of complaints one DC hesitated to give AGC the benefit of the doubt. In 1943 the DC questioned AGC's reforestation plans. Reforestation was not an activity explicitly permitted in the 1897 Agreement and therefore the project needed the Governor's written approval. Furthermore if this was granted he reminded the firm that it would need to be carried out "with due regard to the existing rights of any native."[72] The DC agreed with the Adansihene that 1897 did not give AGC complete surface rights,[73] and particularly concerning food crops it was imperative to maintain good availability of local food in the area. Yet without the use of sanctions to support such words the continued complaints from Africans show that AGC were allowed to exercise their private rights unattenuated.[74]

Existing gold mining and goldsmithing rights

Gold production and smithing were recognised by the colonial administration as long-established indigenous industries in the Obuasi area.[75] AGC tried with some success to use the 1897 Agreement to impose controls over small-scale African mining and goldsmithing within the concession. They were able to restrict goldsmiths through the issue of licences, although the company regularly complained about individuals operating in the vicinity without an AGC licence.

One acting Colonial Secretary was of the view that where mining operations were not being carried out by AGC on the property (they were working less than one tenth of the plot) then the natives maintained rights to mine gold; if AGC were later ready to use those areas they could take them over without compensation.[76]

[71] Ibid.
[72] ARG7/5/62, DC to AGC GM, 21 June 1943.
[73] ARG7/5/62, DC to Chief Commissioner Ashanti, 18 December 1942.
[74] The best example of unattenuated rights, not discussed in this chapter but revealed in Chapter 3, 'A Chronological Narrative', was AGC's ability to get away with polluting the environment without facing any of the costs. It was not until the 1897 Agreement was replaced in 1969 that small, arguably inadequate, steps were taken towards changing this. From the mid-1980s IFC oversight and funding ushered in proper environmental repairs and pollution prevention.
[75] CSO19/2/2, Chief Commissioner Ashanti to Colonial Secretary, 15 January 1932.
[76] ARG7/5/68, Acting Colonial Secretary to Acting Chief Commissioner of Ashanti, 10 October 1923.

Local goldsmiths resented having to apply to AGC for a licence in addition to a government licence. African goldsmiths in the other gold mining areas did not have to suffer this extra bureaucracy and imposition.[77] AGC's defence was that it needed to stop illicit gold trading and furthermore, licensing goldsmiths was a right attached to their 1897 concession agreement.[78]

Existing trading rights

AGC created the Ashanti-Obuasi Trading Corporation (AOTC) as a separate company in 1904 and transferred to it the trading rights contained in the 1897 Agreement. AOTC was the only large-scale European trader allowed to operate within the concession until 1952.

The debate about AGC's monopoly trading rights started soon after 1903 when the government moved the Commissioner for Southern Ashanti, Captain C. H. Armitage, from Kwisa to Obuasi because of the latter's growth. Obuasi was then placed under the rules and regulations of the Ashanti Administration Ordinance (1902). Armitage initially ordered the AGC mine manager to stop issuing trading licences (and collecting ground rent). However, following a series of conferences with the Resident at Kumasi, Captain Donald Stewart, and with Governor Matthew Nathan's approval, it was agreed to allow the company to continue with these actions provided that Bekwais and Adansis were not targeted. From 1910 the District Commissioner of Obuasi issued each trading licence, but only with AGC's written approval.[79]

From this early juncture there followed a series of complaints from Africans and Europeans.[80] The opinion of the local administration was that although a monopoly existed, and "all monopolies are theoretically bad", AGC's monopoly was not detrimental to the local people.[81] Several lines of reasoning were given to support this view of the District Commissioner of the time: it was in AGC's interest to keep staff supplied with cheap and plentiful goods; the AGC

[77] ARG 9/5/2, Obuasi Urban Council to Government Agent Obuasi attached to Chief Regional Officer to Ministry of Commerce and Industry, 6 October 1953; Government Agent Obuasi to Government Agent Bekwai, 14 October, 16 November, 30 November 1953; Chief Regional Officer to Government Agent Bekwai, 18 March 1954.
[78] ARG 9/5/2, AGC to Government Agent Obuasi, 14 October 1953; Chief Regional Officer to Government Agent Bekwai, 18 March 1954.
[79] PRO CO 96/684/1, 'Memorandum as to trading rights, AGC'.
[80] MS 14164/4 minutes, 9 May 1911; 16, 30 April, 14, 28 May 1912; vol. 6, 25 October 1927.
[81] ARG7/5/68, DC to unnamed but probably provincial commissioner Kumasi, 21 May 1929.

concession area was only five miles by twenty, so people did not have to go too far to find alternative tradesmen; and a comparison between basic goods bought from AOTC in Obuasi and from other retailers in Kumasi found that AOTC sold dearer cement and spirits but cigarettes, sugar, milk and groceries were generally cheaper.[82] Opposing arguments from the chiefs were that the lack of competition retarded the development of the area,[83] as other traders would create positive agglomeration and population effects.

AGC controlled its trading rights through the Obuasi Sanitary Board which was run as a joint corporate-government committee including the AGC general mine manager. The Obuasi Sanitary Board issued trading licences to individual Africans (petty traders, not large store owners) subject to the approval of the AGC general manager. These trading licences in 1929 cost 2s/6d per month. Adansis and Bekwais, as well as strangers, faced the same charge. This was in breach of the earlier "understanding" reached between the firm and government that trading licences would only be issued to aliens, that is non Adansis and Bekwais.[84] (Exactly how the company were to distinguish Adansis and Bekwais from other Africans was never addressed in the documents and perhaps shows the government's lack of genuine practical concern). But AGC refused to formalise this "understanding" with a Supplemental Agreement that would in any way modify or dilute the original 1897 Agreement.[85]

At the heart of the issue was whether the "existing rights" of Bekwais and Adansis before 1897 did or did not include trading. As with the other rights discussed above, official opinion and action vacillated. In 1913, F. C. Fuller, Chief Commissioner of Ashanti wrote a 'Memorandum with reference to the trading rights of AGC Ltd' expressing his personal view that "There is no doubt whatsoever, in my own mind, that natives of Bekwai and Adansi retain full trading rights over their respective possessions".[86] In other words, AGC via the AOTC, only enjoyed a partial monopoly. The monopoly applied to every alien besides the native owners of the soil. However, Fuller did not press the issue, because for one thing, there were many individual petty traders who operated with or without a trading licence. Furthermore, if the government fought too strongly

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[82] Ibid.
[83] Ibid.
[84] ARG7/5/68, F. C. Fuller, Chief Commissioner of Ashanti, 'Memorandum with reference to the trading rights of AGC Ltd', 18 December 1913.
[85] ARG7/5/68, C. W. Mann, AGC Secretary, to C. H. Armitage, DC Obuasi, 6 May 1909.
[86] ARG7/5/68, 18 December 1913.

for general trading rights against AGC's will, the firm might withdraw its cooperation and monetary assistance for the Obuasi Sanitary Board and the government would then have to meet the full cost of upkeep, sanitation, administration and policing of the Obuasi township.[87] AGC's real concern seems to have been to exclude coastal traders who represented European companies from operating within their concession.[88]

It is only on the issue of existing native rights to trade that we see an official refutation of AGC's interpretation of the 1897 Agreement. But even here government's words in London and on the spot had no bite and made no impact on the company's actions. The official stance first voiced in 1904, backed by the opinion of the Crown Law Officers in 1913,[89] and repeated in 1929 was that the government had repudiated AGC's trading monopoly in principle, although this was of "little *practical* effect"(emphasis in original).[90] The repudiation was not to be made public knowledge.[91]

Despite the official anti-monopoly stance, the colonial authority's responses to enquiries about trading in Obuasi remained inconsistent. Société Commerciale de L'Ouest Africain (SCOA) was informed by the Colonial Secretary in 1928 that "AGC does not have monopoly trading rights". [92] Less than a month later, a Mr T. Filson representing an American firm interested in buying cocoa in the area was told by the DC to apply to AGC for permission because the firm held monopoly trading rights.[93] When the matter was referred to the Chief Commissioner of Ashanti he informed the American that AGC had no monopoly, however, "no firms other than AOTC have traded or are trading within the concession."

AGC were angered by any loose interpretation of the rights of Adansis and Bekwais.[94] They were conscious to reassert their understanding of 1897 at every

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[87] ARG7/5/68, C. W. Mann, AGC Secretary to Acting Chief Commissioner Ashanti, 26 October 1909; FC Fuller, Chief Commissioner of Ashanti, 'Memorandum with reference to the trading rights of AGC Ltd', 18 December 1913.
[88] ARG 1/5/1/1, Acting Chief Commissioner Ashanti to Acting Colonial Secretary, 29 November year not given but 1909.
[89] ARG 1/5/4/9, Undersecretary of State, Downing Street to AGC, 26 July 1913.
[90] ARG 7/5/68, Governor Nathan to John Daw, 6 February 1904; Colonial Secretary to DC or to Chief Commissioner Ashanti (unclear), 2 April 1929.
[91] ARG 7/5/68, Colonial Secretary to DC or to Chief Commissioner Ashanti (unclear), 2 April 1929.
[92] ARG 1/5/4/10, Colonial Secretary to Société Commerciale de L'Ouest Africain, 8 March 1928.
[93] ARG 1/5/4/10, DC to Mr T Filson, 4 April 1928.
[94] PRO CO 96/684/1, Turner to Colonial Secretary 15 January 1929; Morgan, AGC Secretary to Undersecretary of State, 10 July 1929.

opportunity. For example, when the company surrendered land to the government for public buildings the surrender deed was always made subject to the retention of their trading and mining rights.[95] The extent of AGC's trading rights was yet a further example of the ambiguities and confusion surrounding 1897. The debate on trading rights rumbled on for decades, re-emerging whenever third parties raised objections.

Following the admission of Africans to government in 1951 the Obuasi Urban Council attempted to put government pressure on AGC via the ministry of commerce and industry for the company to abandon voluntarily the trade monopoly.[96] The issue was raised in the Legislative Assembly by the local member for Adansi, N.B. Abubekr.[97] AGC, no doubt responding to the nationalist political changes, allowed a small Co-operative Wholesale store to open in Obuasi early in 1952.[98] And then, after obtaining AOTC's consent, AGC placed an advertisement inviting trading companies to apply for a limited number of licences.[99] Applications were received from the Union Trading Company , Bata Shoe Company, SCOA, Adansi Consumers' Cooperative Society Ltd and a Syrian businessman, Abdul Wahab.[100] Three licences to compete with AOTC were granted to the Adansi Coop, Union Trading Company and Bata.[101] While AOTC interpreted this as an abandonment of AGC's trade monopoly AGC saw it as continued control over the exercise of their rights, since *they* retained licence granting and issuing powers.[102]

When an Indian set up shop without a licence, AGC sought to evict him but received local legal advice that "nothing could be done about it".[103] Determined not to set an undesirable precedent they decided on a pragmatic

[95] MS14170/94, Secretary to GM, 19 December 1951; MS14170/96, Secretary to Acting GM, 15 January 1953; MS14170/97, Secretary to GM, 2 July 1953. The company intentionally avoided drawing government's attention to section 3e of 1897 which gave the government full rights to take back land within the concession for public purposes, without any compensation (except that deemed reasonable by the Governor for any improvements made or buildings erected). AGC's lawyer's cleverly recommended the use of surrender agreements in these cases rather than to give up the land by assignment specifically because a surrender agreement could be made subject to the key rights enjoyed from 1897.
[96] ARG 7/5/63, resolution of the Obuasi Urban Council to the Minister and Government Agent Obuasi, 12 August 1952.
[97] ARG 9/5/2, general manager UAC Ltd to Ministry of Commerce and Industries, 6 October 1952.
[98] ARG 7/5/63, Government Agent Obuasi to Government Agent Bekwai, 27 August 1952.
[99] MS14170/93, Secretary to Acting GM, 28 September 1951.
[100] MS14170/94, Secretary to GM, 17 January 1952 and 27 March 1952; vol. 95, 11 July 1952.
[101] MS14170/95, Secretary to GM, 11 July 1952.
[102] MS14170/9, Secretary to GM, 13 October 1952; MS14170/98, Secretary to GM, 29 January 1954.
[103] MS14170/97, Secretary to GM, 6 November 1953, 13 November 1953, 11 December 1953.

softly-softly approach and asked the trader to regularise his operation by applying for a licence with assurances that it would be forthcoming.[104]

With the changing political context in the Gold Coast and Ashanti after World War II, the colonial government's obligations to wider stakeholders, besides expatriate business, grew. The government was increasingly sensitive to African protests, which is evident in their changing public stance on AGC's trading rights. Although it had been tolerable in the 1920s to keep their criticisms of AGC's monopoly rights private, by 1951 the administrators felt that it was time for a "show down" and a *public* statement by government declaring that AGC did not legally have exclusive trading rights. Nationalism had made the previous approach politically dangerous.[105]

Legal opinions sought

The above discussion showed the variety of ways in which the 1897 Agreement's concern for existing native rights were ignored, misunderstood or unclear. Some in government believed that the 1897 Agreement was illegal. In a letter stamped 'secret' from the Chief Commissioner of Ashanti to an unnamed recipient (probably the Governor, Sir Alexander Ransford Slater, since it was addressed to a Sir) in 1929, the Commissioner's conclusion was that the 1897 Agreement was invalid.[106] Nearly two decades later, Chief Commissioner of Ashanti, E. G. Hawkesworth wrote to the Acting Colonial Secretary, Captain V. J. Lynch: "I gather from an unofficial source that counsel's opinion in London has been sought and that it is to the effect that there is considerable doubt as to Government's right to grant the concession to the Ashanti Goldfields Corporation."[107] This may have been the official belief but it was not transmitted to the local chiefs for in July 1949 the Acting Chief Commissioner of Ashanti informed the Adansis through the DC that the British government had acted appropriately in connection with 1897 and that the Agreement was "not open to challenge by way of petition".[108]

[104] MS 14170/97, Secretary to GM, 6 November 1953.
[105] ARG 1/5/4/10, 30 August, year not given but 1951 from permanent secretary to the ministry of commerce and industry to Chief Commissioner Ashanti.
[106] ARG 1/5/4/9, 2 June, year not given but 1929.
[107] ARG 1/5/4/10, 18 October 1945.
[108] ARG 7/5/60/1, Acting Chief Commissioner to DC, 5 July 1949.

The local chiefs were not passive and had spent significant sums on their own legal advice in Kumasi as well as in London.[109] The Adansihene had sought legal clarification on whether 1897 specified how the rent was to be shared with sub-chiefs and whether AGC's title to the land was good.[110] Despite requests to AGC for a copy of the 1897 Agreement the company always hesitated to provide this.[111] The solicitors acting on behalf of the Adansihene concluded after two years of enquiries that it was too late to claim that AGC's title was bad. This was because the Agreement had not been contested by their client or his forebears in nearly 50 years, during which time the stool had accepted rents (up until 1939). The legal team, however, appealed to the Secretary of State to pay the stool a larger rent. The Gold Coast government replied that they were not prepared to pursue the matter, advising the Adansis to approach AGC directly for any discussion of an increase.[112] The Adansihene also learnt from his lawyers that 1897 contained no details on if, and how, he was to share his £66 rent.

A new dimension to the Adansis protest emerged. In a show of unity, eight Adansi sub-chiefs along with the Adansihene and Adansihemaa (Queen Mother) wrote to the DC that they would not take receipt of the rent held by Kumasi Treasury since 1939 originally because of division disputes, but now also because they wanted to contest the paltry amount of £66. If AGC's title was good, they wanted consideration to be given to their development needs bearing in mind the profitability of AGC and the fact that government was receiving a 5% gross royalty. They charged the government with failing to have protected their interests as an "uncivilised race" and British subjects.[113] The Africans had drawn the behaviour of the British government back in 1897 into the debate. To try to get to the bottom of the matter an Acting DC asked AGC for copies of the original agreement between the Bekwaihene and Ellis, Brown and Biney of 3 March 1890, and the subsequent agreements in August 1895, but these were not delivered (and copies apparently could not be found in the colony).[114]

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109 ARG 7/5/60/1, DC to Adansihene 13 March 1944; Adansihene to DC 14 February 1944; DC to Chief Commissioner Ashanti, 12 May 1944.
110 ARG 7/5/60/1, DC to Adansihene, 13 March 1944; Adansihene to DC, 14 February 1944; DC to Chief Commissioner Ashanti, 12 May 1944.
111 ARG 7/5/60/1, DC Obuasi to Ayasihene, 27 February 1941; ARG 7/5/60/2, Dompoase local council to Lands Dept and Government Agents at Obuasi and Bekwai, 6 May 1958; MS 14170/91, Secretary to Dawsons and Co, AGC solicitors, 2 November 1950.
112 ARG 7/5/60/1, J. J. Peele and Co. to Adansihene, 22 August 1946.
113 ARG 7/5/60/1, Adansihene and other chiefs to DC, 26 September 1945.
114 ARG 7/5/60/1, Acting DC to AGC GM, September 1948.

With specific reference to the monopoly trading rights element of the 1897 Agreement, AGC approached their own lawyers, and the Crown Law Officers were approached by the government. Although this legal conclusion on monopoly trading went against AGC it did not materially affect their practice of limiting trade licences until after 1951, when African political pressure led to change, albeit allowing the firm to retain extensive measures of trading controls.

It was recognised by AGC and the government (the only surviving parties of the 1897 Agreement) that judicial intervention would be needed in order to clarify the ambiguities of 1897 once and for all. "The only way to test the matter will be to take it into Court", wrote J. E. W. Flood at the Colonial Office, adding that AGC behaved "as though they have been given landlord rights over the whole area. I do not think that they would succeed in a claim that they had such rights; but again, in the last resort it would have to go to the Courts."[115]

Stalemate

Neither the government nor AGC chose to take that legal step. As AGC's Secretary put it with respect to trading rights, but equally applicable to the rest of the 1897 Agreement, "We have always firmly maintained our claim to full and exclusive Trading rights, but have never been anxious to do more than this. Nor have Government been prepared to take the matter to the Courts."[116]

It would have been in AGC's interest to legally prove the validity of 1897 in its entirety in order to protect its rights and continued operations: unless they realised the Agreement rested on shaky legal grounds, in particular their monopoly trading rights and their interpretation of other 'existing native rights', in which case instigating legal action would have been foolish. AGC repeatedly avoided dissemination of the Agreement,[117] and they consciously avoided drawing the local administrators' attention to the government's rights therein.[118] The company's oft-repeated argument was that Governor Maxwell had full rights to

[115] PRO CO 96/684/1, J.E.W. Flood of Colonial Office to a Mr Bottomley (status unclear, likely a Law Officer), 5 March 1929.
[116] PRO CO 96/684/1, Morgan, AGC Secretary, to Undersecretary of State, 15 May 1929; MS 14170/91, Secretary to Park, 16 November 1950.
[117] MS 14170/63, Secretary to mine manager, 17 October 1933; vol. 91, Secretary to Dawsons and Co, AGC solicitors, 2 November 1950.
[118] MS14170/91, Secretary to Park, 16 November 1950; vol. 94, Secretary to GM, 19 December 1951; vol. 96, Secretary to Acting GM, 15 January 1953; vol. 97, Secretary to GM, 2 July 1953.

grant the concession and all the terms contained in 1897 because Adansi and Bekwai were under his authority.[119]

It would have been in the government's interest for the validity of 1897 to be upheld to justify their collection of AGC's significant royalties, which by 1945 had amassed to £1.7m, to the exclusion of the Bekwais and the Adansis. It seems that the strongest justification for the imposition of 5% *gross* royalty on AGC was the view that the government held land and mineral rights. As discussed above, this standpoint was rejected in the Lands Bill, but in the case of AGC's plot the 1897 Agreement gave such rights to Governor Maxwell on behalf of the Queen.[120] The much reduced 5% royalty on *net profits* later enacted in the Concessions Ordinances reflects the government's limited role as a regulator of mining activity rather than as a legal owner of land or minerals. The unusually generous terms of the government's royalty from AGC would be at risk if the 1897 Agreement was invalidated. Any redefinition of the 1897 rights would have had positive and negative wealth effects. So a stalemate situation arose and both parties, the Colonial Office and AGC, decided to do nothing.

The ambivalent 1897 agreement was replaced in 1969 with a new mine lease concluded between the Ghana government, Lonrho Limited and AGC.[121] The legal framework underpinning this agreement was the Minerals Act 1962 which vested in the President of Ghana, on behalf of the people, all minerals and waterways.[122] Unlike 1897 this agreement was strictly a mineral and timber lease. No mention was made of any local chiefs. However, it seems an occupational rent of ¢30,000 per annum was paid to the Adansi stool (see Chapter 3, 'A Chronological Narrative'). This diminished the greatest grievances of 1897.

Property rights predictions reviewed

AGC did indeed attempt to increase the exclusivity of their rights and to enforce these. This was demonstrated in the control of trading rights, goldsmith licences,

[119] PRO CO 879/57/578, Hodgson to Chamberlain 4 January 1900, enclosure, Daw to King of Bekwai 8 June 1899; ARG 1/5/4/9, AGC GM, to DC, 28 July 1923.
[120] 1897 Agreement, sixth and seventh paragraphs. The fact that Condition 3e in the Agreement allowed government to repossess land within the concession *without* paying compensation also suggests that government were staking ownership rights in the land itself.
[121] 'Agreement and Lease dated April 15 1969 between the Government of the Republic of Ghana in trust for the people of Ghana and Ashanti Goldfields Corporation Limited and Lonrho Limited', Lonmin, 4 Grosvenor Place, London.
[122] The Minerals Act 1962, Act 126, Laws of Ghana.

and rent collection for crops. They were able to enforce these control measures with pragmatism, obfuscation, and at times with the active support of the local colonial administration. Often their success was down to the government's *inaction*, as was seen in the government's stance over monopoly trading rights until nationalist political pressure forced AGC to advertise a limited number of available licences. The changeover from a colonial government to Nkrumah's post-colonial CPP government failed to rectify the inequities and ambiguities of the 1897 Agreement. This was for a number of reasons. First, Nkrumah was keen not to isolate foreign capital even as his socialist leanings grew – AGC was the most important company in Ghana's most significant industrial sector;[123] second, Nkrumah and Spears had built up a good personal relationship enabling the chairman to speak frankly to the head of state on his annual visits with the aim of protecting and improving AGC's lot;[124] third, at the time of Independence the mine industry had just experienced its longest bout of industrial unrest in 1955-6 which led to the closure of the Tarkwa and Abosso gold mine, the oldest producing mine in the country. This awoke the new government to the impact of further closures on jobs and revenue, and as a result there was a desire to support AGC and other foreign mines rather than undermine their security.[125] Fourth, Nkrumah's leadership from the early 1950s had weakened the strength of chieftaincies by, amongst other things, introducing local government and judiciary reforms that competed with the status of chiefs. Thus, it can be argued that the voice of the Adansihene, already weak from his historically slim superiority over his sub-chiefs, was further quietened.[126]

That well-defined property rights are critical to promote economic activity was not found to be the case for AGC. Besides the 1897 document's lack of legal clarity vis-à-vis both indigenous Ashanti land law and existing British legislation in the Gold Coast Protectorate, there was also a lack of definition in the very boundaries of the concession. In connection with surface rights where AGC's private rights stopped and started and where African rights did remained unclear. Nevertheless, the ill-defined lease agreement did not hinder the growth of the mine's operations. It could be argued that the lack of clarity favoured AGC by

[123] Crisp (1984), pp. 128, 140.
[124] Egremont (1997), pp. 282, 307-9.
[125] Crisp (1984), pp. 119, 120, 126.
[126] R. Rathbone, *Nkrumah and the Chiefs: the Politics of Chieftaincy in Ghana, 1951-1960,* Oxford: James Currey, 2000, pp. 68, 69, 72, 110; Dunn and Robertson (1973), pp. 174-6.

allowing the firm to assert their own interpretation of their rights. No internal documentary evidence was uncovered to show that uncertainty over the 1897 document adversely affected AGC's investment decisions. To have reacted negatively to these uncertainties would have publicly shown that AGC believed it stood on weak legal ground. Instead, a bolder strategy was taken and AGC consistently behaved as freeholder landlords. The acceptance of this strong stance by third parties, however reluctantly, and the passage of time gave the company sufficient confidence to make expensive and long-term investment decisions such as the Pampora Treatment Plant completed in 1947, as well as the ambitious 5-year growth strategy planned in 1967.

Property rights are not only determined by formal laws and documents but by informal practices. AGC's behaviour as landlords and their insistence on not amending or supplementing the original document had a consolidating effect on their perceived rights and established a sort of accepted corporate custom.

The 1897 Agreement gave AGC a breadth of rights, however ill-defined, that were government-sanctioned and unique. This gave the company some competitive advantages over rival firms. The sheer size of the concession (compared with the five square miles permitted under the Concessions Ordinances) provided AGC with valuable timber resources and kept competitors at a reasonable distance reducing the competitive pressure on them for mine labour supply. These factors would have directly impacted their gold production costs. The paltry annual rents paid to African chiefs were also a boon; and the assertion of surface rights potentially put the company in a better position to control its environs and workforce, for example, by restricting goldsmith licences and the trade of alcohol exclusively to the AOTC (although the floating nature of the population in a mining town would have still posed significant challenges of labour control).

Summary

Secure title to property is seen as fundamental to economic activity in property rights theory. It was seen here that legally ill-defined property rights did not equate to insecurity of title. Security of title was provided not so much through the words of a formal document but from the choice of behaviour of the firm and government. Only determined political change in the late 1960s was able to set the 1897 Agreement aside.

CHAPTER 5: LABOUR

A PRINCIPAL-AGENT ANALYSIS OF CAPITALIST FREE LABOUR RELATIONS

This chapter assesses the contribution principal-agency theory can make to the Marxian/class approach of exploring the social relations of production. Tension between AGC and its workforce was at its worst in the decade or so after World War II, which is the historical focus of the chapter. The problems encountered by management at this time and the attempted solutions are explored within a principal-agent framework.

The start of AGC's operations in 1898 are of particular interest from an African labour history perspective because the firm's establishment created an industrial operation with opportunities for capitalist free labour market expansion in a region that was in transition from coercion as the dominant source of labour.[1] Free labour is defined here as the voluntary provision of labour by those who, lacking in land or capital, sell their labour for a wage that is dictated by the market. Such labour relations, particularly in an African mining context, have usually been analysed in a class, or Marxian, framework, [2] with a focus on occupational consciousness and the degree of proletarianisation.

From the outset Cade recruited day labourers in the form of carriers, general hands and skilled labourers such as carpenters and masons, some of whom were trained to be miners.[3] Competition from the British government's labour needs in Cape Coast made it difficult and expensive to secure carriers.[4] But it seems that for actual mine work in Obuasi, the company's first mine manager was able to remark in those early years that the supply of African labour was "amply sufficient".[5] Nevertheless, due to the limited equipment available and the inability to produce much gold in the first production year, AGC made use of pre-capitalist labour relations in the form of tribute workers, a type of tenant, from whom they obtained gold, it would appear in exchange for granting permission to continue

[1] Austin (2005), ch. 6.
[2] Perrings (1979); Crisp (1984); Freund (1981); Konings (1980); for a non-Marxist but a class emphasis see Lentz and Erlmann (1989), pp. 69-111.
[3] MS 24669, Daw's report to shareholders at EGM, 12 December 1898.
[4] MS 24670, Cade Letters, 24 November, 9, 10 and 25 December 1897.
[5] MS 14164/1, Daw to shareholders, 3 July 1899.

their traditional gold mining methods on AGC property.[6] It is also worth noting that the day labourers maintained flexibility to come and go as they pleased. Thus AGC's workers, initially drawn from the coast, Kroo men, and Sierra Leoneans,[7] maintained 'social security' links with home regions.[8]

Class analysis of capitalist labour relations has paid less attention to the intra- and inter-firm mechanisms that shape the capitalist-labourer relationship. Here is where principal-agent analysis can add insight because the theory pivots on the contractual ties and associated costs between capitalists and workers. These contractual ties are determined by intra-firm peculiarities as well as inter-firm, or market, considerations. The social relations of production are the chief concern of Marxist historians and principal-agent theory can contribute to that because it focuses on the human interface between capital and labour. Principal-agent analysis at the same time is able to reflect the power relations which are of great interest to Marxists by highlighting the mechanisms, or institutions, used to display and resist power. The connection between capitalist-labour relationships and principal-agency theory is not often made in the literature.[9]

Principal-agent theory was detailed in Chapter 1, a brief summary is provided here followed by a description of the various principal-agent labour relationships at AGC. The theory is used to explore the relationship between the firm and its African workforce at Obuasi between 1945 and 1957, which was the most turbulent period in AGC's labour history. The focus of the analysis is on the intra-firm institutional changes that evolved to mitigate the costs associated with capitalist-labour relations at this time.

Principal-agent theory

Principal-agency theory is a microeconomic theory that describes economic relationships of unequal power. The fundamental issue is that agents have knowledge but no incentives while principals have incentives but lack knowledge; effort is costly for agents which leads to slacking and other undesirable behaviour. The divergence between principal and agent was aggravated in AGC's case by the

[6] MS 24669, Extracts from John Daw's reports, pp. 1-3; MS 14169, Bullion Books, 1897.
[7] MS 24670, Cade letters, 24 November 1897; MS 24669, John Daw report at EGM, 12 December 1898.
[8] The migrant composition of AGC's workforce is not treated in this thesis as the topic has been covered elsewhere; see Lentz and Erlmann (1989), and Konings (1980).
[9] Hart (1995), p. 5, fn. 5.

following factors: distance and telecommunication problems; cultural and ideological chasms; and the initial absence of rules and regulations over capitalist labour relations in Ashanti. The nature of the problems that arose between the owners of capital and the suppliers of labour at AGC and the mechanisms introduced to overcome these agency problems are discussed below.

The actors

The owners of capital, in the case of a firm, are the shareholders, they are the principals.[10] Shareholders entrust the directors and managers of the firm, the agents, to look after their interests.

Table 5.1: Principal-agent labour relationship 1

Principal		**Agent**
Shareholders	⟶	Directors/Managers

The managers in turn take on a principal's role when they appoint staff to carry out instructions.

Table 5.2: Principal-agent labour relationship 2

Principal		**Agent**
Managers	⟶	Subordinates

In AGC's case, up until 1972, the fact that operations took place in Africa created additional internal principal-agent links, as shown below.

[10] The definition of capital here is limited to the provision of equity funding and the ownership of the mining land concession.

Table 5.3: Principal-agent labour relationships in AGC pre-1972

Principal		Agent
Shareholders	⟶	Directors
Directors	⟶	London managers
London managers	⟶	White Obuasi managers
White Obuasi managers	⟶	African mine staff
African mine headmen	⟶	African mine gang members

Table 5.4: Principal-agent labour relationships in AGC post-1972

Principal		Agent
Shareholders	⟶	Directors
Directors	⟶	London consultants
London consultants	⟶	Obuasi managers
Obuasi managers	⟶	All mine staff
Mine headmen	⟶	Mine gang members

The focus of the ensuing discussion is on the principal-agent relationship between AGC managers (a 'composite principal' comprising the directors, London consultants and Obuasi managers) on the one hand, and the African workforce in Obuasi, on the other, between 1945 and 1957. AGC's directors were substantial shareholders and therefore the ultimate principals. They dictated strategy, mining policy, capital expenditure and, in a more managerial role, they also took responsibility for the recruitment of all European staff. The London management team in this period provided in-house technical expertise to support the directors' decision-making. They provided the planning and implementation details for all projects to take place on the mine and oversaw the purchasing of stores and equipment. [11] By this stage in the company's history the Obuasi manager had diminished power and very limited autonomy: his primary role was to execute instructions from London.[12] Where the Obuasi manager did maintain a large degree of control was over the recruitment of African workers. From the

[11] MS 14170/85, Directive No. 6. December 1947.
[12] MS 14170/96, Management Directive No. 23.

perspective of the African worker the three layers of European management were to all intents and purposes one entity.

Capitalist labour relations in the era of labour turmoil, 1945-1957

This section examines the problems arising in the principal-agent relationship between AGC managers and African workers in a tumultuous period of the company's history, and the managers' formal, informal, direct and indirect responses to overcome these problems.

Three types of African labour relationships co-existed on the mine during these years: day labourers, monthly salaried workers and contractors. The vast majority of Africans employed at the mine were paid daily wages: of an average of 5,500 Africans employed each month only about 150 were paid monthly salaries. Management complained about the difficulty in verifying the identity of day labourers - although workers were issued with employee badges these could be passed on to friends. Another problem with this category of worker was erratic attendance and absenteeism.[13] In this AGC management experienced problems akin to the factory discipline problems of early industrialising workers in eighteenth century Europe.[14] To combat absenteeism and to reduce wage administration management attempted to impose a 26-shift pay system instead of weekly or bi-monthly pay days. Discontent and the threat of strike action, along with the realisation that strikers could hold out for longer following receipt of a 26-shift pay packet than they could with weekly wages, forced this innovation to be withdrawn.[15]

There were no formal employment agreements with wage workers. They obtained a worker identification number and badge upon recruitment for which a deposit was paid by the worker redeemable whenever he decided to leave AGC's employment. The number of waged workers fluctuated with the farming season. In April and May in particular many would leave the mine to their own farms or to seek employment on farms. This group of contract-less 'employees' had no formal representation or communication channels with management until the

[13] MS 14170/81 Cable received from Obuasi 10 October 1945; vol. 82, Secretary to acting mine manager, 18 October 1946.
[14] See for example, G. Clark, 'Factory Discipline', *Journal of Economic History*, 54, 1994, pp. 128-63.
[15] MS 14170/89, Secretary to Norman, 11 August 1949; vol. 96, Secretary to acting mine manager, 2 January 1953; vol. 99, Spears to Edwards, 26 November 1954; vol. 101, Secretary to GM, 13 October 1955.

creation of trade unions such as the Winding Enginemen's Union,[16] and most significantly the Mine Employees Union (hereafter, the Union) in 1944. The chairman and managing director of AGC, General Spears, bitterly resisted the introduction and expansion of the Union at Obuasi. His views about unionism extended to European staff who were told at the point of recruitment in London to forget all about British trade union rules and restrictions.[17] Ownership of capital infers power, but increased labour unionisation created a competing source of power to the capitalists.

The second type of employee was in the minority, the salaried African. Their numbers had only reached about 150 at the end of 1950.[18] They occupied jobs such as Engineering Draughtsmen and Wage Clerks. Until 1947 all of these members of staff also worked without any employment contract or even letters of appointment. From 1947 a small proportion of the most senior salaried Africans were given employment agreements. Following a complaint brought by a salaried worker, one F.O. Darko, management decided that the existence of written conditions of engagement would have pre-empted the problem.[19] The board soon started to consider whether the most senior salaried African employees who had demonstrated ability and "long and loyal service" should "be granted the privilege of being placed on agreements."[20] An employment contract was viewed by London not as a right but a privilege. In any case a principal-agent relationship existed even for those Africans working without formal employment contracts.

In the absence of transparent rights and obligations it is not surprising that labour relations were described by management as "delicate" and on one occasion at the point of "open rupture".[21] Reasons can be suggested to explain why operations were able to continue for so long with a workforce only informally employed. On the part of the employer there was no statutory requirement to provide employment contracts; it was perhaps also felt that the administrative cost of contracting with thousands of Africans with a high labour turnover (estimated between 80% and 90%) was prohibitive.[22] On the part of the African workers the informality allowed flexibility to work stints at their convenience. In practice

[16] MS 14170/81, Secretary to GM, 13 September 1945.
[17] MS 14170/88, Secretary to Norman, acting mine manager 30 June 1949.
[18] MS 14170/91, Secretary to GM, 3 November 1950.
[19] Exact details of the complaint are not given - MS 14170/83, Secretary to GM, 13 March 1946.
[20] MS 14170/84, Secretary to GM, 23 January 1947.
[21] MS 14170/85, GWE Turner to Park 25 July 1947.
[22] Crisp (1984), p. 97.

underground recruitment was conducted by headmen with the permission of white supervisors, rather than at the general management level.[23] There was for a period of 50 years from the start of operations an absence of demand from both the workers and management to formalise the labour relationship.

The third type of labour relationship was with independent African operators who provided contract services. The mine obtained significant quantities of wood for fuel and stoping through African contractors who delivered to AGC's railheads. A comparison conducted in 1954 showed that it cost AGC 19s/2d per stack of firewood obtained by their own staff compared to 13s/7d from contractors.[24] The large discrepancy was due mostly to the costs arising from maintaining AGC's locomotives and rail lines deep into the forest. Some of the fuel contractors obtained their wood from within AGC's concession, others externally.

Principal-agent problems 1945-57

The principal-agent problems encountered between AGC's management and the African workforce between 1945 and 1957 need to be analysed in the wider context of the momentous political changes at this time and the state of the gold industry in the colony. The history of this period was outlined in Chapter 2, but pertinent connections between the national and industrial developments and AGC's labour relations are elicited here.

There was a national crisis over the cost of living following World War II. Basic consumer goods such as sugar, flour and cotton cloth had increased in price by as much as 350% and decreased in import supplies by as much as 75% between 1939 and 1948.[25] For the same period the real wages for Accra day labourers had dropped 20% while the cost of living had more than doubled.[26] These trends had in fact started early in the 1930s. The situation was similar in urban areas across the country. It was acknowledged in Obuasi by AGC's

[23] SPRS 3/1/34, 'Memo on the working conditions at the Ashanti mine, West Africa in relation to theft of gold', 17 May 1936 -the report added that nothing was compulsory for the natives and that they came and went as they pleased.
[24] MS 14170/87, Secretary to GM, 15 October 1948; vol. 98, report on Firewood by George Cappendell, assistant to the consulting engineer, attached to letter 21 May 1954 unsigned but from the Secretary to Edwards.
[25] D. Austin, *Politics in Ghana, 1946-1960*, London: Oxford University Press, 1964, p. 67, citing from the Watson Commission Report.
[26] Austin (1964), p. 67, citing from W.B. Birmingham, 'An Index of Real Wages of the Unskilled Labourers in Accra'.

management, who tried to allay the problem by importing consumer goods and growing food to sell to the workers at cost price.[27] Money wages were increased at AGC (see Table 5.6 below) but not sufficiently to keep in line with the rising cost of living.[28]

The crisis led to a national boycott in January 1948 by Africans of European and other foreign stores who were wrongly deemed wholly responsible for the shortages and high prices.[29] The United African Company (UAC) was perceived as the worst offender. Whether it was generally known that UAC was the majority owner of the AOTC store in Obuasi is unclear, but no doubt the AOTC would have been targeted.

The United Gold Coast Convention (UGCC) took advantage of the level of public protest to combine the immediate economic wants with political ones. Danquah and the UGCC Secretary, Nkrumah toured the country during the consumer boycott with their nationalist message.[30] The protests over the rising cost of living climaxed in February 1948 with the Accra riots. Although the colonial administration admitted to being caught off guard,[31] there had actually been an increase in militant action in the colony since the 1930s with the rural cocoa hold-ups and urban unrest with railway and mine workers.[32] A belated, somewhat reluctant establishment of a Gold Coast Labour Department ensued in 1938, followed by the arrival of trade union advisers. The official view of unionisation, though, was that it was not appropriate for "inarticulate and illiterate labour".[33]

The mining industry had a long history of independent protest at the level of the firm, mostly instigated by isolated segments of the workforce, particularly Northern underground workers upon whom ore production rested. However, in June 1944 a Fante carpenter and Nzima electrician (both former teachers) at the Abosso mine succeeded in forming the Gold Coast Mines Employees Union (MEU), with the aim of representing all mine workers across the industry.[34] The literate, southern leaders then had the difficult task of recruiting from the mass of

[27] MS 14170/ 83, Secretary to GM, 15 April 1946; .vol. 82, Secretary to acting mine manager, 13 August 1946; Spears to Gale and George 27 November 1946.
[28] Cooper (1996), pp. 252-54; Crisp (1984), p. 76.
[29] Austin (1964), p. 69, fn. 36; pp. 70-3.
[30] Austin (1964), pp. 7, 73.
[31] Austin (1964), pp. 3, 11.
[32] Cooper (1996), pp. 126-7; Crisp (1984), pp. 66, 71.
[33] Commissioner of Labour to Colonial Secretary, 10 January 1944, quoted in Crisp (1984), p. 71; see also p. 77.
[34] Crisp (1984), p. 77.

mine workers who were by this time predominantly from the north of the colony and uneducated. The Labour Department unwillingly accepted the union's formation to encompass all types of mine workers with an initial membership of 1,780 (7% of mine workers).[35] One motive for the organization of a general miners' strike by the Union in 1947 was to win mass support by proving their ability to improve the worker's lot. The success of the pay award that followed saw an increase in union membership to 40% in 1947/8.[36] While miners' strikes in the 1930s and early 1940s had mostly been isolated and sectionalised the 1947 general miners' strike marked a turning point in the scale and scope of miners' resistance.

So the aggressive political changes were matched by aggressive action in the mining sector and at AGC. But this was not a causal relationship, although the phenomena were connected. Nationalism per se was not the concern of the MEU: the founding executives made it a point to avoid mixing political issues with their main priority of improving the pay and conditions of miners by not striking as part of Nkrumah's Positive Action campaign started in 1948.[37] Furthermore, there is no reason to assume that the significant proportion of Northern Territory and foreign workers at the mines shared a nationalist agenda driven by educated Akans.[38]

However, the growing militancy throughout the country was connected by underlying factors. Increasing primary education contributed to a greater awareness of rights,[39] coupled with knowledge of resistance movements abroad publicised in newspapers such as the *African Sentinel*.[40] Improved road and rail transport, telephony and the radio permitted better communication to dispersed units which assisted mass organization. Spears reported that:

> *the end of the war has also brought about the end of a period. Times have changed. There has been a profound evolution of the African population. Obuasi is no longer an isolated spot but in daily touch with other parts of the Colony. The natives listen to the wireless and have a picture, however*

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[35] Ibid.
[36] Crisp (1984), p. 99.
[37] Crisp (1984), pp. 78,101-3.
[38] An estimated 75% of underground workers in 1933-4 were non-Akan: Crisp (1984), p. 62; see also pp. 101-2, 114.
[39] For statistics see Austin (1964), pp. 13-15.
[40] Crisp (1984), p. 67.

distorted, of the outside world. The needs of the Africans are greater than they used to be. They expect more. There are disturbing elements in their midst. Questions of welfare, housing, etc. have assumed an importance they have not had hitherto.[41]

With an increase in education and information there was a power shift away from the traditional elite (the chiefs and the well educated) to the less educated commoners.[42] Furthermore, the shared plight over the rising cost of living provided a single issue that different elements of society could protest against.

It was upon these underlying characteristics that Nkrumah's break-away CPP was able to attach a radical nationalist agenda. With specific reference to growing militancy in the mining sector and at AGC certain other factors can be added to the foregoing list. In the 1930s mining capital eventually managed to coalesce effectively in the Gold Coast Chamber of Mines thanks to AGC's membership in 1935 and the creation of the London Advisory Committee of the Chamber which was established to lead strategy.[43] The Chamber then started to behave in a more united fashion which was significant because it meant that there was now a single industry body to hear and decide on grievances. The legalisation of trade unions forced the Chamber to negotiate with the newly-formed MEU who could now channel diverse complaints. In addition, the government's periodic review of minimum wages in the public sector provided a benchmark against which miners could compare themselves.[44]All these external factors exposed the fragility of AGC's African labour relations and this was manifested in frequent strikes, as the table below shows, and continual threats of strike.[45]

AGC had a long experience of worker resistance. This took many forms, the commonest being covert and individual protests such as desertion, absenteeism, lateness, indifferent effort, and gold theft. Prior to 1945 there were sporadic episodes of more overt, communal resistance in the form of strike action that was independently organized without the coordination of any union. As early as 1898 there were short stoppages by small sections of the workforce; in 1905 the

[41] SPRS 3/1/38, report on 1945 visit to Obuasi.
[42] Austin (1964), pp.12-17.
[43] MS 14170/64, Secretary to mines manager, 16 July 1935.
[44] Crisp (1984), pp. 88-9.
[45] MS 14170/99, Spears to Edwards 2 and 26 November 1954; vol. 101, Secretary to GM, 16 September 1955.

firewood cutters stopped work over pay; again in 1909 when the whole mine protested for increased wages; there were three sectional strikes of hammer boys and other underground workers in 1919 over wages and the use of paper currency; in 1920 the Central Treatment Plant workers struck over pay; the whole mine struck in July 1925 for better pay; in 1934 there were two sectional strikes involving some underground workers and the firewood workers over pay and other grievances; and two in 1935 involving underground workers and then all workers primarily over low wages.[46] Notable features of these strikes were that management rarely conceded and that they were not too frequent: between 1898 and 1944, 46 years, there were twelve or thirteen strikes.

But between 1945 and 1957 strikes at AGC became more frequent: eleven in twelve years. The increase was characteristic of the whole mining industry where the lost man days due to industrial action ran between two and three times the national average.[47] AGC was not the most militant of the mines in this period, according to Crisp that notoriety belonged to the Abosso mine where there were nineteen strikes between 1950 and 1954 alone.[48]

AGC's strikes between 1945 and 1957 differed from their experience of pre-war labour disputes in that they were generally of longer duration, they often extended to all mine departments and were marked by extreme tension, deep distrust and occasional violence.[49] They included two lengthy general miners' strikes organized by the MEU.

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[46] MS 24661/5 circular to shareholders 13 November 1919; Crisp (1984), pp. 19, 31, 37, 44-5, 50, 58-9.

[47] Crisp (1984), pp. 98, 109.

[48] Crisp (1984), p. 114.

[49] MS 14170/89, Secretary to GM, 20 October 1949; vol. 92, Secretary to George, 1 June 1951; vol. 93 cable received from Obuasi, 29 June 1951. AGC sought permission along with other mines to stock tear gas grenades to use in case of African riots on mine. Spears wanted to electrify mine fences, use non-lethal gas bombs, armour protected vehicles and increase the number of rifles held at Obuasi: MS 14170/86, Spears to Rt. Hon. A. Creech Jones, Secretary of State for the Colonies, 23 June 1948; vol.89, acting Secretary to GM, Bibiani, 22 September; Spears to Park, 27 September 1949.

Table 5.5: Strikes affecting AGC, 1945-57

Strike date and duration (where known)	**Areas affected**	**Main grievances**
22 Nov – 9 Dec 1945	Machine boys initially, then all Obuasi depts.	Wages and the cost of living
29 Sep – 3 Nov 1947	All Gold Coast mines	Wages and the cost of living
18 Oct-Nov 1949	Underground workers, Obuasi	Wages
2 days October 1951	Machine boys then spread to underground and surface	In support of a machine boy made redundant (with compensation) because he had TB
June 1952	Underground workers and *Ashanti Times* staff	Newspaper staff retrenchment
7 –23 July 1952	All underground and most surface workers	Management's sacking of 'undesirables'
December 1953	Workers at south and main shafts	Objection to enclosure of shaft areas
March 1954	Main shaft workers	Objection to the introduction of crush barriers
26 Sep- 10 Oct 1955	5,200 out 5,800 African workers	Objection to 26-shift payment system
20 Nov 1955-28 Feb 1956	All Gold Coast mines, then AGC-specific from 18 February	General miners' strike for improved wages, but extended at Obuasi in an attempt to gain reassurances that strikers would be re-engaged
1 day, 10 October 1957	Unofficial strike of underground workers	New body search methods introduced

Source: MS 14170, vols. 80-105; Crisp (1984), ch. 5.

Strike action can be seen as a form of hold-up where the agents withhold their labour services from the principal. The first three strikes were due to dissatisfaction with the main incentive to work, wages. As real wages failed to keep up with the rising cost of living worker commitment and morale fell.

The general miners' strike of 1947 and the Gorman Award imposed by government to resolve the dispute marked an important milestone for the fledgling Union. Crisp writes that the outcome was "the greatest humiliation ever experienced by mining capital in the Gold Coast."[50] The miners received pretty much what the Union had demanded - increased minimum wages of 2s/6d -3s/0d for underground workers and 2s/0d-2s/6d for surface workers, on a par with the award given by the Korsah Committee to government workers a year earlier. In addition to the pay improvement, a 45-hour week was imposed along with overtime rates, two weeks' annual paid leave for workers with at least a year's employment, up to a month's paid sick leave per annum and gratuities for those who were forced to leave work due to bad health or who left after serving five years or more.[51] The success encouraged further use of the strike weapon to achieve worker aims.

Thanks to the efficacy of the Union in negotiating industry-wide pay awards wages ceased to be a major cause of disputes. Whereas over 37% of strike action by all miners in the country between 1947-50 had been due to wages, this fell to 4.3% between 1951 and 1954, a decline matched by AGC's strike experience. From 1950 the principal-agent relationship was afflicted by other problems centred on a lack of communication, negotiation and consensus on work related changes introduced to effect the mine's policy of retaining fewer but more efficient workers. The main cause of strikes as seen in Figure 5.5 then centred on perceived injustices stemming from the new labour control strategy. Bearing in mind the diversity of the AGC workforce where nearly twenty tribes were represented on the payroll and workers also differed in skills, length of service and areas of operation, these 'injustice' strikes show a growing sense of polarisation from management and worker solidarity.[52] This supports the notion of occupational consciousness, rooted no doubt in the shared dangers of mining work.

The immediate business effect of repeated industrial disruption and wage rises was a reduction in productivity and profitability. The tables below show

[50] Crisp (1984), p. 87.
[51] Ibid.; MS 14170/86, Secretary to GM, 22 April 1948; vol. 87, Secretary to GM, 18 November 1948.
[52] SPRS3/1/34, 'Memo on the working conditions at the Ashanti mine, West Africa in relation to theft of gold', 17 May 1936.

increasing costs per African worker without a commensurate increase in output per man or profitability per ton of ore mined.

Table 5.6: African staff numbers and monthly costs: Underground workers*

Month of January	Numbers	Total earnings £	Earnings per man	Tonnage	Tonnage /man	Wage cost/ton
1939	1,853	5,206	56s/2d	19,513	10.5	5s/4d
1943	1,221	3,610	59s/2d	17,500	14.3	4s/2d
1947	1,871	6,714	73s/11d	16,401	8.8	8s/2d
1951	2,407	17,322	144s/0d	20,092	8.3	17s/3d
1952	2,665	18,653	140s/0d	19,500	7.3	19s/1d

Table 5.7: African staff numbers and monthly costs: underground and surface workers*

Month of January	Numbers	Total earnings £	Earnings / man	Tonnage	Tonnage /man	Wage cost/ton
1939	5,857	15,858	54s/2d	19,513	3.3	16s/3d
1943	5,383	14,475	53s/10d	17,500	3.2	16s/6d
1947	5,765	21,231	73s/8d	16,401	2.8	25s/10d
1951	5,249	36,478	138s/11d	20,092	3.8	36s/4d
1952	5,685	39,317	138s/4d	19,500	3.4	40s/4d

Table 5.8: The decline in annual profitability and productivity, 1939-53*

	1939	**1947**	**1953**
Tons treated	234,175	194,400	281,031
Gold ounces	263,427	192,640	180,326
Gross revenue	£1,994,131	£1,661,142	£2,364,963
Costs/ton	34/6 d	67/7 d	83/5 d
Profit/ton	135/9 d	103/4 d	84/9 d
Output/underground worker	10 t	8.2 t	8.2 t

*Source: MS 14170/94, schedules attached to letter not signed but from Spears to J. I. L. Edwards, GM, 12 June 1952.

Management decided to address the mine's declining productivity and profitability by engaging South African business efficiency consultants, Production Engineers Limited, and establishing a work study department. The remit was to look at labour utilisation and performance, and budget control.[53] It was hoped that the information gathered would allow a reduction in dependence on African workers by increasing mechanisation where economical to do so. Production Engineers suggested various forms of work re-organization. These were experimented with and monitored. This initiative led to significant procedural changes, particularly in the organization of underground work: streamlined supervision roles, improved grade control (that is, mining delineated ore rather than waste rock) and new mine planning techniques.[54] The end of the first year of the introduction of work study, 1954/5, saw a reduction in mine costs.[55] The success was due to gathering accurate information, knowing clearly the desired outcomes and finding the best responses through experimentation. Interestingly, training Africans was never seriously acted upon as a solution to low productivity. Despite a lot of talk of Africanisation, the company's lack of technically qualified Africans reflected management's view, particularly Spears's, that the Africans were too lazy to put in the work to pass the needed exams.[56] By 1955 only three salaried Africans earned more than £600 a year, which compared to an underground day labourer's annual income of approximately £80.[57] These three most senior Africans were in non-technical, administrative posts, including the editor of the *Ashanti Times*.[58]

Unfortunately for the African workers, the efficacy of their hold-up tactics was diminished by the very nature of the services they were withholding – their labour had little inherent value or specificity. Virtually all the complaints about new labour controls and productivity measures were ignored by AGC's management. The efficiency changes were implemented successfully despite the strikes. Very little investment had been made by management to improve the stock of African human capital, this weakened the power of the strikers to achieve their aims. Had there been some asset or investment specificity in the majority of

[53] MS 14170/98, Spears to Edwards, 17 March 1954.
[54] MS 14170/100, consulting engineer to acting mine manager, 29 April 1955.
[55] MS 14170/103, Secretary to Edwards, 4 October 1956.
[56] MS 14170/94, memo by the Chairman to the GM, 6 June 1952.
[57] Based on 5s/0d per day.
[58] MS 14170/101, Secretary to GM, 17 November 1955.

the workforce perhaps management would have done more to avert industrial action, rather than react to it. The manual, as opposed to technological, manner of mining at Obuasi explained the dispensability of most of the African workers.[59] The most skilled segment of AGC's workforce were the underground artisans such as the hammer, machine and blast boys. They were the most able to hold up the production process, and at times they instigated strikes. Yet, two factors diluted their hold-up ability: they were a minority and their skills were basic.

The failure of the Union to achieve any concessions on behalf of workers protesting against management's efficiency drive (a strategy adopted not only at AGC but across the Chamber of Mines), led to weakened Union support.[60] Between 1950 and 1954 there was a return to smaller-scale, firm-level strikes as in the pre-union days.

A second general miners' strike in 1955/6 failed to regain support for the Union. A new union leader, D. K. Foevie, supported by the CPP in his election,[61] decided on this action when wage negotiations came to an impasse in 1954. The general strike lasted 90 days, and an extra ten days at AGC. It was not a success owing to a lack of support from the CPP and the TUC, and also because the owners of the Tarkwa and Abosso mine called the workers' bluff by sacking them all and closing operations. Workers drifted back to work at most of the other mines by 17 February although the Union did not officially terminate the strike until 23 March. Foevie was forced to compromise: to the displeasure of the rank-and-file miners. Union membership consequently fell to a mere 14% of the mine workforce.[62] Pay increases were awarded but not to the level of the union's initial demand. The government offered £200,000 to the worst off mines to help them absorb this added cost.[63]

Between 1945 and 1956 AGC management conceded wage increases when they were imposed by the Chamber. The company resented these concessions and put the blame on the non-gold producing members of the Chamber who could pass the added labour costs onto their product costs, unlike gold producers.[64] At AGC increased wages were usually accompanied by the

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[59] Compare A. Dye, 'Avoiding Hold-Up: Asset Specificity and Technological Change in the Cuban Sugar Industry, 1899-1929', *Journal of Economic History*, 54, 1994, pp. 628-653.
[60] Crisp (1984), pp. 111, 116.
[61] Crisp (1984), p. 113.
[62] Crisp (1984), p. 127.
[63] Crisp (1984), p. 119-20.
[64] MS 14170/95, Spears to GMs AGC and Bibiani, 21 August 1952.

withdrawal of services and amenities deemed to be non-essential. For example, following the industry-wide Gorman pay award, in response to the miners' strike of 1947, management decided to stick solely and strictly to this award.[65] A review of all expenditure on staff in excess of Gorman led to the withdrawal of the Christmas Bonus, suspension of building plans to create the Batty Township, and suspension of African evening classes.[66] It was hoped that such action would teach Africans a lesson that if they hurt the mine by striking then they hurt themselves.[67] Management were quick to differentiate between African labour rights and privileges. They wanted Africans to appreciate the latter and rarely spoke of their rights: "the Africans should realise we are not prepared to continue to give them amenities which apparently are accepted as of a right."[68]

The mineworkers readiness to strike indicates that during this turbulent time the labour supply for mine work throughout the country was tight: in other words, that it would not be that easy for employers to replace them. This is supported by the fact that there was a boom in the economy in the early 1950s as commodity prices rose and construction projects increased providing alternative wage opportunities. Nevertheless, at Obuasi local unskilled labour supply was not so restricted, and AGC managed to recruit new workers during the September-October 1955 strike.[69] The real shortage was in artisans.[70] Management saw a silver lining in the general miners' strike that followed because it brought financially weaker mines to the point of closure and potentially increased the supply of new recruits at Obuasi.[71] Besides the Tarkwa and Abosso mine, three other mines closed as a direct result of the 1955/6 strike.[72]

Whereas a class approach to labour history would focus on the exploitation of African workers, the principal-agent analysis forces questions to be asked about the nature of the intra-firm contract between management and workers (including the fact that there was little investment in training or technology- see Chapter 6, 'Capital' for details on this) as well as the inter-firm relationship (that is, the state of the market for mine workers). Labour competition would tend to mean that bad employee conditions would not be tolerated, for

[65] MS 14170/86, Secretary to GM, 22 April 1948.
[66] MS 14170/ 87, Secretary to GM, 18 November 1948.
[67] MS 14170/93, Secretary to acting mine manager, 16 November 1951.
[68] MS 14170/85, Secretary to GM, 12 December 1947.
[69] MS 14170/101, cable to Obuasi, 29 September 1955.
[70] AGC annual report, 1954.
[71] MS 14170/102, Secretary to Edwards, 11 January 1956.
[72] Crisp (1984), p. 133.

workers would go elsewhere and therefore the job market would act as a sort of regulator of employers.[73] AGC's relative isolation and consequently better labour supply conditions than in the Tarkwa region partly explains the dismissive and often harsh response given to worker complaints there and the criticisms the firm meted out to the Chamber.

Attempts to resolve capitalist labour problems, 1945-57

AGC's reaction to labour problems up until 1956 was to attack. The general line taken to strike demands was "no appeasement".[74] Spears was always prepared for a strike showdown rather than continual submission to Union or Chamber demands.[75] At the start of the 1947 strike the chairman calculated that sitting it out for two weeks without making any concessions would cost AGC less than agreeing to the demands.[76] Spears despised the audacity of workers trying to force management's hand on anything.[77] This "no appeasement" attitude was apparent during several episodes. For example, when Africans threatened to boycott the AGC canteen Spears instructed the subsidised facility to be closed in the hope that the workers would miss the service.[78] This action would pre-empt any Union sense of victory.[79] Again, when the staff of the in-house newspaper the *Ashanti Times* went on strike in June 1952, Spears's reaction was not to address their grievances but to threaten to keep the staff locked out or to close the operation.[80]

The names of strikers were noted.[81] Many were dismissed - 'liquidated' as management put it - when the opportunity arose.[82] The Union complained about AGC pinpointing and victimising strikers by not re-employing them nor allowing them to work in other departments.[83] The government, too, requested the

[73] Clark (1994), p. 130.
[74] MS 14170/95, cable to Obuasi, 16 July 1952.
[75] MS 14170/85 unsigned but Spears to Gale, GM, 29 September 1947.
[76] Ibid., MS 14170/85 unsigned but Spears to Gale, GM, 1 October 1947.
[77] Ibid.
[78] MS 14170/85, Secretary to GM, 9 October 1947; MS 14170/86, Secretary to GM, 15 and 23 January 1948.
[79] MS 14170/86, Secretary to GM, 15 and 23 January 1948; Secretary to acting mine manager, 31 May 1948. Some provision was however made for underground workers at the manager's discretion.
[80] MS 14170/94, Spears to Edwards, 20 June 1952; vol. 92: Spears to George, GM, 6 June 1951.
[81] MS 14170/85, acting Secretary to GM, 15 October 1947; vol. 97, Secretary to GM, 19 November 1953.
[82] MS 14170/95, Spears to GM AGC and Bibiani, 21 August 1952; vol.94, Spears to Edwards, 20 June 1952; vol. 87, Secretary to Gale, 16 July 1948.
[83] MS 14170/86, Secretary to Gale, GM, 18 March 1948.

reinstatement of dismissed workers.[84] However, AGC refused to give any reassurances of this kind: management treated industrial action at Obuasi as a private matter, not open to government or union intervention without invitation.[85]

Part of AGC's managerial offensive was to encourage defiance of the Union.[86] The workers, in particular the salaried African staff, were put on notice that if they took part in strikes they would forfeit all benefits and they would be put on the bottom pay scale irrespective of length of service, if reengaged at all.[87] The fact that some eager workers could be prevented from work through intimidation or threats of violence would not be accepted as an excuse.[88]

Management were happy that the small number of salaried Africans kept working during the 1955/6 strike, and interpreted this as loyalty.[89] As a reward, Spears agreed to consider providing the African senior staff with more housing[90] which illustrates the nature of the relationship: one based on bribery and privileges rather than rights and responsibilities. A loyalty bonus was also paid to these workers and the day labourers who worked throughout the long 1955/6 strike.[91] These carrot and stick offensive tactics did little to align management-worker interests, perhaps with the exception of the 150 salaried Africans who formed about 3% of the workforce.

AGC also attempted to improve the flow of information to and from management to help resolve the labour problems. Some of these strategies were positive and proactive, others were negative and reactive.

A negative initiative was taken during General Spears's first official visit to Obuasi in 1945 which coincided with a strike. A mine detective was appointed, followed by the establishment of a spy network to infiltrate Union meetings and gather intelligence on strike plans.[92] Regular intelligence reports were sent to

[84] MS 14170/95, cables to Obuasi 8 and 9 October 1952; MS 14170/102, cable received from Obuasi, 31 December 1955.
[85] MS 14170/95, cable received from Obuasi 16 July, reply to Obuasi, 17 July 1952; MS 14170/102, cable received from Spears in Obuasi to London office, 15 February 1956.
[86] MS 14170/85, Secretary to GM, 20 November 1947.
[87] MS 14170/89, Spears to George, 1 December 1949; MS 14170/95, Secretary to Edwards, 22 August 1952.
[88] MS 14170/88, cable to Obuasi, 24 March 1949.
[89] MS 14170/101, cable to Obuasi 7 October 1955.
[90] MS 14170/101, unsigned but Spears to Edwards 31 October 1955.
[91] MS 14170/102, unsigned but Spears to Norman, acting mine manager, 1 May 1956.
[92] MS 14170/81 Secretary to GM, 3 December 1945.

London by the European head of security.[93] European staff were encouraged to learn African languages primarily because of the intelligence advantages that this would give management.[94] The mines at Obuasi and Bibiani investigated purchasing and training carrier pigeons to be used during strikes to communicate intelligence.[95] This was a negative development in the sense that it did not foster trust nor promote the flow of information *from* management to workers.

A major realisation during the early post-war strikes was that management were not clear *what* the workers' grievances were due to the absence of recognised communication channels.[96] The benefits of opening formal, two-way communication channels were apparent, but AGC did not want to accept that this would be in the form of the Union. A dearth of information at the worker level, as well as the merits of providing this, was seen when the Chamber in a meeting with the Union discussed the proportion of mine income going to the government in taxation, and the little direct benefit provided by the government to Africans from this income. By all accounts the union members were shocked by this revelation. Spears immediately saw the opportunity to present the government rather than management as the devil, and he considered how this could be transmitted to headmen underground, and possibly all workers, but not via the Union.[97]

Spears was angered by the Chamber's acknowledgement of and negotiations with the Union. He felt it would only strengthen the union leaders and wondered why the Chamber should "lead the enemy to coalesce".[98] Spears believed that the Union was a fashion despite the fact that it had government support and ILO backing. He hoped to divide and rule by not assisting union administration in any way, for example, by not allowing the deduction of dues from wages, and he hoped a rival mines union would arise to compete with the Union.[99] In fact, when intelligence reported a possible split in the Union with a breakaway of Northern Territory miners Spears encouraged the mine management to assist such a splinter

[93] The *Ashanti Times* editor also sent local news paper cuttings and political intelligence reports - MS 14170/86, Secretary to acting mine manager 28 May 1948; vol. 88 Secretary to GM, 38 April 1949.
[94] MS 14170/82, Secretary to acting mine manager 29 July 1946, 5 September 1946; vol. 85, Secretary to GM, 17 February 1947.
[95] MS 14170/88, Spears to George 5 May 1949; MS 14170/89, Secretary to Bibiani Ltd 19 July 1949.
[96] MS 1170/89, Secretary to GM, 20 December 1949.
[97] MS 14170/85, Spears to Gale, GM, 15 September 1947.
[98] MS 14170/86, Spears to Gale 10 February 1948; Robert Annan, London Advisory Committee member of the Chamber to Spears 9 February 1948.
[99] MS 14170/95, Spears to GM, AGC and Bibiani 21 August 1952.

group behind the scenes.[100] AGC resisted the unionisation of the mine's police force, and to that end considered recruiting policemen from Ivory Coast in an attempt to avoid the building up of solidarity with the union.[101] Management refused leave for staff to attend trade union courses or to subsidise such courses.[102] While AGC were legally unable to prevent the establishment of an Obuasi branch of the Union the company set up two alternative internal institutions to compete with the Union: departmental committees and the Senior Staff Association.

Departmental committee meetings were set up as a forum for labour-management discussions following the 1945 strike. They were not open to any union involvement, and only selected Africans from various departments were appointed to participate. Each committee was run by the European head of department. The African committee members wore special badges to identify them as such. The general mines manager sat on some of these committees such as the Wages Committee and Canteen Committee.[103] Spears argued that this arrangement would bring African worker and European manager closer than a trade union would, using the excuses that the Gold Coast African was not at a stage of development to sensibly employ the trade union institution, and that unionism portended socialism.[104] AGC refused to register the departmental committee members with the Labour Department or to submit the ballot of nominees to these committees to the supervision of the Labour Officer. Spears threatened to abolish the departmental committee mechanism altogether rather than subject it to government interference. Committee members would continue to be appointed by managers until a point in the future when Spears felt that the workers would be ready to elect their own representatives.[105] These committee meetings were not well attended by Africans and they were held irregularly despite London's repeated reminders to the general manager to ensure that they

[100] MS 14170/102, unsigned but Spears to Norman, acting mine manager, 17 April 1955.
[101] MS 14170/94, unsigned but Spears to Edwards, GM, 26 February 1952; Spears 'Notes by the Chairman to both Mine Mangers and Colonel Bean' following establishment of joint Union and Chamber fact finding committee, 5 June 1952.
[102] MS 14170/94, unsigned but Spears to Edwards, GM, 5 March 1952.
[103] MS 14170/83, Secretary to GM, 5 February 1946; vol. 82, Secretary to GM, 10 December 1946.
[104] MS 14170/82, Spears to GM, 19 December 1946.
[105] MS 14170/83, OGR Williams of Colonial Office to Spears, 24 May, and Spears to GM, Gale, 28 May 1946; vol. 84, Spears to Williams 27 May 1946; Secretary to GM, Gale 6 June 1946; vol. 84, Secretary to acting mine manager, 23 June 1947.

took place.[106] In addition to the Commissioner of Labour's disapproval of the AGC committees the Union also expressed discontent with this AGC-specific institution and threatened strike action if they were not abandoned.[107]

The departmental committee arrangement was given another tier in the form of a management committee consisting of two African members from each department committee with the general manager. It was hoped that this would improve communication lines.[108] Again, the desire of African workers to receive more information was apparent when the general manager took committee members on a tour of the property highlighting all the new projects and giving a picture of the entire operation. According to the manager this was appreciated by the Africans.[109] No doubt it helped them to see for the first time how and where their particular roles fitted into the larger picture. The episode showed how top-down information could contribute towards a common understanding and purpose, which are prerequisites for worker commitment.

As explained above, it was only from 1947 that some salaried Africans were put on formal employment agreements. Management then started to think seriously about pensions, retirement homes, housing for first and second grade senior Africans on contract, incremental pay scales and qualification requirements for promotion.[110] From 1949 a directive was given that no long-service African could be sacked by department heads without the possibility of appeal to the general manager.[111] In 1950 an association was established for the African salaried staff with the condition that members were prohibited from joining, or remaining members of, the Union. The Salaried Staff Association (SSA) was put on a more formal footing in 1954 when it was registered as a trade union with a constitution.[112] A clause banning Union membership was added to the constitution, rather than to members' employment agreements.[113] For this renunciation of Union rights management further offered African senior staff a

[106] MS 14170/84, Secretary to Gale, GM, 13 May 1947; Secretary to acting GM, 17 June 1947; vol. 93 Secretary to acting mine manager 7 December 1951; vol. 100 Secretary to GM, 23 June 1955.
[107] MS 14170/85, Secretary to acting mine manager, 7 August 1947; MS 14170/87, Spears to George, GM, of Bibiani, 28 September 1948.
[108] MS 14170/87, Secretary to GM, 13 August 1948.
[109] MS 14170/90, Secretary to GM, 21 April 1950.
[110] MS 14170/88, Secretary to George, GM, 25 March 1949. C.f. Cooper (1996), pp. 332-6.
[111] Ibid.
[112] MS 14170/99, unsigned but Spears to Edwards, 20 May 1954; R.J. Vile, Colonial Office to Spears, 20 May 1954; in 1954 the SSA was also permitted to elect its own officials.
[113] MS 14170/99, unsigned but Spears to Edwards, 20 may 1954; Oliver Lyttelton to Spears, 1 June 1954.

level of gratuities in excess of the Gorman rate, and scholarship and mine school opportunities for their children.[114] Senior staff employment agreements were endorsed in 1953 with a clause making it clear that their salaries were not subject to Union wage negotiations.[115]

The SSA was immediately viewed by management as the sole negotiating body with the workforce.[116] A distinction was made between *senior* salaried Africans and other salaried Africans, the latter being referred to as Affiliated Members of the Salaried Staff Association. Only *senior* salaried Africans were guaranteed employment contracts.

The Union considered action against this new institution following the mine management's refusal to allow Union members to be present during SSA meetings.[117] However, AGC managed to win government support here. The Colonial Office came round to the SSA institution in the interests of Africanisation as Spears used its existence and growth as proof of the increasing number of Africans in senior roles (although AGC did not inform the Colonial Office of their desire to cap the number of Africans in this category to just 50 to maintain the 'sought-afteredness' of these agreements!)[118] When the Secretary of State for the Colonies informed AGC that the SSA would have to be registered as a trade union some sticky issues arose. Spears remained adamant that the association would not be allowed to join the TUC nor affiliate itself to the Union; if, however, SSA dues were to be collected from salaries then AGC would be obliged to do the same for Union members, something they had resisted since 1944.[119] The SSA had no credibility with the majority of the African workforce. They were viewed as blacklegs and quickly became identified with "them" not "us".[120] Hence, in the period under discussion, the SSA did not help to avoid industrial unrest.[121]

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[114] MS 14170/90, Directive 7, Spears to George, 3 January 1950; vol. 91 Secretary to acting mine manager, September 1950; vol. 92, unsigned but Spears to George, 13 March 1951.
[115] CAST had a similar provision in their employment contracts with senior Africans (that company had an altogether more responsive attitude to unionisation than AGC – Stockwell [2000], p. 185); MS 14170/97, Secretary to GM, 12 October 1953; vol. 98, unsigned but Spears to Edwards, 26 April 1954.
[116] MS 14170/98, unsigned but Spears to Edwards, 26 April 1954.
[117] MS 14170/90, Secretary to GM, 29 June 1950.
[118] MS 14170/99, RJ Vile, Colonial Office to Spears 20 May 1954; MS 14170/93, Secretary to GM, 20 December 1951; MS 14170/91, Secretary to GM, 3 November 1950.
[119] MS 14170/99, unsigned by Spears to Edwards, 9 October and 24 November 1954.
[120] MS 14170/95, Secretary to GM, 9 October 1952.
[121] Spears's senior staff association endured as an institution parallel to the unionisation of junior members of staff up to 2004 and his departmental committees persisted at least until 1967.

Another, more subtle, strategy used by the mine in an attempt to align worker interests to management's was to try to bridge the cultural gap between Africans and European management and to forge a new mine culture peculiar to the firm. This had several prongs.

Spears and Colonel Bean, the head of the Chamber, devised a plan to give the Asantehene an interest (presumably financial) in the mine with the hope that his influence would encourage Africans to be less militant.[122] They sought the Asantehene's advice and support in the matter of sacking known strike agitators.[123] The Asantehene and government officials were also invited to a Durbar Day when workers were given a paid holiday.

Mines Day was another cultural innovation by Spears. It was a holiday for workers, aimed to build camaraderie and loyalty, and above all to let Africans know how much they needed AGC as an employer.[124] The main speech on the first Mines Day in August 1947 was written in London by the consulting engineer, G.W.E. Turner, for the GM to deliver. The speech used the patronising and paternalistic analogy of the mine as a mother and the employees as "good children", it urged African workers to be "proud to say I am a Corporation Boy" and called for unity among the mine community – between Africans and Europeans, and between all staff and management.[125]

In 1946 Spears started the *Ashanti Times* as an in-house newspaper (it was later circulated in Accra and Kumasi as well as Bibiani and Obuasi). It was seen by Spears as "an extremely powerful instrument", the "main purpose" of which was to "provide a platform from which the African would gradually be brought to realise the importance of the Mines to their welfare".[126] It was hoped the paper would improve labour relations, provide a management communication outlet and foster a sense of community by, for example, praising good workers and advertising production achievements.[127] London's control over the biased content of the *Ashanti Times* did not bode well for the paper's performance, however powerful a tool management considered it to be. The paper ran at a loss with poor circulation figures and was frequently boycotted by Africans.[128] The paper was a

[122] MS 14170/86, Spears to Gale, 23 March 1948.
[123] MS 14170/87, Secretary to Gale, 16 July 1948.
[124] MS 14170/82, Secretary to acting mine manager, 18 October 1946
[125] MS 14170/84, speech attached to Secretary to acting GM, 12 June 1947.
[126] MS 14170/85, Spears to Gale, GM, 15 September 1947.
[127] MS 14170/84, Spears to BC Freestone, editor *Ashanti Times*, 14 May 1947.
[128] Stockwell (2000), pp. 182-3.

failed attempt to shape the mine's culture away from militancy towards unity. (Lonrho stopped its publication in 1970).

The most obvious way to overcome principal-agent problems is to incentivise the agents appropriately. AGC tried many forms of incentives with varying degrees of success. Non-pecuniary incentives included the award of leather bound certificates for long service, [129] Good Conduct, Long Service and Valour badges,[130] a Roll of Honour board for outstanding work done by members of staff,[131] welfare provisions such as accommodation,[132] the provision of foodstuffs such as rice at cost and a canteen,[133] an antenatal and child welfare centre,[134] leisure facilities such a library for African staff and instruments for a mine band,[135] boy scouts and girl guides associations in Obuasi,[136] and an African Club for socialising.[137]

There were also performance incentives. A bonus to Africans based on production was introduced for the first time for underground workers, and in the fuel and fitting departments, from December 1946.[138] The production bonus was to be based on efficiency rather than simple output, to reflect extra effort, for example tons per shift boy underground rather than total tonnage.[139] To improve teamwork and efficiency underground a suggestion was made for a joint African and European bonus scheme based on team performances during shifts. [140] Headmen's team bonuses earned were displayed at the mine head.[141] An accident bonus scheme was also tried.[142]

Management were aware of the moral hazards associated with bonuses. A shaft sinking bonus (proposed for European staff) was abandoned because it could detract attention from maintenance to the detriment of safety and could lead to the neglect of other work areas.[143]A lot of consideration went into designing

[129] MS 14170/81 GWE Turner to GM, 17 October 1945.
[130] MS 14170/82, Secretary to GM, 12 July 1946; vol. 88 Secretary to GM, 26 April 1949.
[131] MS 14170/87, Secretary to Gale, 9 July 1948.
[132] MS 14170/82, Secretary to GM, 16 July 1946.
[133] MS 14170/82, Secretary to acting mine manager, 29 July and 3 October 1946.
[134] MS 14170/82, Spears to GM, 27 November, 1946.
[135] MS 14170/82, Secretary to acting mine manager, 29 July 1946.
[136] MS 14170/83, Secretary to GM, 3 January 1946.
[137] MS 14170/88, cable to mine, 23 June 1949; Secretary to acting mine manager, Norman, 30 June 1949.
[138] MS 14170/84, Secretary to GM, 23 January 1947; 26 February 1947.
[139] MS 14170/84, Secretary to GM, 1 May 1947.
[140] MS 14170/86, Park, consulting engineer to Gale, GM, 10 March 1948.
[141] MS 14170/98, Spears to Edwards, 12 March 1954
[142] MS 14170/102, Secretary to acting mine, 1 June 1956.
[143] MS 14170/88, Secretary to GM, 30 April 1949.

bonus schemes to not only increase earnings but to also reduce costs and to set the thresholds high enough to maximise effort. [144]

Although the consulting engineer acknowledged that focusing on perks and bonuses would not be enough to satisfy either Europeans nor Africans and that attractive basic pay was needed,[145] this does not appear to have been the view of General Spears. Were it not for industry-wide pay awards AGC would not have taken the initiative to raise African pay levels. Even these increases were aimed to primarily meet the cost of food (over 50% of the daily wage would be spent on food), [146] rather than to signal an attractive basic pay.

When AGC started operations in 1898 they did so with minimal government labour or mining regulations. This changed with the creation of the Mines Department in 1903 and markedly so from the 1940s. External regulation forced internal changes in the management-labour relationship. The establishment of a Labour Department in the Gold Coast, the legalisation of trade unionism, the Workmen's Compensation Act which took effect from January 1942 and provided a payment scale for work-related accidents and deaths for those earning less than £300 per annum; and the Labour Amendment Ordinance 1949 which set out a minimum gratuity scheme for daily paid workers, all forced AGC and other employers to improve work conditions.

Another external factor influencing the capitalist-labour relationship was the development in communication technology. By this period the company were able to make use of air mail and telephone links. However, cables or telexes remained the preferred choice of communication because of the speed (24-hour receipt) and the paper trail left behind (a major disadvantage of telephone use). Ironically, communication between London and Africa did not pose as severe a problem as communication in Africa between managers and workers. This suggests that physical distance was not at the heart of AGC's labour turmoil.

A change in strategy

The 1955/6 strike which lasted three months was a watershed in labour relations. Its sheer duration and the crippling effect it had on the Tarkwa and Abosso mine (in which AGC held substantial shares) forced management to accept that their

[144] MS 14170/88, Secretary to acting mine manager, 30 June 1949.
[145] MS 14170/86, Park, consulting engineer to Gale, GM, 10 March 1948.
[146] MS 14170/103, Secretary to Edwards, 20 August 1956.

"no appeasement" approach, in fact their fundamental attitude towards their African workforce, had to change. From this date London tried to avoid discontent, rather than react to it.[147]

African Personnel Officers were appointed for the first time for each mine shaft,[148] and an African assistant was attached to the European Welfare Officer.[149] The African personnel officers were given the responsibility of dealing with investigations and dismissals for absenteeism.[150]African workers were no longer to be referred to as 'boys' unless they actually were juveniles.[151] New compound housing, not just senior staff housing, was to be provided as a matter of urgency, and withdrawn amenities were re-introduced such as the English evening classes.[152] The African Club was resuscitated with permission for a swimming pool and Union involvement in its management committee.[153]

Spears and his management team came to realise that opposition to the Union was more costly than cooperation. Ghana's political independence as a new reality may also have contributed to the change in the chairman's attitude towards the workers. AGC agreed reluctantly to give a table to the Union on pay day to allow them to collect dues.[154] Spears also decided to extend free health treatment to a limited number of Obuasi branch union members and their immediate families.[155]

Soon after Independence, the head of the Union, Foevie, met "amiably" with the London Advisory Committee of the Chamber.[156] Spears seized the opportunity to build bridges and, after seeing the positive effect that a £500 gift from the Chamber to the Union made, asked the Obuasi General Manager for suggestions to keep the union sweet.[157] Spears himself suggested cash gifts to the Obuasi Union officials no doubt to buy a sense of obligation from them, and this

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[147] MS 14170/103, Secretary to GM, 5 October 1956.
[148] MS 14170/102, unsigned but Spears to Norman, acting mine manager, 14 June 1956.
[149] MS 14170/102, Secretary to GM, 29 June 1956
[150] MS 14170/103, Secretary to GM, 16 November 1956
[151] MS 14170/103, unsigned but Spears to Edwards 2 August 1956.
[152] MS 14170/103, Secretary to GM, 25 October 1956
[153] MS 14170/104, Secretary to acting GM, 10 January 1957; Secretary to GM, 18 April 1957; vol. 105 Secretary to R. Wilson, GM, of Bibiani, 28 November 1957.
[154] MS 14170/103, Spears to GM, 10 December 1956; vol. 104, unsigned but Spears to Brown, GM, 14 June 1957.
[155] MS 14170/104, unsigned but Spears to Brown, GM, 29 April 1957.
[156] MS 14170/105, Spears to Brown, 2 July 1957.
[157] Ibid.

quickly generated a cooperative relationship on the mine.[158] The rapprochement was two-sided: in a letter from Foevie to Spears the union leader hoped for better future relations, acknowledging AGC's influence and therefore the importance of Spears's advice.[159]

This new attitude towards the Union and the African workforce in general was put to the test when underground staff went on an unofficial one-day strike in 1957. They were protesting against the introduction of rubber gloves used during body searches. The strike was quickly resolved by management modifying the procedure, and expressing willingness to make searches as tolerable as possible, and the promise to purchase metal detectors from America.[160] In place of the "no appeasement" attitude a more pragmatic view was taken as it was appreciated that the cost of a strike was greater than any gold that body searching would uncover.[161]

Heated debates between management and the Union continued over shop stewards, a closed shop policy, and individual firm versus industry-wide mine wage bargaining. Nevertheless, 1957 saw the start of the merger of Union and management interests: the Union became part of management, and often spoke of the same aims such as worker discipline, productivity and industrial prosperity.[162]

Official industrial action across Ghana dramatically cooled following Independence, particularly among mine workers who were only responsible for 7% of man days lost from strikes between 1956 and 1960.[163] The unpleasant experience of the 1955/6 general strike left both the Union and the Chamber eager to avoid protracted conflicts in the future. The fragility of mine finances, as evidenced by the four mines that closed during 1955/6 and threats by other mines that they too would be forced to follow suit, concentrated minds. Other factors help to explain the retreat of the Union. The CPP successfully co-opted the TUC as a branch of the political party with responsibility to avoid industrial protests as they would hamper Nkrumah's economic policies. The Industrial Relations Act 1958 effectively made strikes illegal by requiring unions to submit to arbitration

[158] Ibid.; MS 14170/105, Spears to Brown 16 July, 11 September 1957. In 1964 the MWU Branch Secretary and Chairman at Obuasi were promoted to Personnel Officer and Shift Boss respectively; as senior salaried staff they were now obliged to quit the Union and did so, leaving it weakened – Crisp (1984), p. 140.
[159] MS 14170/105, Foevie to Spears 6 July 1957.
[160] MS 14170/105, cables received from Obuasi 11, 12 October 1957.
[161] MS 14170/105, Spears to Norman acting mine manager 28 October 1954.
[162] Crisp (1984), pp. 127, 134.
[163] This was considerably less than the period 1948 to 1951 when the miners 70,522 man-days lost was more than twice the average in the colony: Crisp (1984), pp. 98, 129.

rather than strike action. Under this law all unions were brought under the umbrella of the TUC. [164] Although initially reluctant, the renamed Mine Workers Union (MWU), conformed. The Union leadership was gradually replaced by CPP supporters and elections were done away with. Foevie himself moved from serving labour's interests to serving capital's when he was appointed managing director of the State Gold Mining Corporation and head of the Chamber, while retaining the Life General Secretary role of the Union.[165]

However, as the economy deteriorated under Nkrumah, the Union's atrophy could not prevent the rank-and-file miners from protesting. Covert, individual methods of resistance gradually increased and there was a return to sporadic, collective strike action at individual mines, although these were illegal. There was unofficial strike action at AGC in 1964. When the NLC and Progress Party disappointingly failed to improve the workers lot there was a further increase in industrial militancy of a particularly violent nature as the cost of living once again rose beyond wage increases.[166] At AGC police shot four dead during the strike of 1969, and further unrest occurred in 1970.[167] There were no major strikes at AGC until 1977. The late 1970s also witnessed low labour productivity and rising incidents of gold theft as the economy rapidly declined.[168] Informal resistance persisted at AGC throughout the economic crisis years of the early 1980s contributing to the repeated failure of the mine to meet its production targets, frequent dismissals for absenteeism and gold theft. [169] A decade of improved labour relations and productivity was experienced between 1986 and 1996 which mirrored the positive political economy effects of Structural Adjustment from 1986 and a return to democratic rule in 1992. AGC faced shareholder pressures from its drive to achieve one million ounces following the flotation in 1994. Adverse changes in the world gold price then necessitated retrenchment and renewed efficiency drives. These factors contributed to an increase in worker resistance culminating in a costly twelve-day strike in May 1999 over pay.[170] A wave of strikes that year among civil servants, hospital and

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[164] Crisp (1984), pp. 128-9.
[165] Crisp (1984), pp. 133-4, 137.
[166] Crisp (1984), pp. 151, 153.
[167] SPRS 3/60/5, memo from Powers, 8 March 1969; 3/60/1, Spears file note, 9 September 1969; 3/61/1, Spears to Busia, 17 June 1970.
[168] Crisp (1984), pp. 172-5.
[169] Board minutes, GH, 9 July 1980; 20 January 1982; 17 February, 19 May, 11 August, 1 December 1983; 14 August 1984.
[170] Board minutes, GH, 27 July 1999; AGC annual report, 1999.

university workers also reflected the Ghanaian economy's new difficulties of inflation and stagnant growth which reduced real wages.

Analysis of the period 1945-57

The institutionalisation of annual wage negotiations between the Union and Chamber removed the commonest cause of friction in the principal-agent relationship. This mechanism enabled information on the cost of living and the state of the global gold market to be regularly factored into pay incentives. Prior to this external development it was very difficult for AGC managers to appreciate the average African's economic needs – General Spears appeared genuinely shocked to learn about the predicament of an employee of seventeen years' loyal service who could not afford to buy a decent suit of clothes.[171] The wage negotiations also helped union representatives to appreciate the cost constraints facing the industry.

Information asymmetries were suffered by both the principals and the agents. It seems that a major cause of this was not distance or technological barriers but culture and ideology. Lovejoy and Richardson provide an account of how culture can impact principal-agent costs. They show how the institution of pawning served to lower principal-agent costs in the slave trade.[172] The importance of "historical, cultural, political, and social processes" in contract enforcement is also highlighted by Greif in connection to transaction costs and exchange.[173] This notion is also applicable to the formal and informal contracts establishing principal-agent relationships. There were three key points of cultural or ideological divergence that AGC's management and workforce struggled to reconcile in the immediate post-war years: capitalism versus trade unionism; European superiority versus African; and imperialism versus nationalism.

On these topics AGC's dominant figure, Spears, set the general tone for management. His views about unionism were apparent from the evidence cited above. In connection to nationalism, Spears was quick to use the *Ashanti Times* to publicise any news stories of mismanagement or irregularities at the hands of Africans, for example at the Union and the Cocoa Marketing Board's purchasing

[171] MS 14170/99, Spears to Edwards, 22 December 1954.
[172] P. Lovejoy and D. Richardson, 'Pawns Will Live When Slaves is Apt to Die: Credit, Slaving, and Pawnship at Old Calabar', LSE Dept of Economic History Discussion Paper No 38, 1997.
[173] A. Greif, 'Contracting, Enforcement and Efficiency: Economics Beyond the Law', *Annual World Bank Conference on Development Economics*, 1996, p. 262.

company. This was presented as proof that the Gold Coast was not ready for self-government.[174] The *Ashanti Times* was not allowed to publish anything that would put the British monarchy or British business in a bad light.[175] Regarding racial prejudice, there is some evidence of this at management level. Spears's attitude reflected that of many colonial administrators,[176] namely that Africans were not on the whole intellectually capable for positions of responsibility: in an article penned by him for the *Ashanti Times* he stressed the importance for Africans to learn to obey and know their limitations; he praised lowly, menial workers such as the sweepers, hewers and water drawers, the implication being that this was the role appropriate for Africans to play in the grand scheme of things.[177] The condescending and offensive tone of this article, as well as other comments in his correspondence,[178] goes a long way to explain the difficult labour relations in this period and AGC's pathetic progress with Africanisation.[179] Racial prejudice explains why Italians, Maltese and South Africans were targeted for technical positions rather than prioritising African training despite the massive cost savings that using Africans would have made.[180]

Spears's military background may account for the bellicose stance that the company held for over a decade in the face of labour problems. He failed during this time to bring the Union "to heel" via confrontation,[181] eventually succeeding through subtler means of financial corruption and favourable external developments. That the Union was brought on-side did not remove worker discontent and it was seen how the principal-agent relationship in this regard was primarily moulded by the state of the general economy and the miners' cost of living. Resistance was not predicated on the union institution.

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[174] MS 14170/94, Spears 'Notes by the Chairman to both Mine Mangers and Colonel Bean' following establishment of joint Union and Chamber fact finding committee, 5 June 1952; *Ashanti Times* leader for 6 June 1952; vol. 101, Hansard enclosure in Secretary to GM, 2 December 1955.
[175] MS 14170/102, Secretary to acting mine manager, 11 May 1956.
[176] Cooper (1996), pp. 112, 268.
[177] MS 14170/90, article attached to acting Secretary to GM, 24 March 1950.
[178] See for example, MS 14170/91 Spears's article, 'The Value of our Natural Resources', enclosure in Secretary to GM, 14 July 1950; SPRS 3/57/8, Spears to J. S. Raj of IFC, 10 April 1968; 3/56/5, unsigned but Spears to Rich, 8 May 1968.
[179] Stockwell (2000) compares AGC's weak efforts in this regard with other British firms in the period of decolonization, pp. 171-6.
[180] MS 14170/88, Secretary to acting mine manager, Norman, 30 June 1949; vol. 89, Secretary to Norman, 8 July 1949; Secretary to Antonio Marinoni, 8 July 1949; vol. 89, Secretary to acting mine manager, 29 July 1949; vol. 89, Spears to Park, 27 September 1949; vol. 89, Secretary to Park, 6 October 1949; MS 14170/100, consulting engineer to GM, 14 February 1955. MS 14170/100, Secretary to GM, 2 June 1955 and enclosure; vol. 101, consulting engineer to GM, 28 July 1955; vol. 103, Secretary to Edwards, 9 November 1956.
[181] MS 14170/94 Spears to Edwards, 25 June 1952.

Mine workers had to await the development of labour laws to define and secure their rights - for example, with respect to sick pay and accident liability. Interestingly though, AGC's case showed that in a situation of virtually no laws, the company and workers were able to operate in a manner conducive to growth and profit until the post-World War II period.[182] It was *the transition period* - from few laws to many - that caused the greatest tension in capitalist labour exchange at the mine.

Summary

Informal, formal, direct and indirect attempts to mitigate principal-agent problems at AGC were attempted with varying degrees of success. The power struggle between management and the workforce appeared to be resolved with a 'merger' of Union and management interests and the growth of a patriotic ideology that was anti-industrial unrest. However, rank-and-file workers exercised their ability to protest in the same ways as they had done prior to the creation of a miners' union. They were prompted to do so in reaction to economic hardships and in solidarity for perceived injustices imposed by management.

Agency theory revealed that for capital to extract a surplus from labour it has to surmount certain difficulties. The ability of capital to make labour work in a way satisfactory to it is not automatic nor certain because free labour starts with knowledge and control advantages over capital. In order to mould labour to capital's wishes costly mechanisms such as increased supervision and security, and a conducive external environment such as labour competition and state support, are needed. Sometimes these imperatives are too costly or unfavourable leading to the failure of enterprises. Besides the closure of four mines in 1955/6, South African capital had withdrawn much of its investment in the Gold Coast in 1913 after four years of effort failed to procure from government the labour control regulations they deemed vital for profitability.[183]

The bias in Marxian and class historians' support of labour is avoided by a principal-agent analysis of the social relations of production. In Crisp's seminal work on Ghanaian miners' struggles he admiringly concludes: "Ghana's mine

[182] Compare the case of successful early sugar investors in eastern Cuba who benefited from the initial *absence* of well developed property rights: A. Dye, 'Avoiding Hold-Up: Asset Specificity and Technological Change in the Cuban Sugar Industry, 1899-1929', *Journal of Economic History*, 54, 1994, pp. 628-653.
[183] Crisp (1984), pp. 38-41.

workers have been engaged in a determined struggle to resist their exploitation and subordination. Obstructing and defying the relentless efforts of capital and state to control their activities, the mine workers have persistently asserted their autonomy, displaying a degree of militancy and solidarity rare amongst African workers".[184] The words reflect the book's lack of criticism of the actions of the rank-and-file protesters while mine capital and the state are less favourably portrayed. Yet, if labour demonstrates resistance to the extreme then there would be no employment for them at all, as was seen at the Tarkwa and Abosso mine. The crux of principal-agent theory is the *alignment* of interests. This demands compromise, a convergence of needs, or stated differently, a reduction (rather than elimination) of labour's natural knowledge and control advantages coupled with the augmentation of capital's visibility. This necessary trade-off between capital and labour is not obvious in the Marxian/class approach.

The analysis showed too that power in the workplace is not one-sided, it shifted between capital and labour. Between 1945 and 1956 labour had the upper hand. AGC's profitable survival shows that it eventually obtained and retained sufficient control over the workforce to stay in business, but not on its original terms. Management was forced to take a more moderate and accommodating stance towards the workforce.

A matrix of intra- and inter-firm conditions determine the nature of capital-labour relationship at any one time. Again, principal-agent adds to the Marxian approach by making the contracting environment an integral part of the analysis. The labour market, the state of the gold industry and the changing laws and institutions of the contracting environment were critical aspects of this analysis.

A limitation of the principal-agent approach, however, was seen in the concept of solidarity. Since this approach focuses on the interface *between* capital and labour it offers less insight into important developments *within* capital, or within labour. By treating each category as a homogenous unit, pertinent cleavages and conflicts within are lost. Class analysis is better able to explain the phenomenon of solidarity-building.

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[184] Crisp (1984), p. 179.

CHAPTER 6: CAPITAL

FROM WEALTH TO THE BRINK OF BANKRUPTCY

This chapter looks at changes in the sources, structure, uses and productivity of capital over the history of Ashanti Goldfields. It will be shown that a late change from reliance on equity to reliance on debt put the company's independence at greater risk. Nevertheless, for most of the company's history capital was used productively. Profit generation rather than the redistribution of economic rent distinguished AGC from its competitors. The extreme distortion of markets and prices by Ghanaian governments in the 1970s and 1980s directly impacted the use of capital relative to other factors of production. In terms of earnings distribution, the government's direct financial gains from the company's activities varied over time, sometimes to the detriment of operations. AGC shareholders fared very well if the company's entire history of real share price change and dividend income is considered.

Capital is viewed broadly and considered in three respects: company finance, the capital intensity of production and the social distribution of earnings. The section on company finance looks at the sources of funding available to AGC namely equity, debt and retained earnings, the changing proportions of these and the implications of such change on the firm's longevity. This is followed by an examination of the capital intensity of production which focuses on AGC's investment in capital relative to that in labour and land. The last section assesses the distribution of AGC earnings among two prominent stakeholders: the shareholders and the government, and again, the relationship this had to the firm's survival.

Company Finance

Equity was the predominant source of external finance for AGC. Virtually no long-term debt was assumed until the mid-1980s. The mine's geological wealth and, for the most part, careful production planning permitted reliable cash generation. AGC was not only profitable for most of its history but also cash-rich.

This changed from 1996 when increasing reliance was put on cash generation from the hedging programme (rather than solely from production). As debt and capital outlays rose with multinational expansion AGC's financial footing became increasingly precarious.

Equity

AGC was incorporated on 25 May 1897 with an authorised share capital of 250,000 shares at £1 par value. Priority was given to family and friends of the founding directors in the share allocation and £64,000 was quickly raised.[1] A further 50,000 shares were allocated as fully paid to the Cote D'Or Company shareholders who had funded Cade's reconnaissance trip. Shares were soon trading at a premium,[2] and as subsequent tranches were issued the shares were over-subscribed.[3] A mining student who worked at AGC in the summer of 1900 commented in his memoirs that AGC's mine was "creating quite a stir in financial circles".[4] By 1903 there were 1,961 shareholders.[5] The issued shares were divided in February 1904 from 155,000 at £1 each to 775,000 at 4s each as it was felt that investors preferred smaller denominations.

The remainder of the initial authorised capital of £250,000 was fully issued in 1920 to assist in financing post-war mine rehabilitation. No further changes were made to the authorised share capital until 1930. Three share issues between 1930 and 1933 raised the nominal share capital to £1m.[6] In 1939, in order to allow the doubling of production capacity, two new shafts and a new treatment plant were planned. The finance for this was raised through the capitalisation of reserves and a pro rata equity issue to existing shareholders. The nominal capital was increased to £1,250,000 (£1,248,557 fully paid), and in the process £679,803 was raised through the share premium.[7]

Between 1943 and 1955 the paid-up share capital remained unchanged, however the company's securities were converted from ordinary shares of 4s each into ordinary stock of 8s each to reduce administrative costs. In 1956 authorised

[1] MS 24659, circular dd. 18 February 1897.
[2] MS 14164/1, report on EGM, 21 July 1898.
[3] MS 14164/1, minutes, 15 August 1898.
[4] MS 24669, Reminiscences of Thomas George Madgwick, Mine Engineer, 1899-1900, p.1.
[5] MS 24661/1, report on AGM, 16 December 1903.
[6] The Mining Manual, 1925-72; Turner (1947), p. 9.
[7] Ibid.

capital was increased from £1,250,000 to £1,875,000, and the ordinary stock converted back into ordinary shares in September 1957. The following year the net book value of the remainder of the 90-year lease commencing 1 January 1897 was increased from £46,115 to £546,000. Authorised shares were increased to 12,500,000 at 4s each, and again in 1960 to 15,000,000.[8]

Major changes to nominal capital were made following Lonrho's purchase of the company. On 15 April 1969 the nominal capital was increased to 20,000,000 ordinary shares of 4s each of which 3,745,674 shares (valued at 20s each) were issued as fully paid to the Ghana government in part consideration of the grant of a new lease for 50 years from 1 January 1969, representing 20% of the issued share capital.[9] Lonrho took the company private following their successful bid for AGC.

As a result of NRC Decree 132 in 1972, the company's ownership was split 55% to 45% for the government and Lonrho, respectively. The equity capital in the new company, Ashanti Goldfields Corporation (Ghana) Ltd's first balance sheet was set to zero. Shareholders' funds would not return to the pre-expropriation level again in real terms until the end of the 1980s.

Following the partial nationalisation in 1972 no new equity was raised until the company floated in 1994. With an initial offer price of US$20 per share, the 1994 flotation valued the company at US$1.67bn. The government and Lonrho received 79,999,000 fully paid shares and 3,900,000 of new shares were issued to the public, generating US$78m in new funds for AGC. (Lonrho held on to all of its shares but the government immediately sold down its stake from 55% to 35% raising just over US$450m for the treasury).

A separate equity issue of US$60m in August 1995 was used specifically to fund a new subsidiary, Ashanti Exploration Ltd.[10] Equity was diluted by 24% in 1996 when new shares to the value of US$376.4m were issued for payment towards mines acquired that year.[11] As part of a major balance sheet restructuring exercise in 2002 a private equity placement with Lonrho raised US$75m cash and helped to reduce gearing.[12] This placement and the exercise of share warrants

[8] The Mining Manual, 1962.
[9] AGC annual report, 1969, notes 2 and 6b.
[10] AGC annual report, 1995.
[11] AGC annual report, 1996; see Chapter 7, 'Enterprise'.
[12] AGC annual report, 2002.

issued by AGC to its creditor banks and hedge banks as part of the solution to its derivatives crisis further diluted equity by 17% in 2002.

For most of AGC's history, the company had a preference for equity financing and only resorted to debt for specific short-term needs until 1986 when debt became a regular and growing source of capital, see the capital structure graph 6.4 below.

Equity was mostly issued for specific investment purposes, for example, the £679,803 in 1939 for the construction of the Pampora Treatment Plant; in the 1950s to complete and equip the Eaton Turner shaft and expand the power station; and in 1995 for an exploration subsidiary. Other purposes for issuing equity were to bolster the balance sheet. For example, the increases between 1930 and 1933, in large part through the capitalisation of reserves, was motivated by the feeling among the directors that the company's capital base was too small relative to the value of the company's assets and the amount sunk into developing the mines.[13] A non-investment purpose for new equity in the 1990s was the issue of scrip dividends to conserve cash; and the equity issue from the conversion of warrants in 2002 was an inevitable part of the rescue package with creditors who elected not to exercise their rights to foreclose during the 1999 crisis.

Owning a gold-rich, cash-generating mine enabled AGC to make regular dividend payments: dividends were paid in 93 of the firm's 107 years – of the fourteen years when shareholders received nothing, five were from 1999 to 2003.[14] Prior to the mine being taken private in 1968, AGC's habit of paying dividends regularly could have made raising capital through new equity relatively easy since management had a reputation for acting in shareholders' interests. (The relationship between changes in the share price, a proxy for changes in demand for AGC's shares, and the decision to assume debt or issue equity is discussed below.) On the other hand, the cash generation ability of the mine would also have suited debt finance by giving creditors confidence in future regular payments. However, the mining industry until relatively recent developments in geology and exploration was surrounded by uncertainty. Whether a discovered ore body would continue, in which direction, for how long and with what gold content, and the success of exploration efforts for new deposits created a level of uncertainty

[13] MS 14164/7 minutes, 8 November 1933.
[14] AGC annual reports; board minutes, GH, 1972-1994; Appendix 3.

unsuited to debt. The late appearance and growth in the use of debt in the firm's life is now considered.

Debt

AGC assumed long-term debt for the first time in 1904 when a bank loan for £21,000, increasing to £30,000, was incurred mainly for experiments in cyanidation but also for immediate working capital needs.[15] In the 1906 financial year 1,600 5-year 7% debentures were issued for £50 each, raising £80,000. A small proportion of this debt was redeemed early at a premium and the remainder converted into shares by 1910. The debt was first used to repay the bank loan and debenture issue costs. The remainder went towards implementing W. R. Feldtmann's 1905 recommendations to develop the mine's ore reserves. Feldtmann required nearly £30,000 for new capital expenditure.[16] His report was attached to the debenture prospectus for investors' information. This debt was cleared before the maturity date and no long-term debt was incurred again until 1986.

Early in 1982, AGC's managing director, George Cappendell, had made overtures to the IFC to seek their assistance for capital expenditure and development plans at Obuasi.[17] No systematic investment had been made in the mine for a decade. Raising equity for rehabilitation was not a viable option because of the unattractiveness of Ghana for investors.[18] Lonrho, it appears, were not prepared to inject their own capital on a long-term basis – they were already pre-financing all of AGC's monthly operation costs and experiencing continual delays in repayment from the government.[19] The majority shareholder, the government of Ghana, was close to bankruptcy. However, the IFC consultations gathered momentum following Ghana's implementation of Structural Adjustment in 1983.

Between 1986 and 1992 AGC borrowed US$245m with IFC assistance to rehabilitate and expand Obuasi, through three separate syndicated loans with

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[15]MS 24661/1, report on AGM, 15 December 1904.
[16] MS 24661/1, W. R. Feldtmann, report on Obuasi, 15 July 1905.
[17] Board minutes, GH, 20 January 1982.
[18] J. Ahiakpor, 'The Profits of Foreign Firms in a Less Developed Country: Ghana', *Journal of Development Economics* 22, 1986, p. 330; see Chapter 2: The Research and Historical Context on the state of Ghana's political economy in the late 1970s and early 1980s.
[19] Board minutes, GH, 18 November 1982.

international banks.[20] The loans required government approvals for escrow accounts to be established in London to permit the bankers direct access to repayments.[21] These loans were of short duration, not exceeding five years, and they were all repaid. The table below summarises the use of each of the three IFC syndicated loans.

Table 6.1: The use of IFC-led debt packages, 1986-1995

Project name	Total project Cost	IFC loans	Use of debt
Rehabilitation and Expansion, 1986-1990	US$160m	US$45m	Updated underground infrastructure: haulage, ventilation, shafts; mechanised mining; updated Pampora Treatment Plant.
Sansu, 1990-1992	US$93m	US$60m	Surface mining and oxide ore treatment plants.
Ashanti Mine Expansion (AMEP), 1992-1995	US$305m	US$140m	Underground and overground mine expansion; human resources, environment, health and safety improvements.

Further syndicated debt accrued in June 1995 without the IFC's involvement. A 5-year revolving credit facility (RCF) arranged by Barclays with the participation of seventeen other banks gave AGC access to US$185m on flexible terms and without any political risks insurance.[22] The money was targeted for exploration, business development and working capital.

A return to the bond market was made in February 1996 when US$250m was raised by issuing 5½% 7-year convertible bonds, convertible into ordinary shares at a strike price of US$27 per share (the prevailing share price at the time was US$25). The securities were issued on the New York Stock Exchange and made available as bearer bonds in other international markets. The aim was to attract a wider range of investors. The US$250m financed AGC's new growth strategy of acquiring mines already in production.

[20] See Chapter 3: A Chronological Narrative.
[21] Board minutes, GH, 15 April 1985; see Glossary for a definition of 'escrow account'.
[22] AGC annual report, 1995, p. 27.

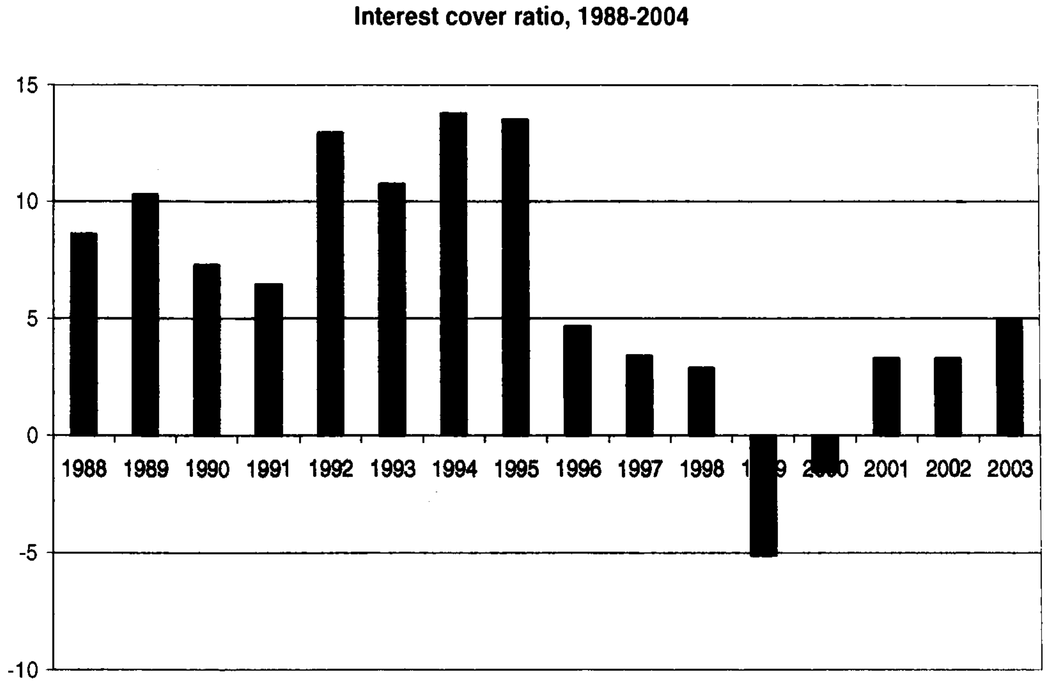
The RCF would be renewed and extended to US$270m in December 1998 and then to US$326m in February 2000. Each new facility repaid the previous one and, in the case of the 1998 package, US$50m went towards an acquisition, the remainder to the completion of mines bought in 1996 at the development stage, and for working capital. A reduced RCF of US$200m was put in place in June 2002.

Gross gearing did not continually exceed 50% until 1996, reaching 164% in 2000 with total debts peaking during that year at US$693.3m.[23] The decline of gold prices between 1996 and 1999 caused a decline in the share price of all gold companies. AGC's share price performed worse than industry indices because of its equity dilutions, the fact that the Ghana government held a golden share, the lack of liquidity created by two large shareholders owning over 50% of the stock, and market reservations over the speed and execution of the growth strategy.[24] This made it unattractive to issue new equity in the open market between those years, which partly explains the high and rising assumption of debt during this period. That this was indeed how the company was thinking is seen in the board room discussion on fund-raising options which culminated in the decision to issue convertible bonds rather than equity.[25]

The growing debt burden squeezed cash flow. This is captured in Figure 6.2 which shows the deteriorating interest cover ratio between 1988 and 2004. A lack of liquidity lay at the crux of the hedging crisis when AGC was unable to meet US$270m of margin demanded by hedge counterparties in October 1999.

[23] AGC annual report, 2000, p. 19.
[24] HSBC Global Mining Division, AGC equity research report, 30 October 1998, p. 2; board minutes, GH, 24 March 2000 – presentation by Robert Knapp of Millennium Partners USA, an institutional investor, on shareholder perceptions of AGC. (See Chapter 7, 'Enterprise')
[25] Board minutes, GH, 24 January 1996.

Figure 6.2[26]



The company's high gearing was also unusual for the sector. AGC's competitors such as Anglogold, Barrick, Goldfields and Newmont had in 2000 gross gearing levels of 3%, 22%, 16% and 67% respectively.[27] With reduced technological and geological uncertainty in modern times, one reason why gold producers remain relatively debt-free is the fact that their product can be viewed as natural money, not just a commodity. (Indeed, when currencies were backed by gold, the paper and coins were derivative instruments of gold, merely representing the underlying asset).[28] Being able to produce the closest thing to money should, with sound production planning and careful investment avoid the need to borrow excessively. Steps taken by AGC to reduce gearing started with the sale in December 2000 of 50% of the Geita mine for US$335m, US$236m of which went to repay debt.[29] Then, in 2002, the cash injection from Lonrho's US$75m equity placement and US$45m from bankers exercising their share warrants together with a new RCF of US$200m allowed the early redemption of AGC's outstanding

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[26] Interest cover calculated as earnings before tax and interest payments divided by interest obligations on long-term debt.
[27] Calculated from their respective balance sheets for 2000. Interestingly, AGC had set themselves a policy back in 1995 that gross gearing should not exceed 45% - board minutes, GH, 1 September 1995.
[28] 'Real gold, paper gold and fool's gold: the pathology of inflation', 12 October 1999, www.goldensextant.com/commentary4. html, accessed 10 March 2005.
[29] AGC annual report, 2000, p.19.

US$250m convertible bond debt. These actions brought gross gearing down to 53% in 2003.[30]

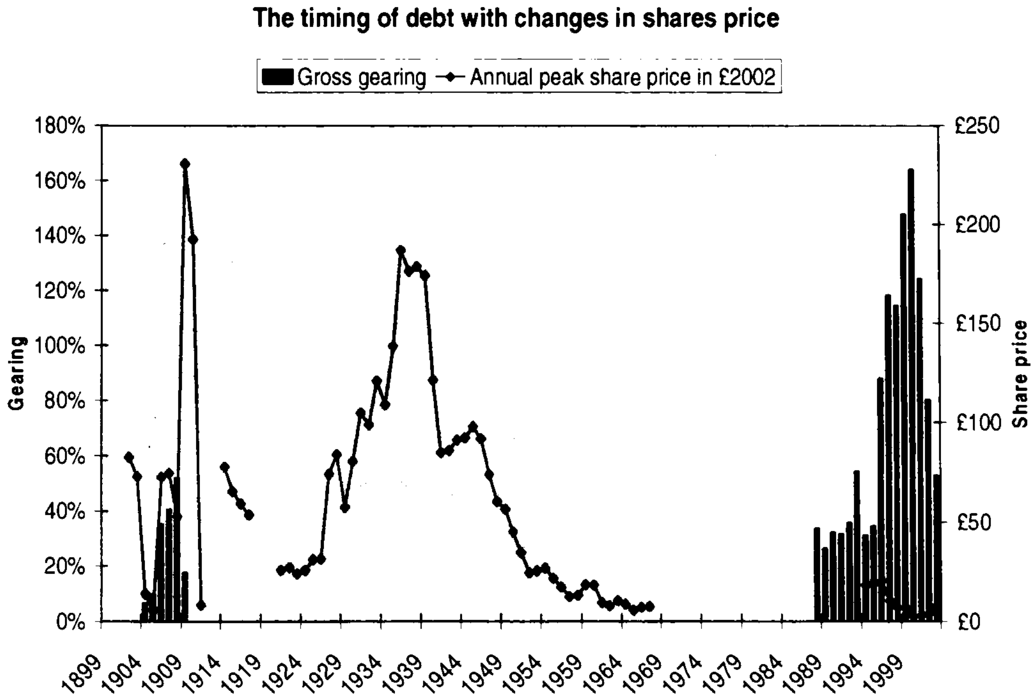
Short-term debt – that is, debt expiring within a year - was a constant feature of the company's balance sheet from inception. The major components of this debt were salaries, royalties, tax and suppliers' invoices. Short-term debt was financed by bank overdrafts. Supplier debts were frequently owed to Lonrho between 1972 and 1986. They were lending £800,000 per month for the mine's working capital in 1982.[31]

The company's experience with debt in its later years was motivated by the quest for growth. While this growth remained organic (between 1986 and 1995) the debt could not be described as a burden, gearing averaged 35% during this period. It was the company's inorganic growth from 1996 with the spate of acquisitions that a huge need for debt finance arose. The debt was not needed primarily as consideration for the purchases (this was largely settled using AGC shares), the need for borrowed cash was rather to develop the sites acquired that were at exploration or mine development stage. Geita, Bibiani and Siguiri all required project finance to bring them into production. (For details see Chapter 7, 'Enterprise'.)

It would be rational to expect that at times of rising share prices new capital would be sourced from equity, and during share price slumps debt would be preferred, holding all other factors constant (these other factors, such as share ownership profile, industrial considerations and political risks, are material, however). Figure 6.3 lends support to this over-simplified expectation. In 1904 when long-term debt was first assumed the share price had plummeted 80% in the preceding 12 months. And in 1909 a 426% annual rise in the share price allowed the early conversion of bond debt into equity. Towards the end of the firm's history the rise in debt levels matched a continuous decline in share price. However, it is worth noting that the decision to issue bonds in 1906 to finance Feldtmann's mine plan coincided with a rise in the share price on the back of his optimistic report on the mine's future.

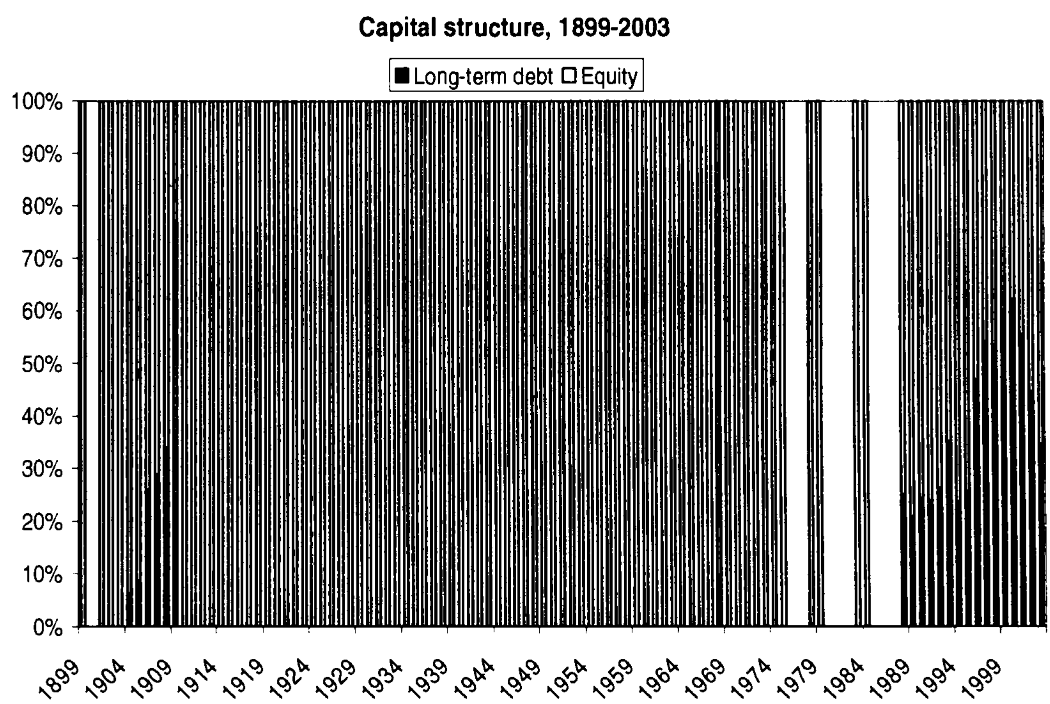
[30] See Appendix 3.
[31] Board minutes, GH, 18 November 1982.

Figure 6.3



An appreciating share price would encourage raising new capital by issuing equity. The falling share price in later years coincided with increasing debt.

Figure 6.4



Equity was the prime source of finance in AGC's history.

Retained Earnings

The richness of the Obuasi mine allowed a reliable flow of cash and considerable investment to be made from retained earnings over the company's life. Indeed retained earnings were the *only* source of capital between 1972 and 1985 with the inability and reluctance of the majority shareholders to contribute investment funds and the economic and political turmoil in Ghana limiting the supply of lenders. Just over 50% of the IFC phase projects were funded from retained earnings between 1986 and 1994.

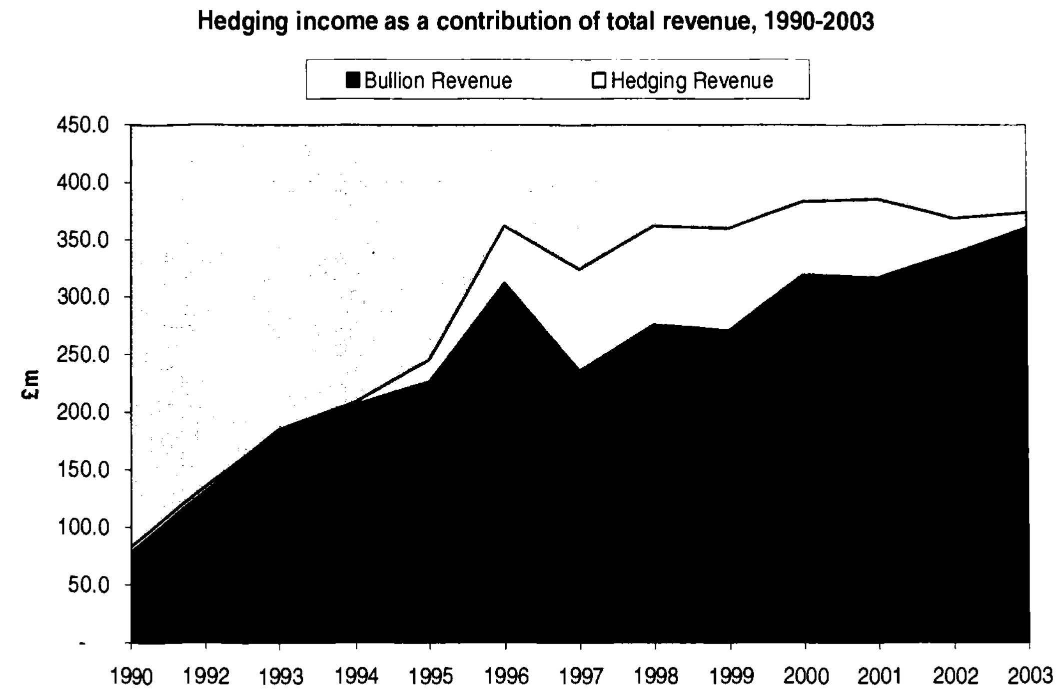
Hedging income became an important component of retained income from 1990. The hedge portfolio grew to cover over 80% of AGC's proved and probable reserves and production for fifteen years in the future, with nineteen different hedge counterparties. After price protection, AGC's stated objective in its hedging strategy was "to raise cash in order to pay back debt or to finance capital expenditure or acquisitions."[32] From the selective, early termination of in-the-money positions the hedge book generated positive cash flow. From the last quarter of 1996 until 2002, income earned from the hedge book consistently exceeded operating profit, as disclosed in AGC's annual reports. The hedge book's performance between September 1996 and July 1999 effectively countered the drop in gold prices from US$380 to US$253 an ounce. Until the hedging crisis erupted at the end of September 1999 AGC always realised a price above spot for their gold. AGC was viewed by the market as a sophisticated and successful hedger.[33] Empirical evidence is available to both support and reject the benefit of hedging for shareholders of gold companies.[34] But what is clear is that hedging income was a critical part of gross revenue and retained earnings from1990, and this is illustrated in Figure 6.5.

[32] Mark Keatley, 'Paper on the management of the hedging portfolio', April 1999, AGC internal document; HSBC International Mining Division, 'Ashanti Goldfields Asset Performance', 6 October 1997, p. 37; HSBC Global Mining Division, AGC equity research report, 30 October 1998, p. 2.

[33] See for example, Bill Shepherd, 'The art of hedging gold', *Global Finance*, March 1999, *The Economist*, 11 November 1999; HSBC Global Mining Division, AGC equity research report, 30 October 1998, p. 2 identifies AGC's "well managed hedge book" as one of the firm's key strengths. *Corporate Finance* magazine, January 1999, profile AGC's CFO and Treasurer as 'Dealmakers of the Month' for their hedging strategy.

[34] Two empirical studies with contradictory conclusions are Matthew Callahan, 'To Hedge or not to hedge...that is the question: empirical evidence from the North American gold mining industry 1996-2000', *Financial Markets, Institutions and Instruments*, Vol. 11, 4, November 2002 and John Wixley, 'Is gold hedging bad for shareholders?' paper delivered at the Euromoney Gold Investment Summit, 6 September 2002.

Figure 6.5



An important use of capital from all three sources was on machinery and equipment. The next section considers changes in this by analysing capital intensity.

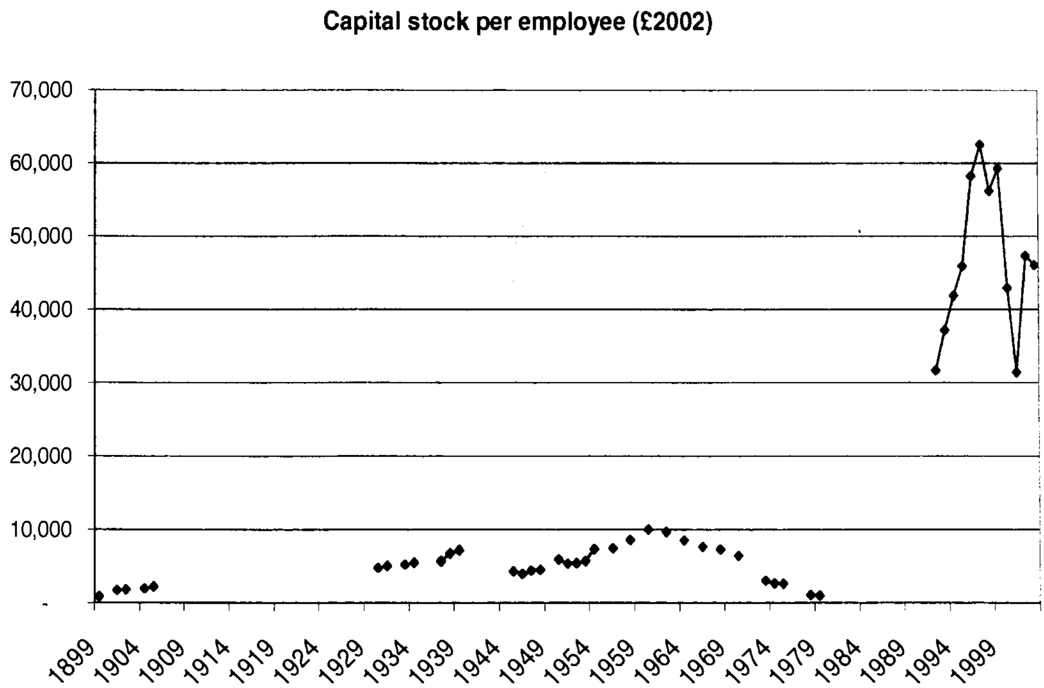
Capital Intensity of Production

Back in the 1930s, while other Gold Coast mines were producing 95% of output using rock drilling equipment, the figure for AGC was only 15%.[35] The reason offered by the company was that the nature of the ground at the stopes made the vibrations from the rock drills too dangerous.[36] The firm's relatively better labour supply in comparison with other mines in the colony also explains why AGC did not feel impelled to rely on machinery. Oral evidence from those who worked at AGC in the 1970s and early 1980s describes AGC as highly labour-intensive until the IFC rehabilitation programmes.[37] By measuring the value of tangible fixed assets per employee we can get a comparative picture of changes in capital

[35] Mines Department annual reports, 1929-30, 32-33.
[36] Mines Department annual reports, 1929-30.
[37] Interviews: Joe Amanor, Geology Manager, Obuasi, 29 March 2005; Sam Jonah, Accra, 23 January 2004.

intensity over time. Figure 6.6 below has been derived for the years where data for both fixed assets and total staff numbers are available.[38] The nominal asset values were all converted to 2002 pound sterling values, using the UK GDP deflator series via www.eh.net.[39]

Figure 6.6



Actual values of capital stock per employee for selected years from Figure 6.6 are shown below:

Table 6.7: Capital stock per employee (in £2002)

1905	1937	1951	1960	1973	1979	1992	1997	2002
£2,291	£5,705	£5,361	£9,993	£3,077	£1,026	£31,687	£62,546	£47,359

It can be seen that the level of capital intensity from 1905 was only gradually increased, doubling by the 1930s. However, by the late 1970s it appears that the mine was less capital-intensive than it had been in 1905. In 1979, the table

[38] The value of the lease of the goldfields is excluded from fixed assets.
[39] For the period 1898 to 1972 this method is satisfactory since AGC procured most of its imported equipment from the UK and accounted for their capital expenditure in pound sterling. For the later 1970s, with the valuation of assets in cedis and the extreme exchange rate distortion, this method is less robust, and adjustments are considered below.

above shows two times less capital in real terms was employed per worker than in 1905.

The company started to report its financial accounts in cedis from 1973. The cedi was overvalued by a factor of between nine and ten from 1973 to 1981.[40] As a result, the accounts grossly understate the free market cost of imported fixed assets. Assuming that AGC had been able to exchange cedis for dollars from the Bank of Ghana, and used the under-priced dollars to pay for imports then Table 6.7 probably shows too low an amount for 1973 and 1979, and fixed assets per employee for those years could possibly have been in reality about £30,000 and £10, 000 respectively. However, the company records show continual difficulty in both procuring import licenses and foreign exchange. The consulting engineer reported in 1979:

> *The major difficulty continued to be the allocation of Import Licence and foreign exchange needed to pay for spares and materials essential to efficient production. Due to reduced imports during the year conservation of stocks of materials available at the mine continued; measures taken included rationing of reagents, explosives and consumable mining stores.*[41]

The statement is supported by further complaints along the same lines in the board minutes.[42] As an exporter, the artificially high exchange rate was an implied tax on AGC, diminishing the income available for purchases. While the capital stock per employee may not be have been quite as low as the table above shows for the 1970s, the evidence indicates that AGC, like the Ghanaian manufacturing sector, was effectively starved of imported capital goods during this period. The sharp drop in the capital/labour ratio between 1973 and 1979 (even after adjusting for exchange rate distortion) suggests that machinery was not being repaired or replaced at this time; and/or it was rational to use more labour because it was relatively cheap.

Supporting the evidence that capital was replaced with greater manpower is the fact that the number of employees averaged 4,765 in the 1960s compared with 7,850 in the 1970s – a period of declining ore and gold output (see Appendix 3).

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[40] Rimmer (1992), p. 149.

[41] Consulting engineer's report 1979 attached to annual report that year.

[42] Board minutes, GH, 23 January 1976, 6 April 1979, 14 October 1981, 19 May 1983; see also the Ghana Chamber of Mines annual report 1980, president's address, pp. 3, 4.

During this decade the relative availability of labour in Ghana was high as population and unemployment increased while land became relatively less abundant. This would imply cheaper labour costs.

Oral evidence from a senior miner who worked during this period adds that the mine was operating on a "barter system", Obuasi would swap equipment with the State Gold Mining Corporation; for example, if they were in need of dynamite and the SGMC in greater need of reagents, then these vital inputs would be bartered.[43]

By 1997, following the IFC loans, capital intensity peaked at £62,421 per worker. The drop thereafter marks the end of Obuasi's surface mining activities and the decommissioning and closure of assets relating to that.

Most of the mine's life was characterised by low capital intensity relative to labour. The reasons for this were in the first instance practical. The heavy ground alluded to in the company's explanation for only producing 15% of ore with rock drills back in 1929/30 was a geological reason; geographical distance and lack of skills in the early years would also have hindered the feasibility of obtaining or manufacturing spare parts and machinery on site, leading to more labour-intensive methods. However, the fact that gradually more capital was being spent per employee until the 1960s suggests that the practical obstacles were being overcome. But the 1970s and early 1980s saw a level of investment in capital goods below that desired by the mine managers.

In terms of the capital to land ratio, a striking feature of AGC is the negligible rent paid to landowners for the original concession, compared to other costs (see Chapter 3). But another aspect of the cost of land to the firm was the royalty and mineral duty paid. These were based on the gold extracted and therefore provide a measure of the cost of the land that can be usefully compared to AGC's' capital base and operating costs. Excluding the twenty expropriation years from 1973 when the equity base of the company was set to zero, the cost of land averaged 4% of the company' s long-term capital (shareholders' equity and long-term debt combined).[44] Measured in this way, land was relatively cheap, and became even more so as the company grew in its last decade from 1994. As a proportion of direct operating costs (again 1898-2003 but excluding 1973-93), the royalty and minerals duty paid for gold averaged 12% per annum. Whether this

[43] Interview, Jonah, Accra, 23 January 2004.
[44] Calculated from Appendix 3, 1898-2003 (excluding 1973-1993).

was low or not could be determined by comparing with other components of operating costs, such as wages. Wage data was not available for the most part, but it was possible to make such a comparison for the years 1994-2000, as Table 6.8 illustrates. The results confirm, for this limited time frame, that land was relatively cheap for AGC – cheaper than both capital and labour.

Table 6.8: Relative cost of land (measured by royalty payments)

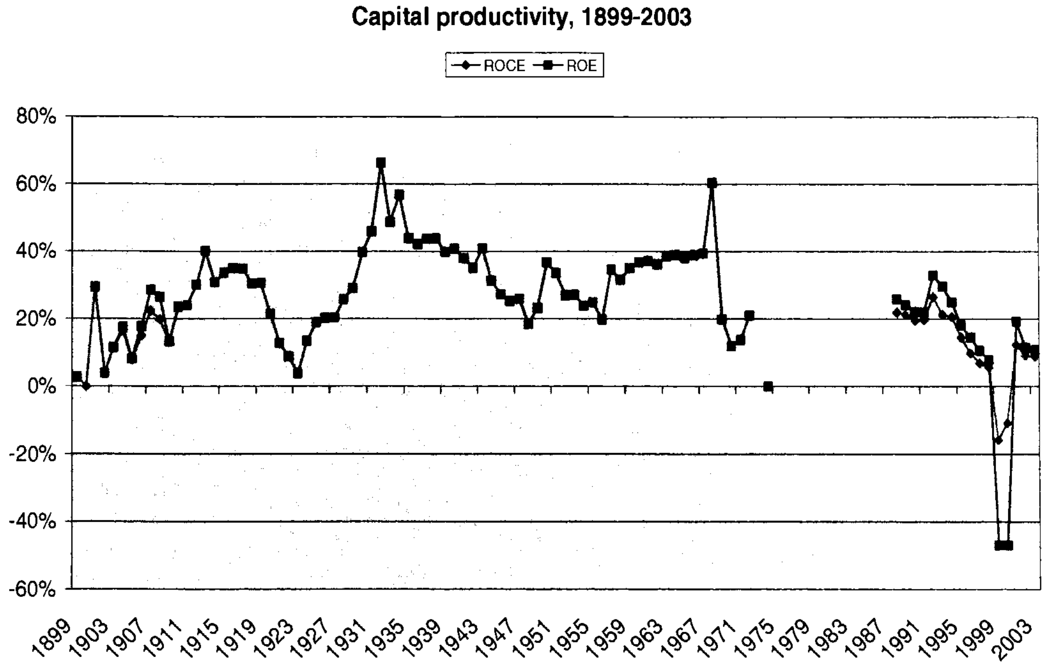
Year	Royalty as % total capital	Royalty as % operating costs	Wages as % total capital	Wages % operating costs
1994	1.6%	6.9%	6.4%	27.3%
1995	1.5%	5.9%	5.6%	22.9%
1996	1.3%	2.9%	6.1%	13.8%
1997	0.4%	1.6%	5.3%	20.3%
1998	0.8%	2.7%	5.8%	20.3%
1999	1.3%	3.8%	6.9%	20.9%
2000	1.9%	4.2%	9.4%	21.2%
Average	**1.2%**	**4.0%**	**6.5%**	**20.9%**

Of the three main factors of production land was relatively the cheapest resource for AGC, followed by labour and then capital. In the 1970s and early 1980s the harsh economic environment in Ghana increased the cost of capital to an extent that the mine was de-modernising. This threatened the viability of production, despite AGC's geological wealth.

<u>Capital Productivity</u>

Since the firm's capital structure was entirely equity based for most of its history the return on capital employed (ROCE) statistics match the return on equity (ROE) statistics for most years, as Figure 6.9 shows.

Figure 6.9



ROCE was calculated by dividing earnings before interest and tax by the sum of shareholders equity and long-term debt. For ROE the denominator excludes long-term debt.

The ROCE tells us the efficiency of use of the company's assets. The general picture for the firm is good. For the years where financial data is available, AGC averaged 26% ROCE, which is impressive: ROCE of 20% is used as a yardstick of very good performance.[45] Prior to 1972, ROCE seldom dipped below 10% and exceeded 50% in 1932, 1934 and 1968. The bare figures, however, impart very little information: comparison with the cost of borrowing and a risk-free yield produce a better understanding of the firm's capital productivity.

For the years when long-term debt was assumed and for which the financial data on cost of borrowing and the data to compute ROCE are available, a comparison is made between the cost of borrowing and ROCE.

[45] Global Investor glossary, http://www.finance-ossary.com/terms/return-on-capital-employed.htm?id=1581andginPtrCode=00000andPopupMode

Table 6.10: Cost of debt and capital efficiency

Debt assumed	**Cost of debt**	**ROCE**
1908 debentures £80,000	7%	19.81%
June1992 US$140m IFC AMEP	LIBOR* + 1.78% = 6.38%	26.45%
June 1995 US$185m RCF	LIBOR + 1.05% = 6.85%	14.58%
February 1996 US$250m convertible bonds	5.5%	9.89%
December 1998 US$270m RCF	LIBOR + 0.83% = 5.83%	**5.59%**
February 2000 US$326m RCF	LIBOR + 2.5% to 4% = 9.3% to 10.8%	**-10.81%**
June 2002 US$200m RCF	LIBOR + 1.75% to 2% = 4.15% to 4.4%	9.22%

*LIBOR figures from British Banking Association, http://www.bba.org.uk/excel/libor/, I used the 12-month USD average for the month concerned. These loan rates are variable so the comparison with the annual ROCE is only reasonable for the first month when the debt was assumed. Over the life of the debt LIBOR varies.

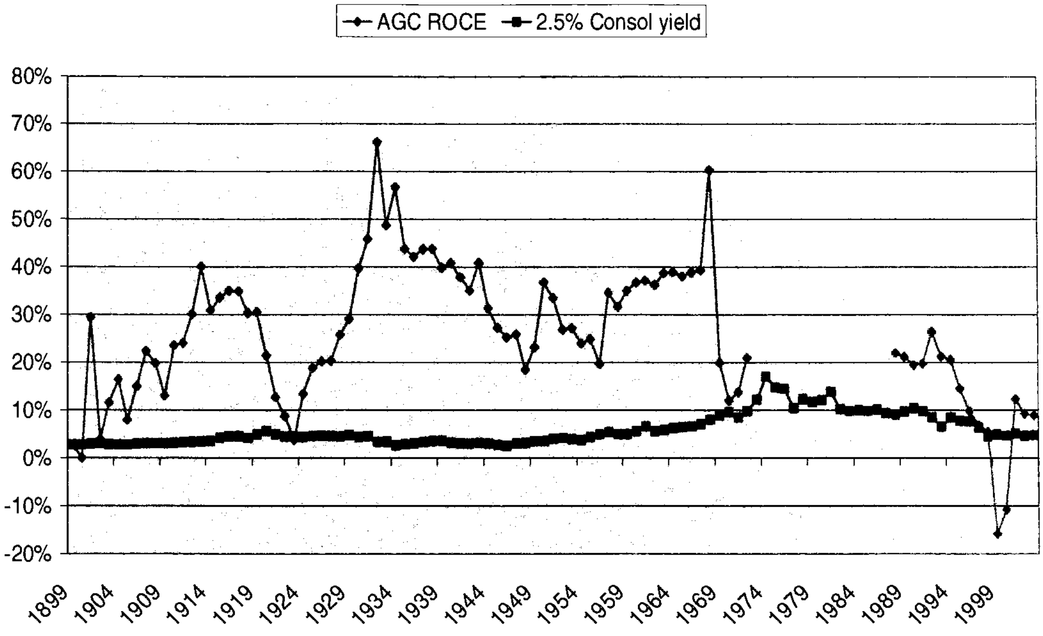
It can be seen that for the most part AGC's earnings yield comfortably covered the gross cost of borrowing. However, in 1998 ROCE was unsatisfactory, as it neither met the 7-year 5.5% convertible bond cost nor the 5.83% RCF cost assumed in December. (LIBOR rates climbed over the proceeding two years, which would only have worsened the ROCE - cost of borrowing gap.) In 2000 the borrowing rate far exceeded the efficiency of capital, owing to the sudden write-off of assets at Obuasi related to surface mining. This analysis adds another dimension to understanding the cause of AGC's financial crisis: besides rising gearing levels the table shows that between 1998 and 2000 AGC was destroying, rather than creating, value.[46]

When AGC's ROCE is compared with the return on a UK risk-free instrument the general picture of a good history of capital productivity can be further dissected. The risk-free instrument used is the UK Government 2.5% Consol, chosen because the data series goes back to the nineteenth century.

[46] ROCE should strictly have been compared with the risk weighted average cost of capital comprising the cost of debt and the opportunity cost of equity. This would have produced a less favourable comparison to ROCE for each of the years under consideration due primarily to the risk premium component in the cost of equity.

Figure 6.11

Comparison of AGC's profitability with a risk-free instrument



Source: Consol yield data from http://www.globalfindata.com.

Again, the company's best performance was prior to 1969. Several factors would anticipate a wide margin, or premium, between AGC's return on capital and the risk-free yield. First, the nature of the firm's industry. Mining, particularly in the firm's establishment years was dogged by uncertainty, as mentioned above. Second, the firm's location in Africa, thousands of miles from investors, created obstacles to the quality and timeliness of information, which would further aggravate uncertainty. With telecommunication advances the premium to be attached for this aspect of uncertainty would have diminished significantly over time. But a third factor necessitating a risk premium, which increased over time, was the political and economic uncertainty from the late 1940s over African self-government.[47] How to quantify the changing value of these elements of uncertainty is not attempted here. But the analysis in itself suggests that, in qualification of the first impression from the raw ratios of an impressive return on

[47] See Stockwell (2000), pp. 105-110.

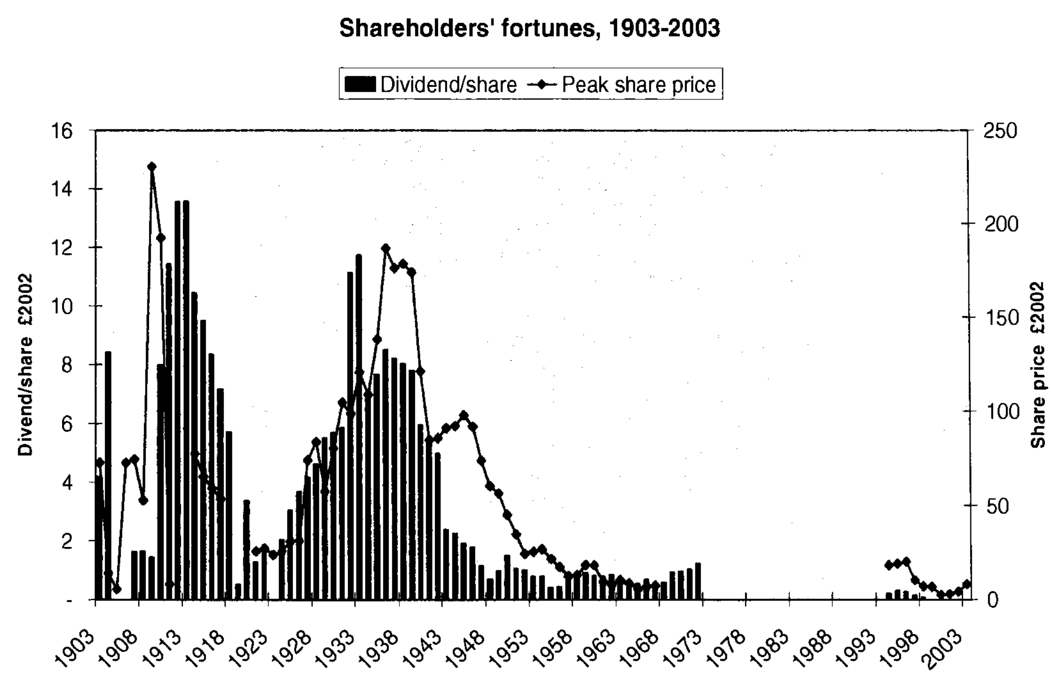
capital, AGC's performance was inadequate compared to the risks in 1900, 1902, 1905, 1923, 1970-72, 1996-2000.

The remainder of this chapter is concerned with the impact of the utilisation of capital on two of AGC's stakeholders. The analysis starts with shareholders before considering the government in its dual capacity as a stakeholder and then from 1969 as a shareholder.

A Shareholder Perspective

The first 9,346 shares offered to the public in August 1898 traded for £2, a further 10,000 shares in January 1900 at £10, and in May 1901 20,000 shares were issued at £25 each.[48] In 2002 pound sterling terms that was the equivalent of £174, £806 and £2,066 per share, respectively.[49] From the start of operations in March 1898 AGC produced operating profits, allowing the first dividend to be paid two years later in September 1900, for the financial year ending June 1901. Excluding the share price from these early years when the enterprise attracted speculative interest, the graph below plots the 52-week peak closing share prices from 1903 to 2003, along with the dividends received per share (all in £2002), followed by an analysis of the results.

Figure 6.12



[48] The Mining Manual, 1925, p.42.
[49] Values obtained from www.eh.net.

The events giving rise to peaks in the share price are tabulated below.

Table 6.13: Share price appreciation in certain years

Year	Share price (£2002)	Event explaining the share price peaks
1906	£73	The widely circulated independent report by an experienced mine industry chemist, W. R. Feldtmann, concludes that the mine has positive growth prospects. Feldtmann's subsequent appointment as Consulting Engineer marks the start of a scientific approach to AGC's gold processing.[50]
1909	£230	The mine strikes the richest ore since operations started. Identified on the mine map at 3 Level SW, about 300 feet below the old Obuasi surface workings, the ore assays more then 302 dwts per ton for over 500 feet.[51] (5 dwts per ton was payable).
1927	£74	Previous years' experiments to improve gold recovery with 3 types of processing is eventually perfected to the use of an 8-unit dry crushing and roasting plant with cyanidation. Monthly output increases to 10,500 tons from 9,000.[52]
1933	£121	Gold premium attracts investors to gold stocks encouraging new mine start-ups.[53]
1936	£186	Gold production capacity to be more than doubled from 18,000 tons per month (using the old roasting process) to an additional 20,000 tons per month using new flotation technology ordered in 1936.
1945	£98	The end of the war anticipates the removal of restrictions on gold production as well as the completion of the new flotation plant suspended because of the wartime labour and supply conditions.
1996	£20	AGC breaks the million-ounce threshold with the acquisition of 3 junior mine companies.

The events explaining troughs in the share price are tabulated below.

[50] See Chapter 3, 'A Chronological Narrative'.
[51] MS 24661/2, report of Consulting Engineer, 31 October 1909.
[52] The Mining Manual, 1925-30.
[53] Mines Department annual report 1932/33.

Table 6.14: Share price depreciation in certain years

Year	Share price (£2002)	Event explaining share price troughs
1905	£6	The initial quick and easy extraction of oxidised surface ore ends. Encountering more refractory ores gold recovery drops to 60%; disappointing cyanidation experiment results.[54]
1911	£8	Reduced ore reserves for the second year in a row; the main Obuasi chute hits barren rock at 8 Level just as Justice's surface mine is worked out.[55]
1923	£24	Post-1918 fuel costs rise; constant tweaks to processing techniques in an attempt to recover more than 80% of the gold from increasingly refractory ores from lower underground levels. Increasing capital expenditure to resolve processing and fuel problems without commensurate improvements in income.
1941	£85	The first year showing a decline in gold output since 1923, due to WWII conditions, lack of manpower and inputs.
1957	£13	Uncertainty about the newly independent Ghana.
1965	£6	The introduction of withholding tax on remitted dividends, and the general perception of rising Ghanaian tax and regulatory costs; perception that Nkrumah's government is in trouble.[56]
2000	£3	Significantly over-geared balance sheet, dividend moratorium, and other consequences of the financial crisis such as loss of management credibility dampen the share price.

The events associated with hikes and troughs in the share price well illustrate the prospective information embodied in the share price, and that the market, bearing in mind the analysis has looked at the annual rather than daily picture, generally appeared to respond in the right direction to news released by

[54] See Chapter 3, 'A Chronological Narrative'.
[55] MS 24661/2, Consulting Engineer's report, 30 September 1911, and report on AGM, 14 December 1911.
[56] Spears, for example, comments that "Ghana is in grave financial straits" *Financial Times*, 31 March 1965, borne from AGC's own experience of the Bank of Ghana delaying the release of money owed to them. That Ghana's taxes were seen to be affecting the share price adversely see report on AGM, 3 April 1964, MS 24661/7.

the firm. While the share price is forward-looking, the dividend reflects the backward or historic performance of the firm. The returns to a shareholder from their investment consist of both of these factors: the change in the share price from the time they purchased it, and the absolute amount of dividend income.

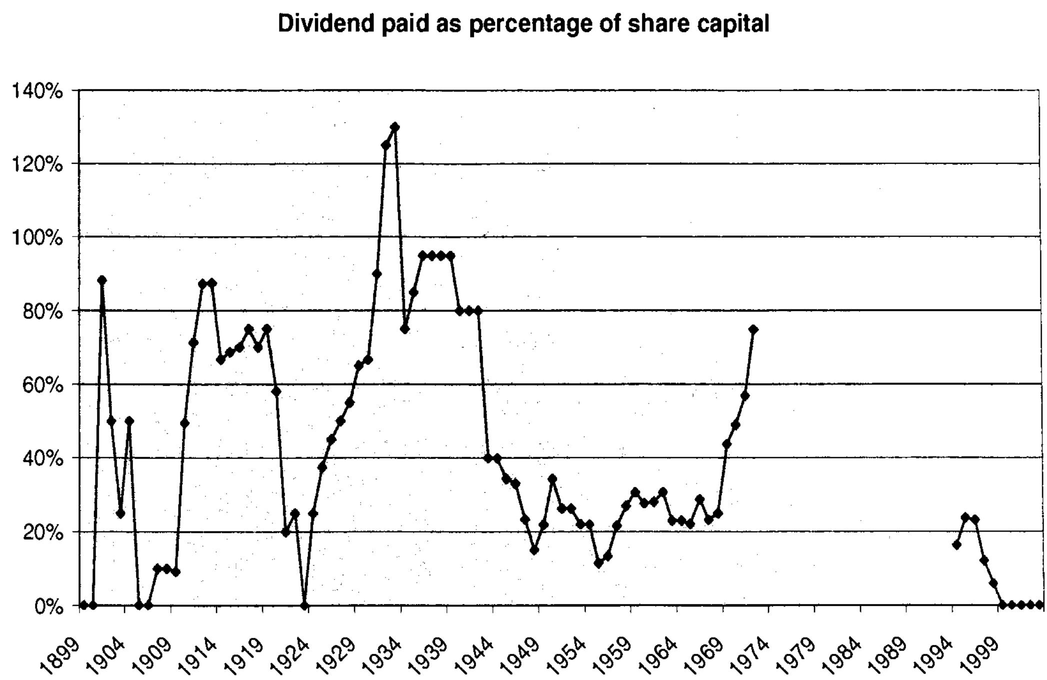
In terms of real dividend income over time, Figure 6.12 shows that AGC shareholders enjoyed a golden period between 1924 and 1939. Prior to that, shares experienced erratic swings in value. A steady depreciation in the value of an AGC share followed the Second World War, in tandem with the labour and political unrest and change discussed in Chapter 2. When the company listed again on the LSE in April 1994 the buoyancy of the IPO price soon gave way to falling real values due to a combination of firm-specific and industry factors.

In a fiery interchange between a shareholder and the board of directors at the annual general meeting in 1911 the opinion was expressed by an irate shareholder that an appreciating share price is preferable to rising dividends. The dissident shareholder criticised AGC for paying high dividends and compared the company's floundering share price at the end of 1911 to the prospering shares of South African gold mines that paid far less in dividends.[57] Cash paid out to shareholders could alternatively be re-invested, improving future performance. The shareholder expressed a rather modern, late twentieth century outlook where shares are primarily bought for capital appreciation rather than dividend income.

Another point of grievance by the shareholder back then was the unevenness of dividends paid by AGC. Sometimes there would be one (for example, in calendar year 1909), two (for example, in calendar year 1907) or more usually three dividend payments during the year. And the amounts paid at each instalment varied. The graph below showing dividends paid as a percentage of fully paid-up share capital illustrates the absence of any dividend smoothing pattern save for the two decades from 1947.

[57] MS 24661/2, report on AGM, 14 December 1911.

Figure 6.15



The turning points in dividend fortunes generally mirrored (but did not drive) that of the share price. There is a positive but weak relationship between these variables. Declining dividends during World War II occurred with an appreciating share price, and the period between 1947 and 1967 when fairly constant dividend payments were made coincided with a declining share price (Figure 6.12). The correlation between real dividend payments and real share prices produced a coefficient of 0.58.

The final judgement on AGC's performance from a shareholder's perspective is made from a comparison with the performance of the London all-share index between 1897 and 2004. The year-on-year change in the real value of AGC's shares is plotted against the change in the UK all-share index. Whereas the data for AGC is the annual share price *peak*, the index data is taken from the closing position on 31 December each year (this is how the series is presented from www.globalfindata.com). The comparison is therefore skewed in favour of AGC, see Figure 6.16. With this reservation in mind the performance of AGC appears comparable to that of the London all-share index for the most part. The period 1904 to 1914 for AGC is marked by share price volatility showing some years when share value appreciated considerably more so than the index, and vice versa. For this reason the same graph is plotted excluding the most erratic, partly speculative-driven, early years of 1898 to 1914, see Figure 6.17. The golden period for AGC shareholders identified above as 1924 to 1939 is confirmed but with qualification – in two of those fifteen years, 1929 and 1934, AGC underperformed the market. From World War II until 1968 the shares - with the exception of two outperforming years, 1963 and 1966 - either under-matched or just matched the growth in the all-share index. Interestingly, even prior to the eruption of the financial crisis in 1999, the company's shares were underperforming, in fact, they had done so from their return to the London Stock Exchange in 1994. From 2000, the balance sheet restructuring efforts and the prospect of a merger with Anglogold significantly appreciated AGC share value in comparison to the index.

Figure 6.16: Comparision of change in the FTSE all-share index with change in AGC real share value, 1898-2003

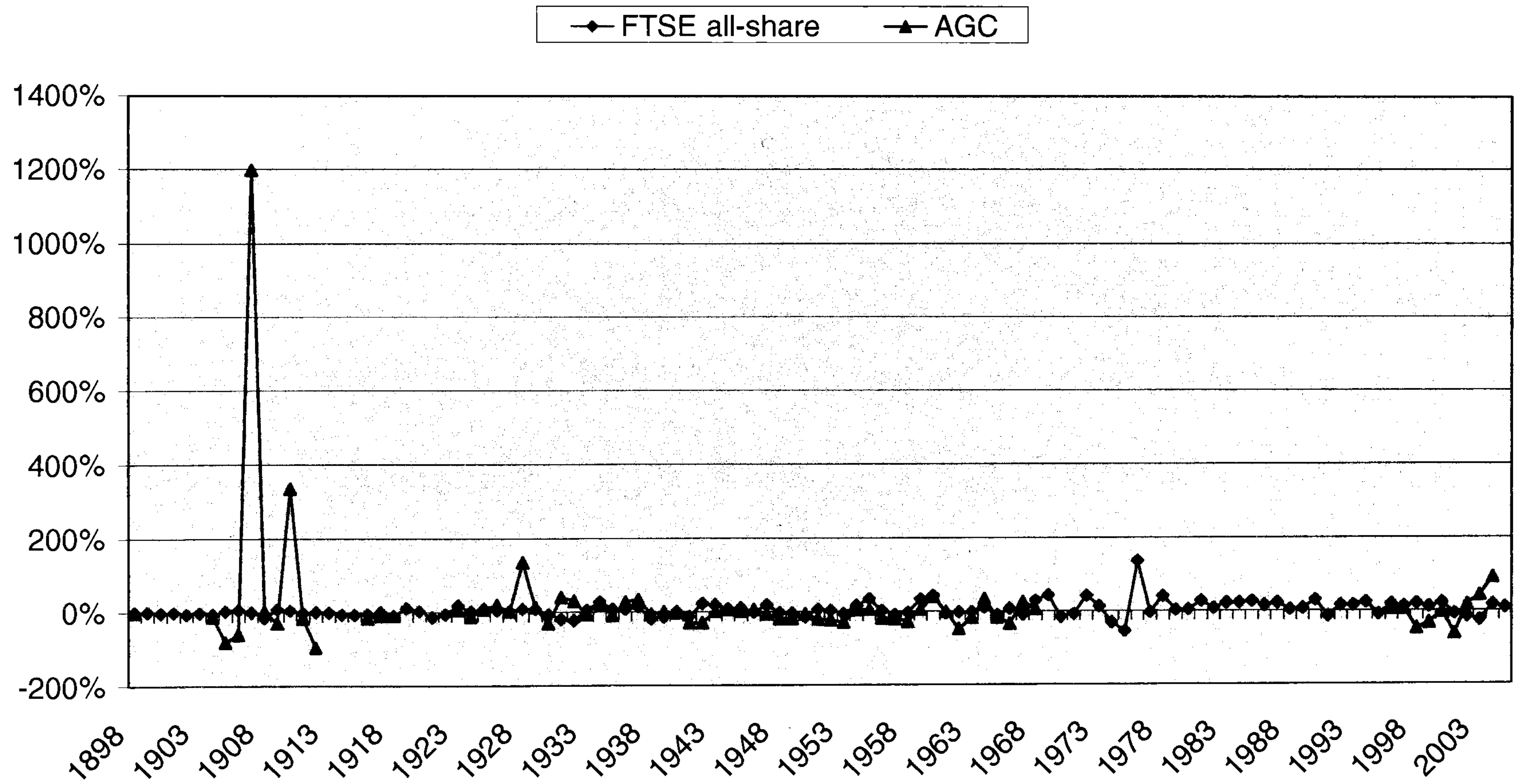
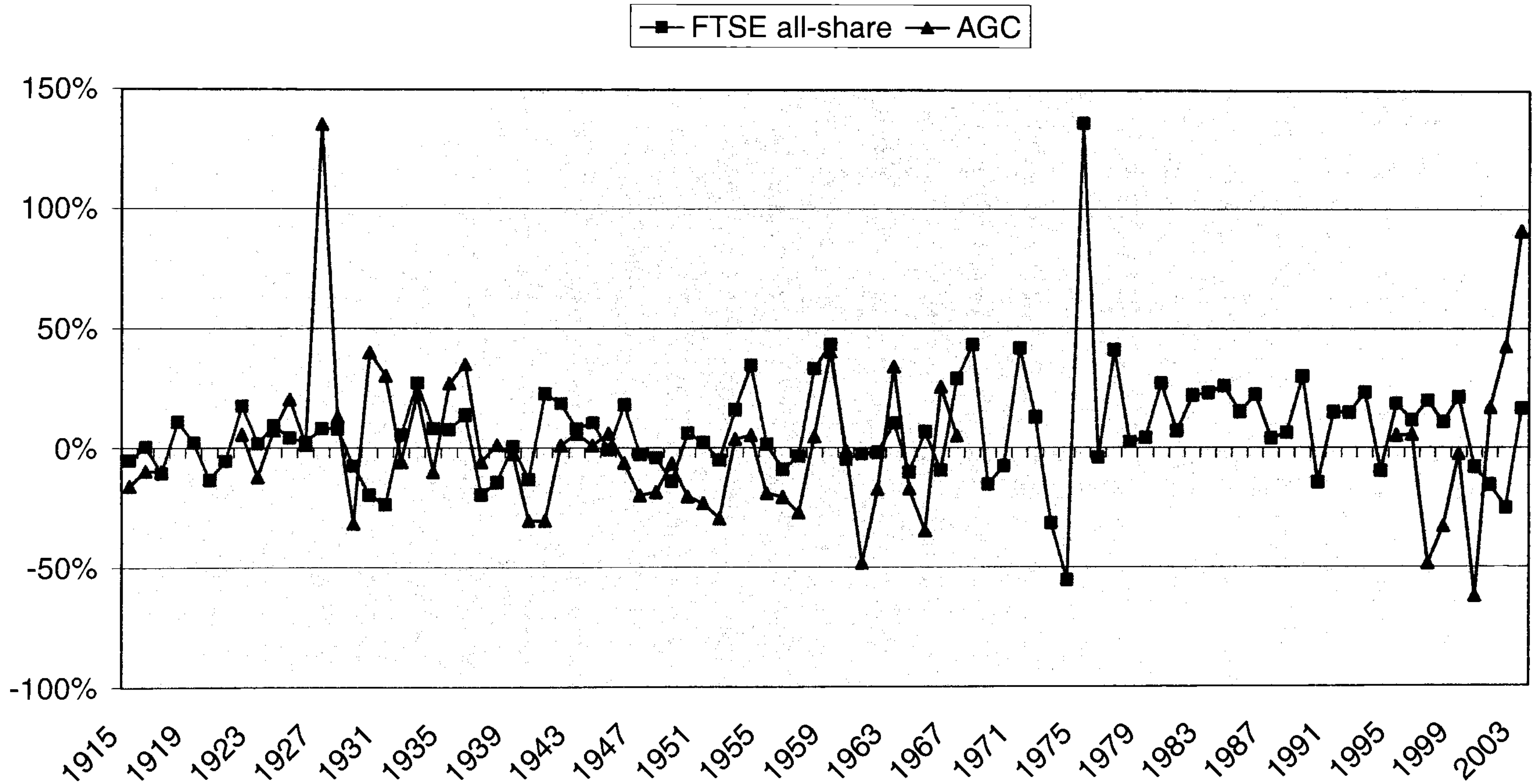


Figure 6.17: Comparison of change inthe FTSE all-share index with change in AGC share value, 1915-2003



The sum of changes in AGC's share value between 1904 and 2003 is 1,263%, compared with 602% for the all-share index over the same period. This tells us that the real value of AGC shares appreciated twice as much as the all-share index. An AGC share, if viewed over the company's entire history, fared very well.

Attention is now turned to an assessment of the Gold Coast and Ghana governments' direct benefits from AGC's capital utilisation.

Government's direct financial benefits

Since AGC's capital was deployed to deplete minerals, the capital resources of a sovereign government, it is appropriate to consider what benefits accrued to the government. The analysis is limited to direct financial benefits because the scope and measurability of other types of benefit, such as human capital and infrastructure development, could prove intractable.

The 1897 mine lease agreement stipulated the payment of royalties at 5% of gross revenue from gold won as well as any other earnings derived from the 100 square mile concession. The royalty was commuted to £500 for five years to assist the company in their establishment.[1]

In 1934 a 15% export duty on gold premium income was imposed through an amendment of the Customs Tariff Ordinance.[2] An Income Tax Ordinance was introduced in the Gold Coast in 1943. Then in 1947 a Profits Tax, an additional income tax of 5%, applicable only to mining companies was imposed on the company.[3] AGC had been exempted from this Profits Tax in 1931 because the 1897 agreement levied a 5% royalty on gross revenue (as opposed to net profits), which no other mine company in the colony paid. However this exemption had been withdrawn by 1946.[4] In 1948 a Gold Coast Ordinance created a new Gold Duty and abolished the export tax on the gold premium.[5] AGC's chairman, Spears, complained that the new gold duty, being specifically designed to give relief to low grade mines in the colony, resulted in AGC subsidising them. The duty was a variable rate ranging from zero to 21% depending on a mine's ratio of profit to

[1] MS 14169 vol.2. p. 97, royalty statement.
[2] Mines Department annual report, 1933-4.
[3] Address by the Chairman of the Corporation attached to AGC's AGC annual report, 1948.
[4] Ibid.
[5] The Gold Duty Ordinance 1948; Mines Department annual report 1948-9; see also 'Address by the Chairman of the Corporation' attached to AGC's AGC annual report, 1948.

gross revenue.[6] Spears compared AGC's and the gold industry's tax burden to that of other mineral sectors in the colony such as diamonds, manganese and bauxite. These faced significantly lower Gold Coast taxes and their production was not constrained by a fixed price at a time of rising costs. AGC's arguments for relief centred on this fact as well as the importance of their product in helping the UK government to purchase much-needed dollars. In 1952 AGC's lobbying seems to have paid off. The colony introduced a Minerals Duty of 3% of revenues to replace the export and gold duties.[7] This reduced AGC's tax burden. However, what Spears perceived as excessive tax would be his bugbear for the next twenty years.

Nkrumah's post-Independence government maintained the industry-specific tax system established by the colonial authority. The company, though, was now hit by non-industry specific taxes as the new regime attempted to broaden the sources of state revenue. Compulsory saving in the form of Ghana National Development Bonds can be seen as an added tax on the company in the early 1960s.[8] Under the regime corporation tax was increased. Other taxes affecting the company included the Excess Profits Tax, Withholding Tax on dividends remitted from Ghana, and a Sales Tax Act in 1965 which greatly increased AGC's cost of petroleum products for fuel.[9] An increase in personal taxes such as the removal of marriage allowances on income tax affected the cost of living for workers and the attractiveness of jobs in Ghana to expatriates.[10] Laws to improve workers' benefits, and the new exchange controls also impacted the firm.[11] Spears constantly bleated to his 'friend' Nkrumah that the mine's tax and regulatory burden was too onerous.[12] This time the arguments focused on AGC's ability to contribute to Ghana's 7-Year Plan, particularly with its emphasis on industrialisation.[13] Spears attempted to extract concrete assurances from Nkrumah that taxation would be capped at 50% of profits. Besides the fact that taxation calculated on profits would be too open to manipulation by the company, Figure

[6] Address by the Chairman of the Corporation attached to AGC's AGC annual report, 1948.
[7] Mines Department annual report, 1952-3, the rate is deduced from AGC's AGC annual reports, 1961-68.
[8] MS 24661/7, AGC annual reports, 1962, 1963.
[9] Ghana Trade Report 1964-5. See also MS 24661/7, Consulting Engineer's report, 1962.
[10] MS 24661/7, report on AGM 3 April 1964, reported in the Financial Times, 6 April 1964.
[11] Exchange Control Act 1961.
[12] MS 24661/7, report on Spears's Visit to Ghana May – June 1964.
[13] Ibid.

6.18 shows that during Nkrumah's rule AGC's tax burden peaked at 34% of gross revenue, less than the 51% endured in 1944 during colonial times.

Spears wrote of great expectations for tax relief with the change in regime in 1966, because the National Liberation Council (NLC) were perceived as friendly to the West. He foresaw "improved prospects for the mine."[14] However, the three years of NLC control actually saw an increase in the percentage of gross revenue going to government coffers. Some of this was through tax increases, for example the increase in corporation tax from 45% to 50%,[15] but in 1969 the most significant increase in the government's share of AGC's business came with the 20% ownership in the company offered by Tiny Rowland. The government for the first time shared in the company's profits.

Busia's People's Party significantly reduced AGC's tax burden to 17% of revenues in 1970. The advantageous situation was short-lived for the firm. Following Colonel Acheampong's 1972 coup, government attention turned to those foreign firms at the "commanding heights of the economy."[16] The National Redemption Council Decree 132 singled out the diamond producer Consolidated African Selection Trust Limited and AGC for state control. Thereafter the combination of taxes and dividend income accruing to the state rose to 55% of AGC's gross revenue in 1974.[17] In 1984 the government still enjoyed over 40% of gross bullion revenues (in that year that represented 188% of post-tax profit amount).[18]

It was not until the introduction of the PNDC Minerals and Mining Law 1986 that the state's direct share in AGC's business significantly reduced. The 1986 law turned around the disinvestment faced by the industry by redressing the imbalance between the industry's needs and the government's extraction of income. The flexible and low royalty terms and tax write-off provisions for capital investments, in particular, were effective (see Chapter 2).

The 1986 law can be seen as a swing to the opposite extreme of NRCD 132, reducing the state's share of AGC's fortunes to as little as 2% of gross revenue in 1997 and 1998. For most years following the 1986 law change AGC paid little or

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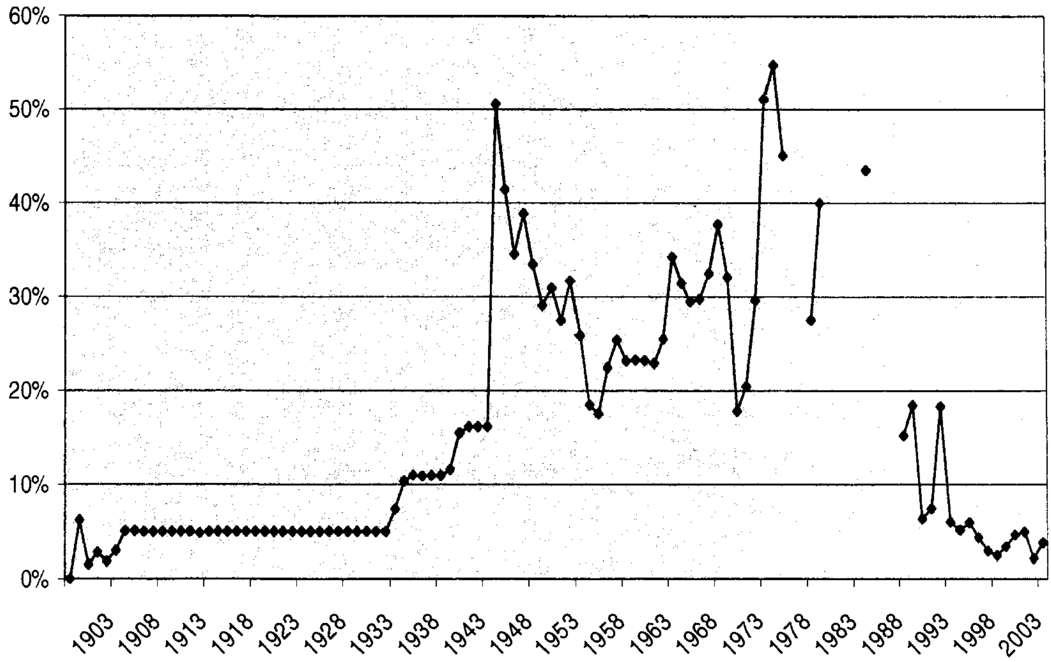
[14] MS 24661/7, report on Spears's Visit to Ghana January - March 1966.
[15] Although other taxes such as employer's social security contributions and withholding tax were reduced.
[16] Text of speech by Col. I. K. Acheampong, May 1973, from Speeches and Interviews by Col. I. K. Acheampong, vol. II (n.d. but Accra 1973) pp/ 119-25.
[17] Calculated from AGC annual report, 1974.
[18] Calculated from AGC annual report, 1984.

no corporation tax because capital allowances exceeded depreciation costs thereby erasing any corporate tax liability.

The chart below shows the percentage of AGC's gross revenue accruing to the state in the form of duties, direct taxes, compulsory savings and dividends.

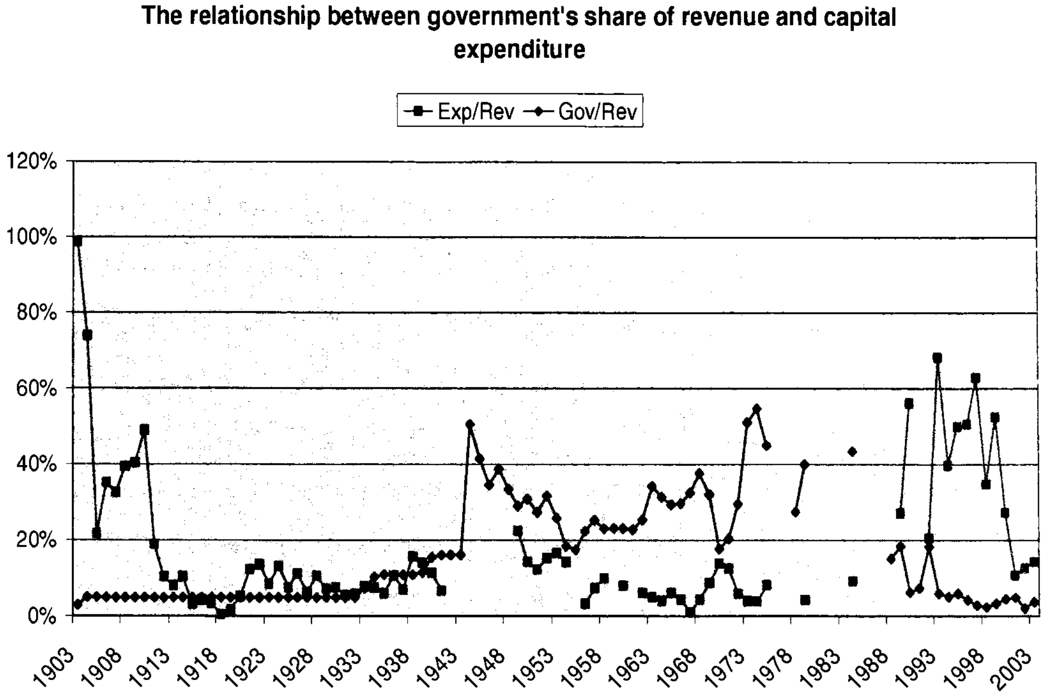
Figure 6.18

The percentage of AGC revenue directly benefiting the government



The same data plotted against the percentage of gross revenue put toward new capital expenditure each year provides quantitative evidence that a growing state share during the 1970s met with diminishing investment, see Figure 6.19. The correlation coefficient between the two variables for the 71 years for which I have both capital expenditure and government revenue data is –0.40, but -0.85 for the 1970s.

Figure 6.19



A comparison of changes in Ghana's mineral fiscal law with that of other gold producing LDCs, indeed with First World gold-producing countries, is worthwhile but beyond this thesis. It would seem though, that 2% of gross revenue as compensation for the exploitation of a non-renewable asset and for the environmental damage caused during and after the mining process is insufficient, even derisory. In 2005 discussions were underway in Ghana to amend the mining law. This should hopefully refine the balance between incentivising capital and benefiting wider stakeholders.[19]

Summary

AGC relied mostly on equity capital throughout its history. It was able to do this partly because its production methods were not capital-intensive until heavy investment was made from the late 1980s. Capital was used productively save for a handful of years when the margin between the firm's return on capital employed and that of a risk-free instrument appeared intuitively too slim to adequately cover the risks associated with AGC's business and location. ROCE did not meet the cost of borrowing between 1998 and 2000, showing that the final years of the

[19] Of course, there is no guarantee with corruption and weak government institutions that an increase in financial contributions from the mines sector will benefit local people or national interests.

company, a period of rapid growth, were prone to capital inefficiency. It was not just high gearing and low liquidity that precipitated AGC's demise.

An AGC shareholder over the century 1903 - 2003 fared better than the London all-share index in terms of share price appreciation. AGC's regular dividend payments until 1969 illustrates the company's profitability in comparison with other mines in Ghana, whose foreign owners had all exited by 1965. In this respect AGC also differed from the majority of British free-standing companies established in the late nineteenth century.

The government as a stakeholder increasingly benefited from AGC's operations, reaching a zenith in the 1970s. (How far successive governments used such revenue for the benefit of the local population is a separate question not treated here). However, there was a negative relationship between the growth of government's share of company income and the level of reinvestment. This confirms that AGC's operations were seriously directed to generating profit via production, rather than being to a large extent a carve-up of economic rent. Merely redistributing economic rent between shareholders and government (through dividends and taxes) would have been suggested had there been no relationship between tax and levels of new investment.

Changes to Ghana's legislation to attract investment for the sector coincided with the introduction of international debt finance to AGC. The firm benefited from the new mineral laws from 1986 and, in its last decade, arguably paid too little back in the form of direct taxation.

CHAPTER 7: ENTERPRISE

THE EVOLUTION OF AN AFRICAN MULTINATIONAL

The chapter investigates the evolution of AGC into a multinational enterprise. Existing multinational theories are tested against the firm's experience and are found wanting on several counts. AGC does not fit the dominant description of LDC MNEs as low-capital enterprises funded by retained earnings and family sources. The theories tested understate the importance of entrepreneurship and fail to consider the causal role of international finance - specifically, the role of borrower reputation, shareholder expectation, and the innovative use of financial instruments - in the growth of a firm. In AGC's case, these factors were critical in explaining why and how the company extended its borders internationally when it did.

Enterprise, the often neglected factor of production, can be defined as readiness to take on risk. Distinct from management, which connotes day–to-day co-ordination and execution tasks, enterprise involves setting future strategy, seizing on uncertainty and market and price discrepancies to expand the firm's productive possibilities.[1] Firm growth, like economic growth, requires more than an increase in inputs, or dependence on exogenous technological developments.[2] Endogenous innovation at the level of the firm is critical to growth, and it is the entrepreneurial function that drives such innovation.

An examination of AGC's international growth will allow an assessment to be made of the role of enterprise in this process. The company evolved into a MNE between 1996 and 1999. From a single mine at Obuasi in Ghana the firm acquired and developed five additional mines in a short space of time: two others in Ghana and one each in Tanzania, Zimbabwe and Guinea. Using theoretical tools from theories on multinationalisation the *initial* internationalisation of the firm is investigated: when it occurred, why and how.

The chapter is organized as follows: the literature on MNE theory is critiqued; this is followed by an assessment of the specific branch of MNE theory

[1] Baumol (1968), pp. 64-6.

[2] Compare, N. Crafts, 'Economic Growth', in J. Mokyr (ed.), *Oxford Encyclopedia of Economic History*, vol. 2, Oxford: Oxford University Press, 2003, pp. 137-45; M. Bleaney and A. Nishiyama, 'Explaining Growth: A contest between Models', *Journal of Economic Growth*, 7, 2002, pp. 43-56.

that focuses on LDC MNEs. The chain of events in the firm's international expansion is constructed. Five hypotheses, representing the main tenets of the MNE theories, are investigated:

1. The desire to extend monopoly power induces internationalisation.
2. Transaction cost considerations explain the firm's boundary extensions.
3. Ownership advantages combine with location cost savings and transaction cost savings to encourage internationalisation.
4. Low-capital, low-technology and small-scale operations characterise LDC MNEs.
5. The exhaustion of domestic expansion opportunities leads to internationalisation.

Each hypothesis is analysed in relation to the evidence with the aim of determining the internal and external factors influencing the firm's internationalisation and what role, if any, entrepreneurship played in that. Conclusions are made about the adequacy of the existing MNE theories in explaining AGC's growth experience and the role of entrepreneurship in this process.

Definition of a multinational

Definitions of multinational enterprises vary. The definition used in this chapter is a firm directly controlling income-generating activities in more than one country. By this definition AGC, although established as a free-standing British foreign investment in 1897, was not a multinational since income was only generated in Ghana.

From early on, however, the company did investigate additional opportunities abroad such as tin mining in Malaysia.[3] Extensions of the firm boundary within Ghana were also examined. Options were taken out on a tin concession in Winneba, for example, in 1919.[4] Had such forays proved worthwhile the properties would likely have been established as separate

[3] MS 24661/6, report on proceedings of AGM, 20 December 1921.
[4] MS 24661/5, report on proceedings of AGM, 11 December 1919.

companies. There was of course the Bibiani mine subsidiary in Ghana which was majority-owned by AGC between 1927 and 1961. In 1951 AGC established a UK-registered subsidiary, the West African Finance Corporation (WAFC), as a vehicle to hold all their portfolio investments in British, Ghanaian and other foreign mining and non-mining enterprises.[5] Since AGC did not directly control and manage the interests held by WAFC, it did not meet the above definition of a multinational. AGC became a multinational in 1996 when directly managed operations in a second country commenced.

The theoretical literature on MNEs

MNE literature is multidisciplinary. Contributions have come from pure economics, development economics, strategic management, business studies, business history and industrial organization. This chapter is concerned with the literature on why and how a domestic firm expands its operations abroad.[6]

The creation of distinct theories to explain the MNE phenomenon started in the 1960s. Prior to that neoclassical trade theory offered a plausible explanation for corporations operating abroad. Under the assumptions of perfect competitive markets, identical production functions, given technology and undifferentiated marketing and management, the orthodoxy held that capital would move from areas of capital abundance (such as the USA) to areas of capital scarcity (such as developing countries) where it could earn higher rates of return. This explanation appeared to fit the majority of multinational enterprises existing in the first half of the twentieth century. Led by Britain, an estimated 60% of Western European and American foreign investments before World War II went to Latin America, Asia, Africa and the Middle East.[7] Examples of such MNEs would be Du Pont, Royal Dutch/Shell and United Fruit. However, these DC-to-LDC MNEs were highly natural resource-based. This suggests that the motivation to obtain higher rates of return on capital was secondary to the firms' natural resource needs. After 1945, the trend in MNE development shifted away from LDCs to developed countries.

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[5] In 1968 the West African Finance Corporation's investments included Standard Bank of West Africa Ltd, Allied Breweries, British American Tobacco, Consolidated Goldfields, BP: SPRS 3/55/5.

[6] Many of the articles and books produced on this topic are quite old, pre-1990s. Since the late 1980s, the MNE agenda has moved from explaining causes to focusing on the impact of MNEs on host and home countries, which is outside the scope of this thesis.

[7] J. Greer and K. Singh, 'A Brief History of Transnational Corporations', Global Policy Forum, 2000, p. 3.

Two-thirds of American foreign direct investment now headed for Europe,[8] an area of relatively high capital supply; furthermore, many US firms did not export their capital along with their operations but borrowed funds from the host country raising further doubts about the orthodox explanations.[9] The eventual increase in cross investment, for example, Ford establishing in Japan and Toyota establishing in the US, put paid to location theory explanations that firms would move abroad to exploit variations in real wages and productivity between countries.

Hymer in his 1960 PhD thesis adapted the orthodoxy to produce a theory of multinationalisation by introducing the concept of ownership advantage.[10] According to this, there are disadvantages to operating abroad such as unknown cultures and transport and communication costs. For a firm to internationalise would mean that it possesses some advantages which host country firms do not and which exceed the costs of operating abroad. Hymer's theory takes a microeconomic perspective and is often called the market-power theory because it stresses that advantages related to size (barriers to entry, technological intensity and marketing) motivate international production in order to secure greater monopolistic power. There is empirical support for Hymer's theory. For example, the US Tariff Commission in 1973 showed that large oligopolistic firms at home were the most likely to become MNEs, while small domestic firms showed weak foreign presence. The UN's World Investment Report 2003 shows that a small number of companies own the majority of MNEs around the world and dominate global output in their industries. Hymer added that entrepreneurship and historical accident also play an important role in multinationalisation. Shortfalls in his analysis included the lack of definition of ownership advantage. He confused firm-specific advantages with country-specific ones. He failed to see the two-way relationship between advantages and growth - his thesis focuses exclusively on how advantages cause a firm to grow internationally, ignoring how growth itself creates advantages. Hymer assumes that a firm's domestic advantages are easily transferable abroad: however factors such as experience and reputation may not be. In addition, a company's advantages are not necessarily oligopolistic or monopolistic. They may be better described as competitive advantages

[8] J.H. Dunning, J. A. Cantwell, T.A.B. Corley, 'The theory of International Production: Some Historical Antecedents' in P. Hertner and G. Jones (eds.), *Multinationals: Theory and History*, Aldershot: Gower, 1986, p. 33.
[9] S. Hymer, *The International Operations of National Firms: A Study of Direct Foreign Investment*, MIT Press, published posthumously in 1976 unrevised.
[10] Ibid.

irrespective of the structure of the product market. For example, Lecraw's study of MNEs in Thailand in the mid-1970s showed that they were operating in very competitive manufacturing markets. These firms' advantages cannot be described as monopolistic.[11] Hymer is unable to explain the different forms international operations can take, such as joint ventures and licensing, he concludes that the form taken abroad is indeterminate.[12] The market power theory has also been criticised because of the increasing use of non-equity, inter-company alliances to increase market power, particularly with respect to technology and innovation.[13]

Transaction cost theory in the Coase-Williamson tradition became the preferred explanatory model for the MNE phenomenon from the late 1970s.[14] International vertical and horizontal integration have been explained by efficiency gains that arise from internalising production where there are market failures. This approach therefore contradicts the market power school: the boundary of the firm in transaction cost theory expands in order to maximise efficiency, whereas the market power theory states that the motivation is security (and oligopolistic behaviour would more likely lead to inefficient, welfare-reducing consequences). Whereas the market power theory focuses on final product markets, transaction costs are more concerned with inputs and intermediary markets. Ownership advantages such as strong management or marketing skills are taken as given. In addition to the conceptual problems in separating transaction costs from production costs, Williamson's emphasis on asset specificity has been criticised because the motivation for multinationalisation may relate to a firm's *intangible* assets such as know-how. No one-off sunk investment is made but know-how is accrued over time, often through trial and error. Transaction cost explanations seem to work from an ex-post perspective, the theory is less attractive in trying to predict whether a firm will make the initial first investment abroad or not.

Dunning integrates Hymer's ownership advantage concept (O) with the internalisation concept (I) from transaction cost theory and traditional location theory (L) to produce his O-L-I paradigm.[15] Although Dunning claims that this

[11] D. Lecraw, 'Direct Investment by Firms from Less Developed Countries', *Oxford Economic Papers*, Vol. 29, 3, Nov. 1977, pp. 442-57.
[12] Hymer (1976), p. 91.
[13] J. Cantwell, 'A Survey of Theories of International Production' in C.N. Pitelis and R. Sugden (eds.), *The Nature of the Transnational Firm*, New York: Routledge, 2000, second edition, pp. 16-17.
[14] See for example, O. Williamson, *The Economic Institutions of Capitalism, Firms, Markets, Relational Contracting*, London: Macmillan, 1985.
[15] J.H. Dunning, 'The Eclectic Paradigm of International Production' in Pitelis and Sugden (2000).

model is 'mesoeconomic' (that is, at industry, rather than firm or national, level), much of his analysis is microeconomic, which is why it is included in this single-firm case study.[16] He defines ownership advantages as "any kind of income-generating assets that make it possible for firms to engage in foreign production";[17] these must exist prior to the initial move abroad and are endogenous to the firm. The firm will also take into account locational factors (exogenous) as well as transaction costs savings before expanding abroad. Dunning adds that firms go international not only to exploit OLI advantages but also to enhance them, to find complementary advantages. Dunning's use of the concept of advantages is also imprecise. For example, he refers to internalising advantages but according to transaction costs theory, *markets* and not advantages are internalised. He equates internalisation advantages to ownership advantages, which blurs his three-prong analysis into a two-pronged one. He fails to clarify what a firm's advantage is relative to – is it to host country firms or to other international firms?[18]

According to Pitelis and Sugden, resource- and competence-based, endogenous growth explanations from the strategic management literature form a new strand in MNE theory.[19] The resource-based view stems from Penrose's 1959 book, *The Theory of the Growth of the Firm* in which she defines a firm rather loosely as " a collection of productive resources" and states that a firm's growth is a "process" dependent on the interplay between internal resources and external opportunities.[20] Rather than suffering from diminishing returns to scale as the firm grows, Penrose asserts that management is not a fixed factor – firms can continually alter their administrative structures according to increases in size. Furthermore, the entrepreneurial leader, as distinct from management, is the Schumpeterian innovator, the agent who perceives the growth opportunities best

[16] Some MNE theories focus exclusively on mesoeconomic or macroeconomic causes of multinationalisation. These have been excluded from the review because we are interested here in microeconomic behaviour. See for example, Dunning's Investment Development Cycle (J.H. Dunning, 'Explaining the international direct investment position of countries: towards a dynamic and developmental approach', in J. Black and J.H. Dunning (eds.), *International Capital Movements*, 1982) and Nelson and Winter's industrial technological competition explanation in R.R. Nelson and S.J. Winter, *An Evolutionary Theory of Economic Change*, 1982.
[17] Dunning in Pitelis and Sugden (2000), p. 124.
[18] See M. Casson, 'General Theories of the Multinational Enterprise: their relevance to Business History', in Hertner and Jones (1986), pp. 42-63.
[19] Pitelis and Sugden (2000), p. 3.
[20] E. T. Penrose, *The Theory of the Growth of The Firm*, 1959, p.15.

suited to the firm's internal resources. The individual entrepreneur can set the tone for the firm to create an entrepreneurial culture.

Kay adapts Penrose's work to the multinational enterprise. He categorises a firm's resources into: marketing, production, R and D, and country (that is, the legal framework, economy, political context, language and culture).[21] These resources are dynamic. A company will seek to grow in a direction that creates or utilises its strongest resource linkages. However, a firm's expansion is often uncertain and contingent on factors outside the firm's control. The resource-based theory predicts that firms would exploit resources domestically first before foreign expansion and that countries with low "psychic distance" (that is, more culturally or historically linked) would be preferred.[22] MNE expansion is caused by a lack of further domestic opportunities. The resource-based approach exposes the point in time when a firm will seek to grow as well as why it should chose to diversify abroad as opposed to branching into a different product at home: this decision is determined by the strength of its critical resource linkages and the exhaustion of domestic opportunities.

The Literature on Multinational Enterprises from Less Developed Countries

In reaction to the growing number of 'Third World' MNEs observed from the 1970s, a new branch of MNE research developed with a much greater political economy context and related to a broader debate encompassing economic development. This work by researchers such as Wells, Lall and Lecraw focuses nearly exclusively on Latin America and Asian manufacturing firms. They use a Hymer-based monopolistic advantages explanation: the same factors that make a firm oligopolistic at home will induce it to go abroad. Whereas the monopolistic advantages identified as important for DC MNEs are technology and marketing related, they conclude that for LDC MNEs the critical advantages are the ability to adapt standard technologies flexibly and cost effectively to the 'Third World's' economic, employment and climatic conditions. LDC MNE firm sizes are relatively small and technological 'descaling' occurs. As a result, greater use is made of local labour and materials. Low managerial and technical staff costs,

[21] N. Kay, 'The Resource-Based Approach to Multinational Enterprise' in Pitelis and Sugden (2000).
[22] Ibid., p. 153.

ethnic advantages to political access and host government preference are also identified as monopolistic advantages for LDC MNEs. In contrast, DC MNE advantages are listed as: large firm size, access to capital markets, technology, product differentiation, complex organization management skills, and vertical control over factor markets (see Table 7.1 below). A further difference observed was the greater likelihood of LDC MNEs to choose joint ventures with local agents rather than 100% ownership. Lecraw's sample of twenty manufacturing LDC MNEs in Thailand showed independent foreign units, unlike the divisional structures typical of DC MNEs.[23] These were often managed by relatives of the owner of the home country firm.

Table 7.1: Sources of monopolistic advantages for MNEs[24]

DC MNEs	LDC MNEs
Large firm or group size; divisional structure	Ownership is in the form of conglomerates
Access to capital markets	-
Technology	Technology is mostly disembodied and adapted to 'Third World' conditions
Product differentiation	Occasional product differentiation
Marketing know-how	Marketing skills (imitated as opposed to acquired through experience)
Management skills, complex organizations	Management adapted to 'Third World' conditions
Access to low-cost inputs	Low-cost inputs (especially managerial and technical personnel)
Vertical control over factor/product markets	-
Host government preference	Host government preference
-	Ethnic advantages
-	Familial management

[23] Lecraw (1977).
[24] Adapted from S. Lall (ed.), *The New Multinationals: The Spread of Third World Enterprises*, Chichester: Wiley, 1983, p. 7.

Lall states that these advantages are country-specific and dynamic. He locates the most likely source of difference between the characteristics of MNEs from India, Hong Kong, Brazil and Argentina as the "differing trade and industrial strategies".[25] No mention is made of Africa, except as a destination for some Asian MNEs.

Lall and Streeten categorise the monopolistic advantages of a firm as "permissive", "causal" or "consequential".[26] Causal advantages induce internationalisation; permissive advantages facilitate internationalisation but on their own do not provide sufficient motivation; consequential advantages arise ex post. One causal factor mentioned by the authors is the existence of a Schumpeterian, dynamic leader who could induce internationalisation. However, they state that the "prime" causal factor is technology, which is related to size.[27] Access to raw materials and marketing could also be causal. Finance, economies of scale, bargaining and political power are labelled "permissive" factors. After gaining experience from entering into new markets, a firm could find the process of further expansion much less costly, global integration could allow better exploitation of input costs, in this sense some advantages are consequential and acquired cumulatively.

In addition to a firm's advantages Lall and Streeten discuss external motivating factors to internationalise: short term strategic gains, host country political stability, market growth prospects, threats to established markets, local competition and tax incentives.[28] Some of the motivating factors discussed, such as earnings remittance restrictions, are not as relevant today as they would have been in the late 1970s.

The authors' explanation for the choice of international production versus licensing or other contracting options ignores any market failure / transaction costs considerations. The criticisms of Hymer's theory discussed above apply.

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[25] Ibid., p.8.
[26] Lall, S. and P. Streeten, *Foreign Investment, Transnationals and Developing Countries,* London: Macmillan, 1977.
[27] Ibid., p.25.
[28] Ibid., p.37.

Table 7.2: Summary of the main characteristics of LDC-to-LDC MNEs as portrayed in the literature

Characteristics of LDC-to-LDC MNE
Manufacturing of low margin, undifferentiated goods
Standard, disembodied technology
High level of joint ventures
Low production cost advantages rather than marketing advantages
High labour input
Cheap managerial and technical manpower
Internal and/or indigenous local financing
Small plant size

(It is worth noting that many of the approaches above, particularly the market power approach, complement Marxist interpretations of the MNE phenomenon. Within Marxism generally, the global growth of large monopolistic firms would represent an advanced and expected stage of capitalism.)[29]

Problems and limitations of existing literature and research

There are notable limitations to the existing literature. Research on the causes of multinationalisation is dated. This wrongly gives the impression that the phenomenon is well understood and that decades-old findings still hold. As Hertner and Jones stress, more empirical evidence on the motives and behaviour of modern MNEs is sorely needed. Too much that has been written is speculative and in the aggregate; they call for research into the "inner workings" of individual firm's motives through the use of documents.[30] This chapter therefore responds to this gap in the research with respect to modernity and methodology.

Apart from the resource-based approach, the other methods are static and fail to capture the dynamism in the multinationalisation *process*. This chapter will attempt to capture the different stages AGC experienced in its evolution into a MNE.

[29] See for example, J. Peoples and R. Sugden, 'Divide and Rule by Transnational Corporations' in Pitelis and Sugden (2000), pp. 174-192.
[30] P. Hertner and G. Jones, 'Multinationals: Theory and History' in Hertner and Jones (1986), pp. 1-18.

The literature, particularly on LDC MNEs, ignores the role of international finance; one is left to think that firms from these countries have no access to the international financial markets. This implies that capital exported in the multinationalisation process must be indigenous or from retained earnings. Lall and Streeten treat capital as a permissive advantage – not a causal factor in internationalisation, they write, "it is unlikely that in the absence of other oligopolistic advantages, the mere access to (cheaper or more) finance will act as an inducement to direct, as opposed to purely financial (portfolio) investment, though theoretically it is possible that this by itself may facilitate expansion via take over or merger".[31] This chapter will determine whether the role of capital in AGC's MNE evolution was "permissive" or "causal".

There is an over-emphasis in the empirical studies on the manufacturing sector - bearing in mind the dominance of the service sector in modern economies,[32] this represents a significant limitation in the application of existing MNE theories. Villela gives two examples of extractive LDC MNEs.[33] The first is YPF, an Argentinean petroleum company. However, this firm expanded abroad into marketing distribution and not into exploration and extraction.[34] In Brazil, the state-owned subsidiary of Petrobras, Braspetro, was created in 1972 to exploit Petrobras's twenty-year experience in exploration and oil and gas production and to diversify its oil sources. Insufficient information is provided on Braspetro's internationalisation, we are only told that most of its foreign operations are joint ventures. Villela focuses his analysis instead on Brazilian manufacturing. It would have been informative for the author to compare the differences in motivation and method *between* Brazilian manufacturing and extractive MNEs.[35] More empirical work is needed on the services and extractive sectors. In so doing it may be possible to define more testable hypotheses applicable to specific sectors. The MNE literature perhaps lays undue emphasis, in this era of globalisation, on whether a company is from a developed or less developed country. The analysis

[31] Lall and Streeten (1977), p. 20.
[32] In 1999, 80% of U.S. GDP, for example, was attributable to the services sector.
[33] A. V. Villela, 'Multinationals in Brazil', in Lall (1983), pp. 220-249.
[34] J. Katz and B. Kosacoff, 'Multinationals in Argentina' in Lall (1983), pp. 137-219.
[35] A detailed investigation into Braspetro's evolution into a MNE would provide a useful comparative exercise with AGC. Both firms were publicly listed. While the Brazilian government owns 55% of Petrobras, the Ghanaian government owned at various stages between 17.2% and 55% of AGC and therefore both firms would have encountered political considerations surrounding international expansion. This is a worthy area of future investigation but is outside the scope of this thesis.

of AGC's experience may show that the developmental stage of a firm's home country is less relevant from an analytical point of view than the firm's industry.

The neglect of reputation as an asset, the importance of relationship networks and a general "undersocialising" of the firm, as Granovetter would put it, is noticeable, particularly in the transaction cost approach. The influence of financial reputation, and business relationships in general, on the boundary of the firm is investigated in this case study.

I was unable to unearth any research on another sub-Saharan African MNE; from the LDC MNE literature one could wrongly conclude that black African MNEs do not exist. Research on AGC therefore goes a little way to fill an important gap in the geographic scope of existing research.

Chain of events

The chain of events leading up to multinationalisation starts in 1986 with the first IFC-led project. As explained in Chapter 3, 'A Chronological Narrative', AGC successfully executed, in co-ordination with the IFC, three major capital projects: the Rehabilitation and Expansion programme, the Sansu Project and AMEP. Together they allowed the mine to implement large-scale mechanisation of ore production and to lower its cut-off grade by economically treating the diversity of ores found at Obuasi with appropriate technologies. This resulted in rapid growth in ore and gold production.

Tentative Domestic Conglomerate Growth

Through contact with the IFC, AGC was given the opportunity to make financial investments in other IFC projects within Ghana. In 1989, a 20% equity investment was made in a commercial bank, Ecobank (Ghana) Limited. The Togo-based Ecobank Transnational Inc with a network of banks throughout West Africa, was the majority shareholder. In 1990, AGC made a financial investment in Hotel Investments (Ghana) Limited to build Ghana's first 4-star hotel, Labadi Beach. AGC held 22.5% ownership and Lonrho was the majority shareholder, again there was IFC participation. These financial opportunities had been brought to AGC. However, in 1992 the company declared a proactive desire to seek and "identify profitable investment opportunities in manufacturing, farming and services".[36] Subsequently, a new investment was made in agricultural interests held by SCOA, but this time a controlling, management stake was bought – 73% of Jei River Farms, a leading pineapple exporter. Jei River Farms became an AGC subsidiary wholly managed from head office. In 1994 another subsidiary, Limestone Products (Ghana) Ltd was created with 51% ownership. The following year this subsidiary was reduced to joint venture status with 50% ownership granted to a Belgian firm, who took on its management. The limestone business was treated alongside the hotel and bank interests as an "associated undertaking",[37] as was a second manufacturing investment in ICI Explosives (Ghana) Ltd (49%). While the associated undertakings would soon be divested, the company held on to Jei Farms for as long as possible, only selling it off when pressured to do so following the financial crisis in late 1999. The contribution of these subsidiaries and undertakings to income and profits was always small but positive (less than 1% of revenue).

Ecobank was available for financial advice and products, the limestone production provided an important input for the Sulphide Treatment Plant, as did the explosives enterprise and the 4-star hotel arguably benefited foreign visitors to the Accra head office. However, it is difficult to explain the rationale for the pineapple farm. A later annual report refers to these holdings as "strategic investments in other sectors of Ghana's economy".[38] It is possible that the business model espoused by Tiny Rowland with his extensive agricultural and hotel investments across Africa, was being replicated in miniature in Ghana. However, the small and constant size of these non-mining activities shows that a conglomerate growth path was never seriously developed. Had AGC remained a private company this alternative growth path would have been easier to execute, as such investments did not require large capital outlays and could be financed out of retained earnings. But once the decision had been taken to go public, new priorities and restraints would be set by shareholders and bankers. As a recently floated public limited company AGC would need to earn analysts' and shareholders' confidence, conglomerate growth would have been a difficult strategy to justify in terms of management experience and competencies.

[36] AGC annual report, 1992, p. 22.
[37] The annual reports list subsidiaries separately from associated undertakings. The distinction between the two was whether AGC had management control or not.
[38] AGC annual report, 1995, p. 13.

Flotation

The marketing material produced by James Capel to attract investors for the flotation spelt out the company's growth credentials, plans and targets.[39]

- Output to reach one million-ounces in 1994/5 and to be "maintained above this level for sometime thereafter."
- Proven and probable reserves to provide another 17 years of mining.
- Improvements in mechanization and processing to further reduce cut-off grade and consequently increase reserves.
- Exploration *within* the existing concession to be pursued based on already identified geological anomalies (italics mine).
- Exploration, advanced projects and major operations *within Ghana* (italics mine).
- "The strategy of AGC is to develop the potential of its *mineral concession* (italics mine) to create long term value for its shareholders through profitable growth".[40]

Ghana's good geological setting with a 300km northeast-southwest gold belt, favourable investment climate, political and economic stability and infrastructure were highlighted in the marking literature to support this strategy.

The growth path identified at the time of flotation was to focus first on the existing concession, followed by consideration of the potential outside the mine but within Ghana. It is noteworthy that no mention is made of international exploration or acquisitions in the flotation marketing document. This may have been because the flotation promoters did not want to present a new avenue of operations where the company did not have a track record and therefore sufficient credibility. The document shows that the company's priorities were on the Obuasi concession and Ghana.

The million-ounce target was partly influenced by the fact that gold producers are categorised by mining bankers according to their output: producers of a million-ounces or more are 'senior' producers, 500,000 to 999,999 ounces are

[39] James Capel flotation document 1994.
[40] Ibid., p.22.

'intermediary', and below that are 'juniors'. The categorisation directly affects the producer's cost and availability of capital with bankers preferring to lend to seniors, whose larger revenue streams give greater confidence that loans can be repaid.

AGC's flotation on 26 February 1994 valued the company at US$1.8bn, shares started trading at US$20.

PLC

The first annual report produced after flotation announced the establishment of a 100%-owned subsidiary, Ashanti Exploration Limited, "to facilitate an aggressive *international* exploration and development programme" (italics mine). [41] Expansion beyond Obuasi would be achieved through exploration, evaluation of mine development projects and acquisitions of operating mines. The motivation for this strategic move was attributed to "... technical, managerial and financial expertise. Synergy with our existing supplies and technical support functions for developing new mining properties will provide a competitive edge for Ashanti".[42]

Looking at the output achieved in the 1994 reporting year, 822,954 ounces, it is clear that the previous years' growth rates had decelerated sharply. 1994's output growth of 7% was the lowest since 1987. To deliver the promise of a million-ounces by 1995 - the promise upon which the successful marketing of flotation had hinged - would require an unrealistic increase in output of 22%. This may have been a strong factor in initiating an "aggressive international exploration and development programme".[43]

The first mining acquisition was made in 1994, a 49% controlling stake in Midras Mining Limited of Ghana. Midras was an early stage alluvial mining project, not yet operational, located about 30 miles northwest of Obuasi. It was purchased for US$1.6m cash and AGC took over its management.

By the financial year-end in 1995 the one million-ounce target had not been achieved – 932,323 ounces were produced. The failure was attributed to lower than planned tonnage and grades from the underground mine and an

[41]AGC annual report, 1994, p. 6.
[42] Ibid., p.13.
[43] Ibid., p.6.

increase in refractory ores from the open pit mines.[44] Nevertheless the commitment to the million-ounce target was repeated by Sam Jonah, the CEO, "The expansion of AGC's gold production from underground gives us confidence that even while gold production from our large surface operations begins to scale down, the Company can maintain production from Obuasi around the one million-ounce per year mark for the foreseeable future".[45] The diction choice is revealing: "around" one million-ounces replaces the previous year's promise "to take AGC past the million-ounce benchmark".[46] The need to manage, or reduce shareholder expectation is apparent.

In addition, we see that the firm's "aggressive *international* exploration and development programme" has been specified as "gold mining elsewhere in Ghana and *Africa* as a whole" (both italics mine).[47]

In 1995, the company ventured for the first time into the international debt market without the auspices of the IFC. A US$185m syndicated revolving credit facility (RCF) led by Barclays with sixteen other participating banks was concluded. It was 100% secured on the company's gold sales and certain offshore bank accounts, at a rate of Libor plus 1.05% (compared to an average of 1.78% over Libor for the previous IFC loan).[48] Most of the participating banks had been involved in the previous IFC syndicated loans. The RCF replaced existing long-term debt and provided funds for continued Obuasi expansion projects. US$60m in new equity was raised specifically for Ashanti Exploration Limited for which debt finance was not available due to the high levels of uncertainty.

Ashanti Exploration initiated grassroots exploration in Ghana, Ethiopia, Eritrea and Guinea; exploration projects already advanced by other firms were built on in Niger, Senegal and Mali.[49] All of these projects were joint ventures, mostly with AGEM/IAMGOLD a Canadian-based international exploration and mine development company. The terms of the partnership provided for a 50% share in exploratory costs and AGC would operate any successfully developed mine arising from the explorations. AGEM had discovered a lucrative mine in

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[44] Refractory ores contain properties that hinder the recovery rates of the normal gold extraction process. These refractory ores require intermediary processing before satisfactory levels of gold can be achieved; therefore they increase costs and reduce gold output.
[45] Board minutes, GH, 19 May 1995; AGC annual report, 1995, Chief Executive's Review.
[46] AGC annual report, 1994, Chief Executive's Review.
[47] AGC annual report, 1994, p .6 compared to AGC annual report, 1995, p. 4.
[48] Board minutes, GH, 19 May 1995; Libor is the London Interbank Offer Rate, see glossary for definition.
[49] Board minutes, GH, 16 December 1994.

Mali and had existing partnerships with senior operators, they were seen to be reputable exploration experts.[50] At the same time the company commenced an Obuasi-specific exploration initiative. International specialists in structural geology, geochemistry and geophysics were commissioned for the task with three aims: to improve understanding of geology to optimise surface and underground mining and mine planning; to search for new deposits within the Obuasi concession; to transfer international best exploration and geological practice by training AGC staff.

Late in 1996 the chief executive admitted defeat over Obuasi's million-ounce target. The drive for quantity had resulted in soaring costs, lack of attention to grade control, the mining of excess reclamation material instead of gold ore and a demoralised staff.[51] The target production for Obuasi was reduced to 850,000 ounces. AGC had lost its reputation as a low-cost producer with cash operating costs in 1993 of US$173 per ounce now at US$252.[52] One mine industry analyst remarked that investors felt that they had been "legged over", that the pre-flotation promises had not been realistic and the IPO had consequently been overpriced.[53] It seems to me that the realisation that exploration projects and Midras, still in its development stage, would not produce output quickly enough for shareholders led the company to acquire mines that were already in production.

Table 7.3 shows the acquisitions made in 1996, how they were financed and the types of mine bought.

[50] AGC annual report, 1995, p. 15.
[51] Board minutes, GH, 23 August 1996.
[52] The world average costs per ounce in 2002 was US$235 including depreciation costs which are not included in Ashanti's cash cost figures. www.gold.org.
[53] Interview, Mark Horn, mining and metals industry analyst, M. Horn and Co. Ltd, London , 17 February 2005. He added that there had been considerable hype in the mining equity market in 1993/4 because of the bullish activity of junior firms across Africa in the wake of Structural Adjustment economic improvements. Investors and analysts had perhaps been remiss in their scrutiny of AGC's forecasts.

Table 7.3: Acquisitions made in 1996

Mine name and type	Acquired company	Financing
Freda-Rebecca mine, Zimbabwe; **open pit** (2-year mine life) and **underground** production (over 7 years expected mine life). Ayanfuri Mine, Ghana; **open pit**, 5-year mine life.	100% acquisition of Cluff Resources, a British junior.	Cost US$156.4m. Paid by US$67.8m in AGC shares; US$86.6m cash; US$2m deferred.
Iduapriem mine, Ghana; **open pit** production (initial 5-year mine life extended to 13 years). Siguiri mine **development project**, Guinea; open pit mining to commence in 1998. Development costs estimated at US$55m. (Over 10 years expected mine life).	Through the acquisition of Golden Shamrock Mines Ltd (GSM), an Australian junior, AGC acquired 80% of Iduapriem (20% held by Ghana-Australian Goldfields) and 85% of Siguiri (15% held by Guinea gvmt).	GSM cost US$235.8m. Paid by US$172.6m in new shares; US$37.5m preference shares; US$19.9m cash; US$5.8m deferred.
Bibiani mine, Ghana; a mine **development project**. Open pit mining to start in 1998, estimated development costs of US$83m. (Over 10 years expected mine life).	100% acquisition of International Gold Resources, a Canadian junior.	Cost US$125.7m; US$98.8m in new shares; cash US$15.2m; deferred US$11.7m.

The acquisitions were not made without market criticism. It was felt by some that the choice of mines, with the exception of those in Ghana were geographically too isolated and therefore lacked cost synergies. There was also concern about AGC's rising debt commitments needed to develop the properties.[54] Siguiri required a US$60m project finance loan from Rothschild and Bibiani obtained US$40m project finance from Société Générale, out of a total

[54] Interview, Horn, London, 17 February 2005; HSBC International Mining Division, 'Ashanti Goldfields Asset Performance' 6 October 1997, p. 7.

development budget of US$83m. AGC now comprised four operating mines: Obuasi, Ayanfuri and Iduapriem (all in Ghana) and Freda-Rebecca in Zimbabwe. Output from these four sources totalled 1,024,803 ounces in 1996. Three mines were under development: Midras and Bibiani in Ghana and Siguiri in Guinea. The exploration portfolio had grown to 35 properties in twelve African countries. The most promising prospect was at Geita in Zimbabwe where AGC owned a 85 square mile exploration concession through the acquisition of Cluff Resources. These projects were pursued to "guarantee that we meet our future growth targets".[55] The aim was "to establish our credentials as an attractive growth company".[56] According to the chief executive, the path taken was in-line with the firm's entrepreneurial spirit, "A vital ingredient in the Ashanti culture is the entrepreneurial spirit that has become our hallmark... an innovative and purposeful spirit and [to] operate with the full attributes of an owner-driven enterprise".[57] The emphasis on achieving continual growth and "an owner-driven" attitude is obviously for shareholders' reassurance. The pressure exerted from shareholders' expectations is evidenced in the fact that although net profit fell by 40% in 1996 (due to increased costs of production including a 40% mine workers union pay increase, increased capital expenses and corporate costs associated with the acquisitions) the recommended dividend per share matched that paid in 1995.

To finance continued growth, US$250m was raised by issuing 7-year 5.5% Exchangeable Notes on the New York Stock Exchange in February 1996. These notes were exchangeable into shares at a strike price of US$27. However, by the end of 1996, the company's share price had plummeted to US$12.50 and would decline further in 1997 to US$6.87, from an all-time high of US$27.[58] Over this period the world gold price declined from around US$400 an ounce to around US$300 an ounce, which affected all gold producers' share prices. However, comparing AGC's share price performance to the precious metals industry shows that from the middle of 1996, AGC began to fare worse than the industry when measured by the performance of the Dow Jones Precious Metals index and HSBC's Gold Index .[59] This can be explained by the firm's rising cash operating

[55] 1996 AGC annual report, p.7.
[56] Ibid., p. 6.
[57] Ibid., p. 7.
[58] US$27.50 was the closing price on 2 February 1996; US$6.87 was the closing price on 4 December 1997.
[59] Dow Jones precious metals industrial classification 1996-2000, www.ft.com; HSBC International Mining Division, 'Ashanti Goldfields Asset Performance' 6 October 1997, p. 6.

costs (discussed above), the increasing debt levels (gross gearing jumped from 34% in 1995 to 88% in 1996 to 118% in 1997, see Figure 7.8 below), as well as the extensive use of new share issues to fund acquisitions and to pay dividends, considerably diluting existing shareholders' stakes. Authorised share capital was increased from 150 million shares to 200 million shares in 1997 to facilitate the further use of company shares as currency for acquisitions.

Management teams experienced in production and development were recruited or seconded to the acquired mines. A federalist management philosophy with divisional boards for each producing mine was implemented.[60] Extensive staff changes were made at Obuasi with the introduction of a new Obuasi managing director and a new general manager; the group's chief operating officer was also replaced with the aim of improving discipline at all levels, supervision, training and cost control. Management succession planning was introduced along with incentive bonuses. Specific actions to curb costs included staff cuts and renegotiations of supplier and service contracts. Growth necessitated improved reporting, so quarterly reporting for each division was introduced. In 1997, non-gold activities acquired with some of the purchased firms, such as copper and silver mining interests, and non-African gold mining properties, were put up for sale, as were the undertakings in Ecobank and ICI Explosives. Interestingly, Jei River Farms and Hotel Investments (Ghana) Limited were not, at this stage. All these measures were aimed at demonstrating the firm's focus on gold production and improving profitability alongside growth.

A corporate "vision" was adopted in 1997, "To be the premier gold producing company in Africa" and the number of times the word "aggressively" is used in connection with this vision is noteworthy.[61] The vision was supported by a decision to cap dividends in the future to a quarter of distributable earnings in order to retain funds for growth.

The acquisition of Samax Gold Inc (a junior Canadian exploration and mining firm) for US$140.1m in November 1998 extended the area of the Geita concession in Tanzania where excellent exploratory results had trebled the measured and indicated resources to 6.4m ounces of gold – once in production this would make Geita one of the largest mines in Africa outside South Africa. Samax was paid for using a US$50m debt facility, US$44m in cash, US$42.1m of

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[60] AGC annual report, 1996, p. 4.
[61] Ibid.; AGC annual report, 1997 p. 1.

2.5% Mandatory Exchangeable Securities (in effect, deferred shares), and US$4m in the form of 5% Loan Notes (a type of bond). The acquisition of Samax included a 50% interest in Golden Pride, a 180,000-ounce per annum producing mine in Tanzania managed by Resolute Limited, Australian operators, which was later sold in 1999; 50.4% ownership of a small 15,000-ounce a year mine in Prestea, Ghana, and an exploration property in Congo Brazzaville.

In December 1998 the RCF was refinanced and extended to provide US$270m, this time led by Chase Manhattan for a 5-year period at an interest rate of Libor plus 0.83% (compared with + 1.05% before).[62] The new facility had reduced security requirements and less strict financial covenants. This indicates that AGC was reaping the reduced capital cost benefits of being a senior producer. In addition, most of the financiers now had a relationship spanning twelve years with the firm; despite recent production problems at Obuasi debt obligations had always been paid on time, sometimes even ahead of schedule, the company therefore benefited from a good credit reputation. Examples of a good borrower's record were the repayment of the Bibiani and Siguiri project finance loans in the first year of bringing these mines into operation in 1998. The company was aware of their "established financial credibility and access to international capital markets".[63] Nearly all of the RCF's US$270m was used to repay the previous facility and part of the Samax acquisition costs.

Although the bankers' favourable lending showed approval of AGC's international growth strategy, industry analysts were aware of the risks of the approach. Rising debt levels was a particular threat to AGC's future performance, as was the company's uncertain ability to permanently reduce costs.[64]

In 1998, 50% of AGC's total output of 1,547,610 ounces was generated by the mines acquired since 1996. Cost reduction strategies started to pay off and earnings were slightly better than the previous year.

Exploration properties increased to 40 in thirteen African countries in 1998 including a 49% controlling interest in Kimin, a prospect in the Democratic Republic of Congo acquired for an initial consideration of US$5m. Certain joint ventures were discontinued because of unsatisfactory geological results.

[62] Board minutes, GH, 29 June 1998.
[63] 1998 AGC annual report, p. 8.
[64] HSBC Global Mining Division, AGC equity research report, 30 October 1998, p. 2.

In response to the declining global gold price, the company increased the amount of production sold forward in their hedging portfolio, and plans were made to phase out the highest cost mine at Iduapriem, and Midras, the alluvial mine only recently commissioned, was sold. Obuasi's surface mines were also nearing the end of their economic lives, estimated for 2000. Development of the lucrative Geita prospect, scheduled to commence in 1999, was therefore critical to future output growth, cash flow and profitability.

In 1998 AGC initiated merger talks with Lonmin, the majority shareholder. The strategy was to form an African precious metals enterprise with Lonmin's South African platinum mine to be added to AGC's gold mines.[65] AGC's chief executive, Sam Jonah, insisted that the new enterprise would be called Ashanti,[66] the merger would be a takeover of Lonmin by AGC, in part to make it easier for the Ghanaian government to accept the proposal, since it held a golden share giving it powers to veto any corporate change of this nature. No doubt, personal ambition to see the continued growth of AGC was also a factor. Lonmin agreed to this approach but talks stalled over country of domicile issues and the divestment of Lonmin's coal interests.[67] Another motivation for this combination was risk diversification: the gold price trended downwards largely because of the loss of gold's status as a reserve asset evidenced by central banks selling off gold reserves to invest in higher return securities. Low inflation and a strengthening dollar also diminished the appeal of gold as an investment. Platinum had different marketing and price dynamics to gold; it had greater industrial uses (unlike gold's predominant consumer use) and would therefore complement gold production.

1999 saw rationalisation in exploration projects. Grassroots explorations were narrowed down to focus on sites surrounding existing properties, the number of projects falling to 25 in six African countries.

AGC's hedging portfolio had been expanding - in line with the belief that gold prices would continue to fall - from 14% of proved and probable reserves in 1994 to 85% in 1999.[68] When the hedging crisis struck at the end of September 1999, the merger with Lonmin was seen as a possible solution to the crisis as the combined entity would have had a stronger balance sheet, justifying the removal of margin requirements. The merger terms changed and Lonmin now proposed to

[65] Taylor (2006), pp. 154-5, 172.
[66] GH, Jonah to Nick Morrell, CEO Lonmin, 2 November 1998.
[67] Chief Financial Officer meeting notes, May 1998 – October 1999.
[68] AGC annual reports 1994, p. 19, 1999, pp. 21, 53-7.

take over AGC, however the government of Ghana refused to support the bid as they felt, amongst other factors, that Lonmin was getting AGC on the cheap.[69]

The crisis was eventually resolved by granting the bankers 15% ownership of the company with the issue of equity warrants in exchange for margin-free trading. The RCF was renewed and increased to US$326m at an expensive Libor plus 2.5% along with a separate US$100m debt facility to put Geita into production at Libor plus 2% (Geita's resource base had been further increased by geologists to twelve million ounces).

AGC recorded in 1999 its first pre-tax earnings loss since the mine's IFC-assisted rehabilitation of negative US$183.6m, largely attributable to exceptional write-down costs from closing Obuasi's surface mines and some treatment plants, this totalled US$171.1m.

The financial constraints imposed by bankers brought an end to the firm's "aggressive" acquisitive phase. Although the company did purchase 90% of the Teberebie open-mine, adjacent to Iduapriem, in June 2000 from Pioneer Goldfields Company, deferring the US$13.8m consideration to be paid in five instalments over five years. The company maintained its vision "to be the premier gold producing company in Africa".

The views of critical decision-makers

The following observations about the company's multinationalisation phase were made following in-depth interviews and questionnaire responses from the critical decision makers.[70] These interviews were conducted in 2004 with Sam Jonah in person while he still held the post of CEO at AGC and following the merger with Anglogold when he became the executive President of Anglogold Ashanti; with Mark Keatley in person and via email, Keatley was AGC's CFO from 1994 to 2000 (before being recruited for this role he had been part of the IFC team assisting AGC with project finance); with Dr. John Clarke via email from Canada, formerly the executive director of strategic planning at AGC between 1994 and 1998 (prior to this Clarke, a metallurgist by training, had managed the AMEP project).

[69] Taylor (2006), pp. 181-4; J. Kibazo, 'Three omissions that may cost Lonmin', *Financial Times*, 15 October 1999.

[70] The respondent's answers to the questionnaire are attached in Appendix 8. And the interview questions are in Appendix 9.

Table 7.4: Internal view of factors motivating expansion abroad[71]

Very significant	Quite significant	Not significant
Shareholder expectation	To take advantage of the firm's reputation in raising international capital	Inability to achieve 1m ounces from Obuasi
To further exploit the firm's managerial skills	To further exploit the firm's technical skills	Declining share price
To exploit the firm's entrepreneurial culture	To further exploit the firm's financial skills	
To diversify in order to reduce risks	To avoid or reduce pressure of competition from other firms	
Ability to issue new shares to pay a significant part of acquisition costs	To defend or expand existing market share	

Table 7.5 Internal view of the criteria affecting the choice of mine/project to develop or operate[72]

Very significant	Quite significant	Not significant
Geological setting	Capital availability	Availability of joint venture partners
Ease of acquiring mining leases	Availability of technical and skilled labour	Availability of advanced technology
Confidence in property rights and rule of law	Good infrastructure	Availability of cheap labour
Absence of foreign exchange controls and profit repatriation limits	Political stability	Cultural affinity
	Tax breaks	Business and family connections

[71] The respondent's answers to the questionnaire are attached in Appendix 8.
[72] Ibid.

The small number of interviewees is an obvious drawback. Furthermore, management would be expected to be biased towards painting their past decisions in the most favourable light. To try to balance some of this bias, interviews were conducted with three strategically-placed informants who were at arms length from AGC's executive decisions. Martin Martineau, an executive director of Samax (the mine company acquired by AGC in 1998) who also became a non-executive director of AGC between 2000 and 2003 was interviewed. In addition, Gerard Holden, global head of mining and metals at Barclays Capital one of the firm's principal bankers was able to comment on AGC's strategy. For an investor and market perspective Mark Horn of Mark Horn and Co. Ltd, a metals and mining industry analyst was also interviewed. In addition, equity research reports on AGC and newspaper comments on the firm's strategy were reviewed.

Notwithstanding the problems inherent with interview and questionnaire techniques, the questions were targeted at informants qualified to comment on the internationalisation strategy, the methodology is therefore insightful. The factors raised in all these interviews are now discussed to complement the mainly public record of events outlined above from the annual reports.

The idea of international expansion was first mooted late in 1994 when a three-pronged strategy was formulated articulating the possibility.[73] The focus was on achieving growth – not on becoming a multinational. The growth strategy comprised the continued development of Obuasi, exploration and acquisitions. AGC's output had doubled in five years between 1989 and 1993 and the firm had developed "a taste for success and achievement" according to the chief executive.[74] With this background, Jonah commissioned John Clarke and Mark Keatley to investigate ways of doubling output again for the ensuing five years. Clarke was given the remit to seek opportunities in Ghana and internationally that utilised the skills already within the company. Keatley's task was to devise the financial means to deliver the growth strategy.[75]

Apparently, Obuasi's failure to achieve one million-ounces by 1995 was unrelated to the multinationalisation process. These were, as Clarke put it, "independent issues. Ashanti had a market opportunity to go international. Obuasi

[73] Board minutes, GH, 16 December 1994.
[74] 1996 AGC annual report, p. 7.
[75] Interview, Keatley, London, 19 February 2004.

was the experience base that allowed the company to know that it could do the job well".[76] Obuasi's successful expansion projects had provided valuable technical, operational and managerial experience, giving the firm confidence to look for new opportunities. Obuasi's future was only one of the prongs in the strategy. Whatever happened at Obuasi, the explorations and acquisitions paths were to be fully explored.

In response to the question 'What limited growth within the Obuasi concession?' Clarke's response was "capital and time".[77] Capital in the sense that returns were diminishing for every dollar sunk into Obuasi.[78] The company had to consider whether it could get a better return elsewhere. With respect to time, the highly profitable oxidised surface mines at Obuasi had a finite life and prompted the search for additional resources. Also, Jonah had (internally) set a 5-year deadline to double output again. From 1996 gold prices steadily declined, in an industry with a high proportion of fixed operation costs from equipment and machinery, the pressure to expand output to absorb fixed costs increased. This exerted more pressure for quick growth. Shareholder expectation was also high due to the company's flotation promises of growth.

Despite the insiders' denial that failure to achieve a million-ounces at Obuasi was a contributory factor to the aggressive growth plans, it seems to me that had Obuasi been able to achieve and sustain a million-ounces a year, it would have bought the company more time to develop exploratory projects. Growth through exploration seems to have been the preferred path, evidenced by Ashanti Explorations Limited being set up in 1994, two years before the first acquisition of a producing mine. As one newspaper headlined following the million-ounce failure and the sudden spate of acquisitions, 'Ashanti Chief Learns Harsh Lesson of International Listing' referring to the pressure on Jonah to deliver the flotation growth promises.[79] As late as October 1998 analysts felt that AGC still needed to "establish a credible pattern of sustainable performance", [80] and the market's attention was on AGC's "previous shortcomings" with forecasts and actual results.[81]

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[76] John Clarke to author, email correspondence, 31st May 2004.
[77] Ibid.
[78] Interview, Keatley, London, 19 February 2004.
[79] *Evening Standard*, 18 December 1996.
[80] HSBC Global Mining Division, AGC equity research report, 30 October 1998, p. 1.
[81] HSBC International Mining Division, 'Ashanti Goldfields Asset Performance', 6 October 1997, p. 1.

One reason why growth outside Obuasi but within Ghana was limited was the fact that following the attractive terms of the 1986 Minerals and Mining Law amendments, foreign operators flooded the Ghanaian gold sector.[82] This reduced AGC's ability to cherry pick operating mines. The very first exploration projects, however, were Ghana-based, initially surrounding Obuasi and also in the north of the country, outside the traditional gold belt. In any case there was a desire to geographically diversify so as not to "have all one's eggs in one basket".[83]

Growth down the conglomerate path was unacceptable to market analysts. Conglomerates were being treated unfavourably in the markets, Lonrho's own experience being a case in point: a depressed share price and negative analyst reports precipitated the separation of Lonmin from its agricultural, manufacturing and hotel sister-companies in 1995. AGC's profitable pineapple farm had grown into the country's largest pineapple exporter and there is a sense that the company regretted having to sell it following the crisis: "The pineapple farm was assumed to be a distraction to the main business by some market analysts. In fact it was not, as it took very limited involvement of HQ staff."[84]

Information on potential acquisitions and prospects was gathered formally and informally. Formally, use was made of technical appraisals, market data, and contacts with financial institutions involved with mine financing who would be aware of operations for sale or in need of capital. Junior firms find it difficult to raise capital and often advertise their exploratory results with the hope of attracting larger operators as partners or buyers. Informally, attendance at mine conferences and industry relationships that spanned the globe, thanks to the international work experience of all three men, also contributed valuable information. Jonah in particular had been known to support junior exploration firms and mine producers with information on the mining business in Ghana, for example putting people into contact with relevant government departments to assist them in their projects.[85] After short-listing desirable operating mines to acquire, AGC gathered information from the companies to determine the state of affairs and whether the management would entertain offers. None of the acquisitions made were hostile takeovers. Considerable legal work was required

[82] Keatley to author, email correspondence, 9 June 2004; interview, Jonah, Johannesburg, 14 December 2004.
[83] Clarke to author, 31 May 2004.
[84] Ibid.
[85] Interview, Martin Martineau, former Samax director and AGC non-executive director, Hildenborough, 16 May 2004.

to satisfy the regulations of different jurisdictions with respect to land ownership, tax, company and securities laws.

Initially, the acquisitions search was not limited to Africa. One opportunity in Uzbekistan was considered in some detail. As Clarke recounted:

> *We were invited to see some properties in Uzbekistan and did visit properties and conduct some review work there. The Uzbeks came to Ghana to see our Biox operations at Obuasi and were impressed with what Ashanti could offer in both development and management. Hence the invitation for us to visit them. It was clear that if we had continued we would have had to tackle the issue of 'why were we not making the most of our home ground advantage in Africa first?' - including understanding of politics and legal systems let alone wider geological and country risk issues. It was a valid set of questions that we asked ourselves (before others could ask us) and we decided that we had only just started to understand our opportunities closer to home.*[86]

It became clear that it was in Africa that AGC could compete the strongest against other international buyers:

> *The market opportunity was strongest within Africa where Ashanti's history and its development as a significant company, self-contained within Ghana, was a benchmark to offer elsewhere in Africa. We were not reliant on a foreign workforce in Ghana but we were willing to make use of non-nationals who carried specific skills that could be used in the short-term to be passed on to our staff in the medium-term. Ashanti offered to governments the opportunity to replicate this model and to develop as a 'Malian company' any interests it may develop in Mali, Zimbabwean in Zimbabwe, etc ... The issue could have been expanded to any nation wanting its own nationals to be a focus for its own mining business development but Africa had a clear advantage to Ashanti as a perceived 'African player' – by governments and by business. We really did have an advantage both on the business and on the political front in what was perceived by the market place in general as a 'home market' for Ashanti. The whole continent*

[86] Clarke to author, 6 June 2004.

(particularly sub-Saharan) gave an easy welcome to the new international Ghanaian mining company.[87]

Jonah pitched directly to African heads of state and ministers for support for mining and exploration licences and concessions. Prior to AGC's arrival, many of these politicians were used to negotiating with Westerners over large capital investments. In Jonah's opinion, being an African, he was treated with a greater degree of trust, even embraced.[88] There is evidence that AGC was given preferential treatment by African regulators, for example, the Tatagura and Christon Bank Exclusive Prospecting Orders granted in Zimbabwe in 1995 were unusual in their exclusivity. As a reflection of the good opinion held of AGC the company was asked to contribute to discussions on Tanzania's statute amendments to rehabilitate her mining sector.[89] From a banker's perspective, expansion across the continent was perceived more as an extension of the home market than internationalisation thanks to AGC's experience of Ghanaian business and politics.[90]

Tangible proof that the firm did have an entrepreneurial culture included the adoption of the Biox treatment process in 1993. As one of the first mines to use this new technology on a large commercial scale, AGC demonstrated a pioneering spirit. The firm's inclusion of exploration projects in former Soviet-leaning countries such as Mali and Ethiopia, which had been largely ignored by Western companies, showed a leave-no-stone-unturned attitude. The purchase of a controlling stake of the Kimin concession in the Democratic Republic of Congo in 1997 manifested an appetite for risk, bearing in mind the political instability in that region. Sam Jonah showed entrepreneurial ambition in setting high targets for the firm. His leadership was viewed as critical to the firm's success and future (as was later proved by the refusal of international bankers to accept his resignation during the financial crisis.)[91] These examples fit the definitions of entrepreneurship.

The ability to issue new shares was pivotal in the expansion process. Neither Lonmin nor the Ghanaian government (the majority shareholders) had requested

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[87] Ibid.
[88] Interview, Jonah, Johannesburg, 14 December 2004.
[89] Interview, Keatley, 19 February 2004.
[90] Interview, Holden, London, 19 March 2004.
[91] Interview, Holden, London, 19 March 2004; Taylor (2006), pp. 180, 220.

stringent limits on share issuance in the articles of association at the time of flotation – much to Lonmin's later regret.[92] When growth through acquisition was to be pursued Keatley spoke to Randall Oliphant the financial director of Barrick, a major Canadian gold producer that had achieved phenomenal growth through acquisitions. According to Oliphant the critical success factor had been the use of the company's own shares to pay for the acquisitions. Barrick shares were traded in Toronto and New York, accessible to North America's large institutional investors. Based on this information Keatley made the suggestion to list AGC on the New York Stock Exchange.[93] The Board agreed and this was achieved in February 1996. AGC was in fact the first African operating company to list in New York (another example of pioneering entrepreneurship).[94] The table below shows the percentage of shares used compared to the cash and debt component in the firm's acquisition of operating mines.

Table 7.6: How Ashanti's major acquisitions were financed

Acquisition	Total cost	% Shares paid	% Cash and debt
Cluff – Jan 96	US$156.4m	43%	57%
International Gold Resources (IGR) – Jun 96	US$125.7m	79%	21%
Golden Shamrock Mines (GSM) – Oct 96	US$235.8m	89%*	11%
Samax – Nov 98	US$140.1m	30%	70%

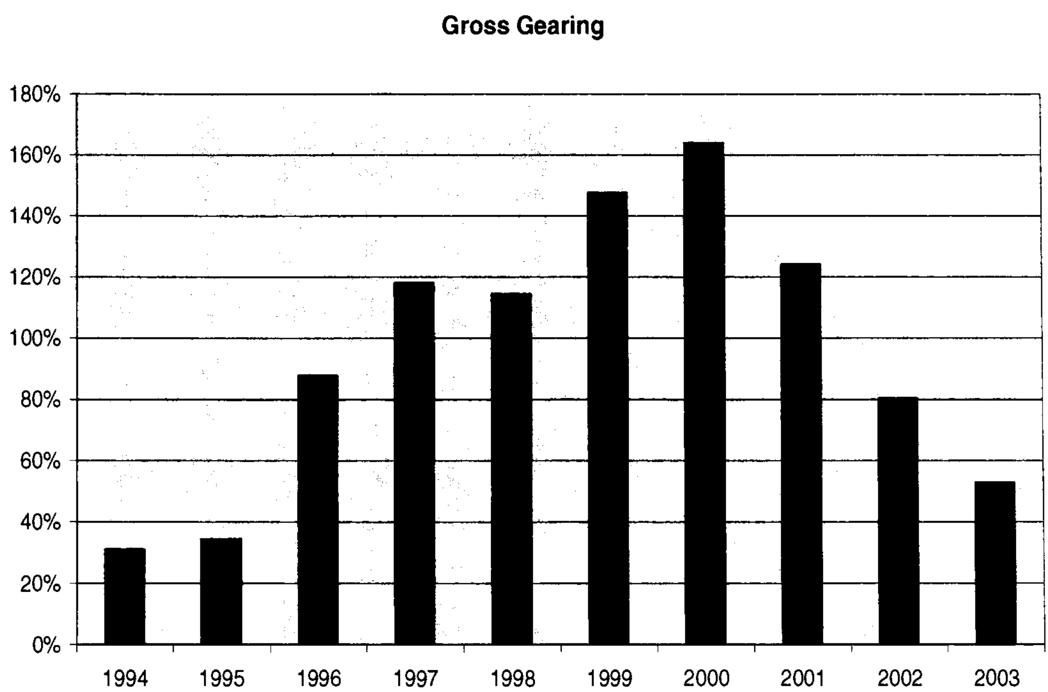
* Ordinary shares and preference shares.

The growing use of shares as currency is evident in 1996, falling in 1998 but remaining substantial. By this time the payment strategy was contributing to the depressed share price. The company for the first time repurchased some of its shares from the market, hence the lower percentage use of shares to buy Samax. In fact, for the Samax transaction, ordinary shares were not used but rather Mandatorily Exchangeable Securities, exchangeable into ordinary shares at a deferred date. AGC also introduced the use of Loan Notes in the acquisition of

[92] Taylor (2006), pp. 246-7.
[93] Board minutes, GH, 16 December 1994, 1 December 1995
[94] Dow Jones, 'Emerging Markets Report', 21 February 1996.

Samax. The use of financial instruments in this way complemented the use of debt. The speed of the acquisitions and the level of borrowing required to develop these mines led to soaring gearing levels and interest repayment commitments which contributed to the lack of cash needed to meet the margin calls at the time of the hedging crisis. This is illustrated in the graph below.

Figure 7.7 [95]

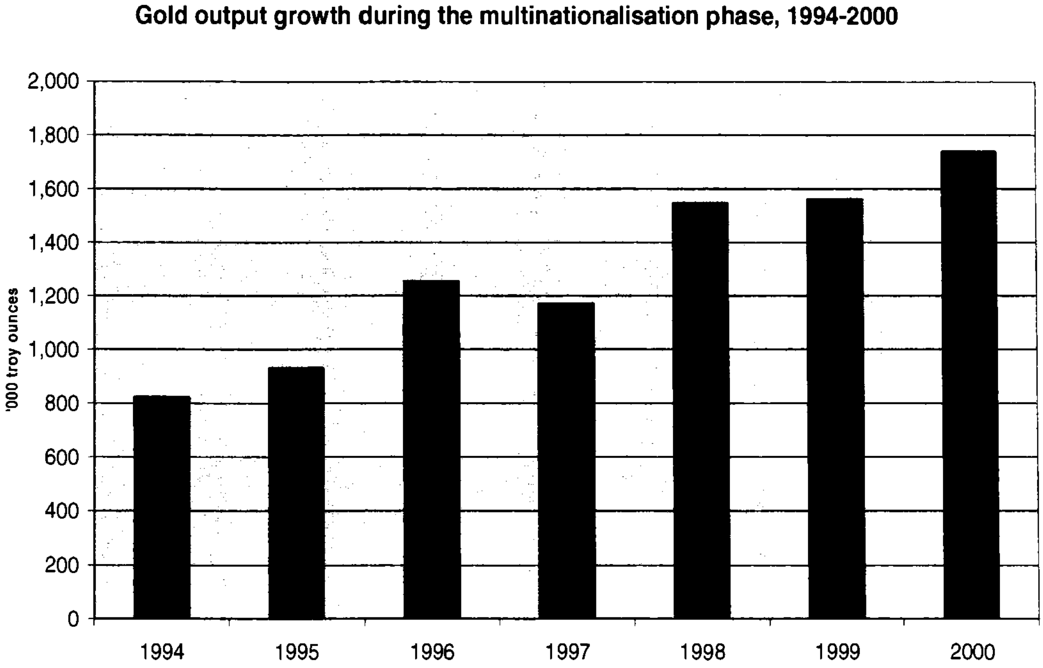


In 1993, Ashanti's output represented 1.1% of world output; the desire to defend or expand this market share was stated as a motivating factor to internationalisation. This goal was achieved: in 2000, output represented 2% of world mining production.[96] The graph below shows that between 1994 when the first mine acquisition was made (Midras) and 2000 when the last acquisition was made (Teberebie), the internal goal set in 1994 to double output again within five years was only narrowly missed.

[95] Gross gearing = debt payable after one year / shareholders' funds.

[96] Based on estimated world gold mining output of 70m ounces in 1993 and 82m in 2000; Ashanti's output was 0.8m ounces and 1.7m ounces respectively.

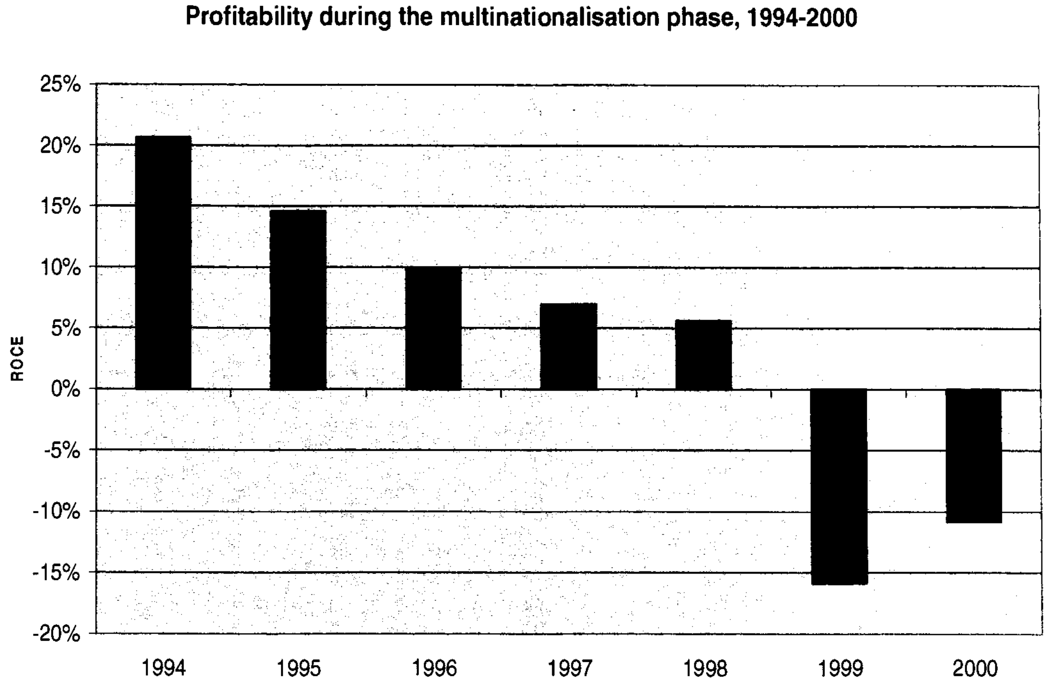
Figure 7.8



However, in terms of cash flow and profitability too, the high costs of developing the acquired properties, together with Obuasi's ongoing cost containment difficulties, had a negative impact. Operations were running with negative cash flow. It was only thanks to income from the hedging portfolio that it was possible to offset the operational cash deficit.[97]

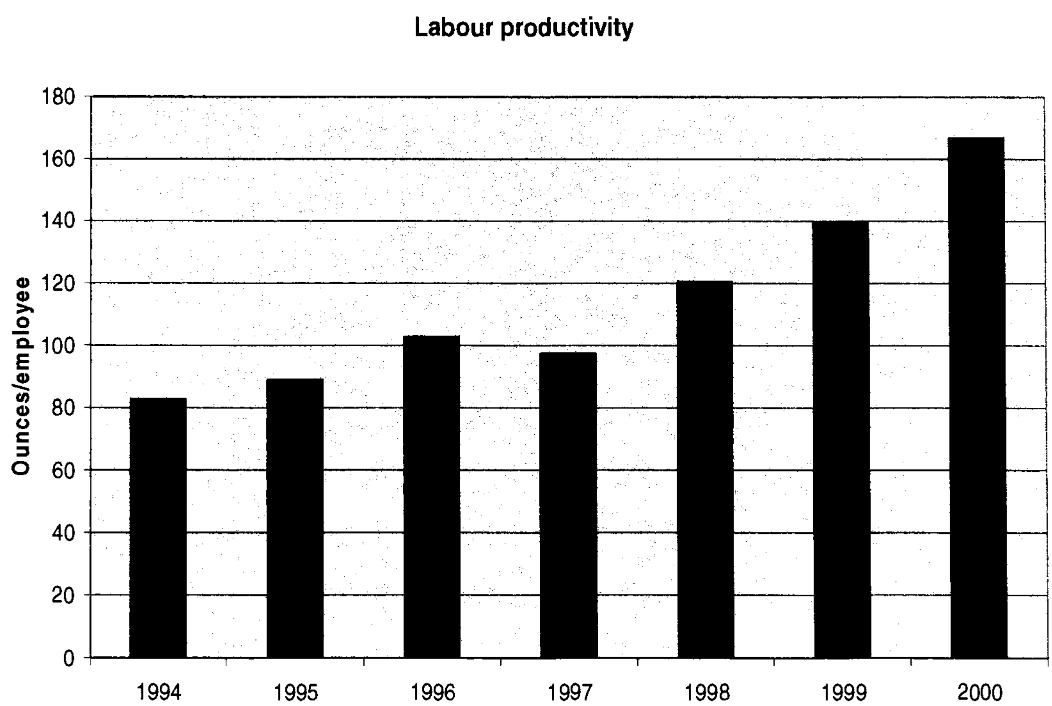
[97] HSBC International Mining Division, 'Ashanti Goldfields Asset Performance', 6 October 1997, pp. 35-6.

Figure 7.9 [98]



Production of greater ounces, particularly from the low-cost open pit mines acquired, did improve output per worker as Figure 7. 10 shows.

Figure 7.10



[98] ROCE = earnings before interest and tax / long term debt + shareholders' funds.

AGC never set a goal to internationalise. The goal it did set in the early 1990s was to achieve continual growth. Internationalisation was one of several means of achieving this, but became for a few years the primary one. The chain of events revealed that efforts were first exerted on expanding the existing mine followed by exploration initiatives in Ghana, and the first acquisition (Midras) was made in Ghana, but this was a mine development project not yet in operation. Output targets set internally and publicly created pressure for quicker results and led to a decision to acquire mines already in production. The first of these acquisitions was Cluff Resources in January 1996, Cluff's portfolio simultaneously added a producing mine in Ghana (Ayanfuri), and in Zimbabwe (Freda-Rebecca). The company therefore became a multinational enterprise in January 1996, according to the definition of an MNE used here. The search for producing mines was initially global: however, it quickly transpired that the strongest commercial opportunities were African-based acquisitions. These were more favourably received by financiers, as well as African-based sellers and regulators, and they matched the firm's strengths and experience better than opportunities further afield. AGC's perceived risk of doing business in Africa was lower than her developed country competitors. The experience gained in coping with Ghanaian political and economic risks was invaluable. This realisation led to the decision to concentrate expansion within Africa.

The aborted Lonmin merger plan illustrated the dynamism of corporate strategy. The inclusion of platinum to become an African precious metals company was also driven by the continual growth agenda. Jonah's personal ambition was another driving force. Penrose differentiates between a product-minded entrepreneur and an empire-building one. The former focuses on improving and extending activities while conscious of performance – lowering costs and improving quality. The latter aims for growth for growth's sake. It would appear that Jonah was a combination of both these types of entrepreneur – AGC's rapid growth led to a decline in profitability, and quality control fell at Obuasi following the million-ounce-chase. However, the company learnt from this experience and by 1998 new priority given to organizational enhancements to reduce costs and maintain quality discipline were beginning to pay-off.[99]

Continued expansion by acquisition was curtailed by the need to consolidate the rapidly enlarged company and by the financial crisis. The crisis exposed liquidity problems caused largely by the heavy debt servicing obligations accrued to develop existing mines and to expand the boundaries of the firm. The firm lost its favourable borrower reputation, this was reflected in the significantly higher costs of borrowing and financial restraints imposed post-crisis.

Based on the foregoing discussion, Table 7.11 below summarises the internal and external factors which caused or permitted AGC to become a multinational enterprise in the manner that it did. 'Necessary' or causal factors are those which in their absence multinationalisation would not have occurred when it did, if at all; 'permissive' factors are those that facilitated multinationalisation but were not critical.

Figure 7.11: Factors contributing to AGC becoming a multinational enterprise

	Internal	**External**
Necessary	▪ Strong borrower reputation ▪ Obuasi's inability to achieve 1m ounces by 1995 ▪ Operational success and experience from Obuasi's rehabilitation ▪ Entrepreneurial ambition ▪ Fund-raising ingenuity	▪ Shareholder expectations ▪ Long exploration lead times ▪ Declining share price ▪ Declining gold price
Permissive	▪ Technical expertise ▪ Managerial expertise ▪ African identity	▪ Willingness of junior producers to sell

The evidence can now be used to test the hypotheses posed in the introduction.

[99] HSBC Global Mining Division, AGC equity research report, 4 August 1998, pp. 2, 3.

Hypothesis 1

- The desire to extend monopoly power induces internationalisation.

AGC's experience does not fit Hymer's power theory since the gold market is not monopolistic. There are a large number of producers and the gold price is difficult to manipulate by any one of them.[100] Even though AGC contributed 69% of Ghana's gold exports in 2000, this domestic dominance did not give it a monopoly in the gold market. The company has never been involved in gold marketing- all the bullion produced was sold to refiners who then sold AGC's gold onto the market. To defend and expand global market share was stated by management as a motivating factor to internationalise - but this is not the same as securing monopoly power.

Hypothesis 2

- Transaction cost considerations explain the firm's boundary extensions.

According to transaction costs theory, market failure and inefficiencies motivate firms to internalise the supply, production or distribution of services and goods. There are three examples of this in the firm's evolution: first, the acquisition of a limestone subsidiary, Limestone Products (Ghana) Limited in 1994, limestone being a critical ingredient for the sulphide treatment plant. The contractual arrangements changed a year later from a 51% controlled subsidiary to a 50% joint venture with management provided by a Belgian manufacturing expert, Carmeuse S.A. This domestic extension of the firm's boundary did secure supply and reasonable prices.[101] The second example was the 49% associated undertaking in ICI Explosives (Ghana) Ltd, which reduced the firm's import costs of explosives, a vital input for underground mining operations. The disposal of these interests shows that other contractual means of ensuring satisfactory delivery and prices of these inputs were achievable – market failure or inefficiencies were not so severe to necessitate internalisation. Third, Ecobank became a small, contributory lender in AGC's revolving credit facility

[100] The largest producer in 2000, Anglogold, had 9% market share.
[101] AGC annual report, 2000, p. 17.

(contributing less than 1% of the facility).[102] However, its value to AGC was potentially greater than this. Ecobank's Africa-wide presence would undoubtedly have given AGC advisory services and networking opportunities that would have smoothed the way for conducting business in neighbouring countries such as in the Ivory Coast. In any case, these interests temporarily increased the boundary of the firm within Ghana and not internationally. No obvious transaction cost explanation can be offered for the ownership stakes in the pineapple farm.

It could be argued that AGC improved the efficiency of its existing capital market transactions by employing funds in several countries, rather than just one. Geographic diversification potentially improved the use of every dollar acquired in the market by reducing risk. In addition, the use of retained earnings and the company's own shares to fund foreign acquisitions can be seen as an internalisation of the capital market. The capital markets could, but would not, supply all of AGC's funding needs, therefore this could be viewed as a type of market failure from the company's point of view. In these latter respects the transaction cost approach to explaining multinationalisation is relevant to AGC.

<u>Hypothesis 3</u>

- Ownership advantages combine with location cost savings and transaction cost savings to encourage multinationalisation.

The company was conscious of and broadcast its internal advantages: financial credibility, project management experience, technical expertise, entrepreneurial spirit, experience of operating in an African political and economic context, and a business model that empowered indigenous staff. These combined ownership advantages induced and facilitated multinationalisation. The partial internalisation of capital markets discussed above did indeed combine positively with these ownership advantages. The location cost savings aspect of Dunning's O-L-I model, though, was not relevant to AGC's story. Location choice for a mineral extraction business was necessarily driven by geological considerations as well the amenability of acquisition targets to being taken over, and not by the exploitation of factor cost differences.

[102] Board minutes, GH, 26 October 1998.

Hypothesis 4

- Low-capital, low-technology and small-scale operations characterise LDC MNEs .

This conclusion from the LDC MNE literature, admittedly based mostly, but not exclusively, on manufacturing firms, is wholly inapplicable to AGC's case. AGC was in a capital-intensive extractive industry, the firm embraced the latest technological practices and operations were extensive. The LDC literature ignores the possibility of international finance influencing the growth of 'Third World' enterprises, which was an important factor in AGC's experience. It is important to note here that changes in political, economic and legal institutions in Ghana had to occur before the way was paved for international financiers to assist AGC.

Hypothesis 5

- The exhaustion of domestic expansion opportunities leads to multinationalisation.

Obuasi's resources were far from exhausted when the company embarked on its acquisition strategy. The mine's life in 1994 was estimated at seventeen years and that excluded the potential benefits of new exploratory work within the concession. Just as manufacturing companies would plan for the depreciation and replacement of fixed assets so do gold mines for the replacement of their largest asset, the ore body. Even though mining a finite resource will ultimately cause physical boundary changes to the firm, this fact alone does not necessitate a move *abroad* nor does it explain why AGC's management sought to expand *when* they did. The discussion above showed that domestic opportunities continued to be exploited throughout the multinationalisation process: growth at home and abroad was mutually sought.

The fact that priority was first given to domestic opportunities was not because Obuasi was exhausted. Domestic priority can be explained by AGC's obvious advantage in knowing Ghana's business system: laws, industry contacts, political economy, etc.

Other elements of Kay's resource-based theory of multinationalisation did apply to AGC: by developing an African bias the firm showed that it was gravitating to destinations with "low psychic distance" and exploiting its strongest linkages. However, it is important to bear in mind that the African vision was a discovered strength rather than pre-planned.

Summary

Hymer's power theory, the traditional forward and backward integration aspects of transaction cost theory, and location theory were found to be the least useful explanatory tools in AGC's experience of multinationalisation. The role of international finance, specifically

- the benefits of reputation in acquiring funds
- shareholder expectation and
- financial ingenuity

were critical elements of AGC's MNE evolution ignored by the existing theories. The MNE theories also underplayed the importance of entrepreneurship. Without Jonah's ambitious targets and the entrepreneurial attitude of the firm's finance team, which reflected the entrepreneurial culture of the firm, the extension of the firm's boundaries would not have occurred in the manner that it did.

Penrose's theory of the growth of the firm provides a better all-round explanatory tool than the multinational theories. Penrose's observations that growth is a process, that management adapts in size and expertise to facilitate continued growth, and that entrepreneurial ambition is critical, capture the dynamics of AGC's experience well. Multinationalisation was a means to growth, not an end in itself. But even Penrose ignored the causal role that international finance can play in a firm's growth.

The nature of the mining industry provides a second order of explanation to the company's multinationalisation: the cost structure of gold mining and the global price trend contributed to the search for growth. However, without access to the financial markets and an excellent borrower reputation, these industrial constraints could not have been resolved through multinationalisation which depended on debt and international market listings. Existing MNE theories are mostly based on empirical evidence from the manufacturing sector, which goes some way in explaining why their value in this case study was limited. Industrial characteristics were as relevant, if not more so, than Ghana's national characteristics which suggests that it would be more insightful for MNE theory to focus on industrial differences rather than national ones, as has been the case particularly with the LDC literature.

AGC's experience has highlighted an important gap in research, namely the need to evaluate the role of international finance in firm growth. In addition, the case study suggests that the theory of multinational enterprise may suffer from teleopathy: multinationalisation is a means to firm growth, therefore it might be empirically more illuminating to focus on understanding the ends - firm growth - rather than focussing on the means. This suggestion is supported by the fact that there are numerous MNE theories and models offering nearly as many different explanations as there are firms (only the main ones were considered in this chapter). Casson rightly observes that, "there is no really satisfactory general theory of the MNE".[103]

[103] M. Casson, 'General Theories of the MNE: their Relevance to Business History', in Hertner and Jones (1986), pp. 42-63.

CHAPTER 8:
CONCLUSIONS

The evidence and findings from Part One and Part Two are discussed here and related to the main theme of firm survival. The contributions of this study to other areas of economic history are considered, along with topics for further research.

Endogenous factors promoting longevity

Certain corporate characteristics were apparent from the Chronological Narrative that contributed to the firm's survival: technical expertise, continuity of key personnel, responsive management, and executional conservatism. Chief of these qualities was the firm's reliance on technical expertise. Mining, mechanical, metallurgical and geological consultants were a constant feature of strategy development and execution.

Obuasi's complicated and varied ores presented geological and metallurgical challenges encouraging continual information gathering, experimentation and adaptation of treatment processes. Although great emphasis was put on technical expertise, AGC could not be described as technologically pioneering until the Jonah era. Prior to this, the company was a relatively slow mover in the adoption of cyanidation and flotation, for example. AGC's approach until 1986 was to *imitate* best practice from abroad, making in-house adaptations to get the most out of new technologies.

Another important trait contributing to AGC's longevity was the length of time served by critical employees, in particular managing directors and chief consulting engineers (see Appendices 5 and 6). This was important for continuity in strategy and the successful oversight of long-term project implementation.

From the start of operations great emphasis was put on the quantity, type and speed of information required from the mine by the decision-makers in London. The archives show that an impressive and detailed array of reports covering all aspects of the mine's operations were sent monthly to London. Significant mine development findings were reported by cable or telex the same day. The speed with which operational problems were addressed was noteworthy, good examples being the recruitment of W. R. Feldtmann in 1905, C. Norris as metallurgical consultant for the new flotation plant in 1945, and the engagement of the eminent geologist Norman Junner from the 1930s until 1968. These actions were often in quick response to unacceptable variations between mine forecasts and actual performance. Head office management were information-hungry and quick to respond to negative operational data from the mine.

Until 1986 AGC can be described as a conservative company. The geological wealth of the mine could have tempted management to seek quick and easy, but unsustainable, profits. It would have been possible to mine out Obuasi's rich ores with minimal investment and speedy pay-back. However, as early as 1905, such a strategy had been condemned in favour of a more conservative, longer-term outlook. Good mine planning and continual production, rather than quick, rich pickings, were sought. Further evidence of this conservative business ethos was seen in the extensive experiments and trials conducted before investment decisions were made.

The first sign of departure from this conservatism came when Lonrho as newcomers in 1968 wanted to speed up the well-planned, 5-year expansion programme. However, they failed to achieve this because of external factors. Increasing operational difficulties caused by foreign exchange and import licence constraints could not support an aggressive growth strategy. During the lost decade of 1975-85 the firm was reduced to fire-fighting because of the harsh economic environment. Following the IFC investments a new pioneering ethos and aggressive growth was pursued by Sam Jonah. Under Jonah's leadership the firm's new entrepreneurial spirit led, for example, to AGC acting as first-mover, rather than a follower, in the large-scale, commercial use of the Biox treatment process. However, this change from conservatism to entrepreneurial dynamism was inextricably linked to the 1999 financial crisis and eventual takeover. This suggests, paradoxically, that the pre-1986 conservative approach had been an important factor in the firm's longevity.

From Part One the critical success factors were all management related – reliance on technical expertise, the long service of corporate leaders, responsive management and a conservative growth ethos. In Part Two the contributions of the four factors of production were considered.

Land

It was seen, surprisingly, that well-defined property rights were not a critical success factor for most of AGC's history. Ambiguities surrounded the original 1897 lease agreement. For over a decade between 1972 and 1984 the mine operated without a mining lease whatsoever. The theoretical explanation for this would be that the *legality* of the title was less relevant than AGC's actual usage of the land that had been established and observed over time and taken as given. AGC succeeded in behaving as (and in being treated as) landlords although they were strictly only leaseholders (and not even that between 1972 and 1984). In so doing they founded what was referred to as a corporate custom. It was suggested that greater emphasis in property rights theory needs to be paid to habitual behaviour rather than title definitions and formalities.

It was not in AGC's interest to establish clarity of property rights. This was because the legal basis of the 1897 Agreement was known to be shaky, and to have had this confirmed in court would have been foolish. AGC assiduously guarded the document from public scrutiny and from attempts to amend or supplement any part of it. There was economic value in the Agreement's ambiguities: lack of clarity allowed AGC to assert their own interpretations. A useful comparison showing that uncertainty and open interpretation of land rights can be valuable would be the way in which many chiefs subverted the attempts of colonial administrators to define their boundaries because delineation would have inhibited rent-seeking opportunities.[1]

The role of the colonial government was relevant. As party to the ill-defined agreement of 1897 and as a substantial financial beneficiary of it through AGC's royalty payments, it was not in the government's interest to legally contest AGC's interpretation of it at the risk of invalidating their own position. AGC enjoyed security of tenure largely because of government's active and passive support. This important state sanction continued with Nkrumah's post-colonial government. It was not until Lonrho made a bid for AGC that the NLC government in 1969 took the opportunity to set aside the 1897 Agreement, replacing it with a better defined, legally tighter lease. This had positive wealth effects for the Adansi landowners but was immaterial in terms of AGC's

[1] Berry (2000), p. 27.

continued security of title. The new lease did not in any way deter the furtherance of large investment programmes, which reflected AGC's confidence in their property rights. When the 1969 lease was arbitrarily suspended in 1972 the firm continued operations, only inhibited by the deteriorating economic situation in Ghana (and not by the absence of a mine lease). A lease was reinstated in 1984 to satisfy third parties: the IFC and bank lenders. These foreign financiers based their loans on formal evidence of secure property rights. Whereas long-established use rights provided AGC with sufficient security on a national level within Ghana, greater legal formality was demanded by international finance. Compliance led to an unprecedented period of growth for the company. It was only in recent times that AGC's experience better matched the theoretical prediction of property rights theory that clearly defined rights promote economic growth. But this was not found to be the case in the firm's early history when commendable growth was achieved even in the absence of well-defined property rights.

Geology mattered. Obuasi's ores were unusually rich. This improved profitability. It allowed management greater manoeuvrability than the more marginal mines when it came to absorbing rising costs. It partly explains why AGC were not reliant on coerced or indentured labour early in the twentieth century when all the other Gold Coast mines were. Between 1927 and 1961 the Bibiani mine was managed in the same way as AGC and with the same access to expertise. However, the lower-grade ores there made it difficult to sustain profitability, which led to the mine being sold to the government. It cannot be said, though, that AGC's longevity was solely due to Obuasi's geological advantage. This is because in the late 1970s and early 1980s good geology plus a lack of reinvestment (albeit due primarily to external economic factors outside management's control) led to near terminal decline. Again, in 1999, good geology plus poor financial management brought the company to the brink of bankruptcy. So, although geology mattered, it was the *combination* with sound, conservative management, discussed above, that was essential for the firm's survival.

Labour

Labour was seen to be the factor of production least within the firm's control. An absence of labour legislation in Ashanti and the informality of employer-employee relations when AGC started operations was conducive to the firm's initial growth. It was seen that there was little demand from workers themselves for formality as flexibility in their comings and goings suited them. Although the firm experienced sporadic and small-scale labour disputes in the early years, the disruption did not seriously impede production. This changed from the late 1930s, and most notably between 1945 and 1956. The transition from a regulatory vacuum to an environment of increasing government intervention by means of legislation and labour commissions along with unionisation ushered in a period of acute labour unrest. This was marked by protracted and violent strike action which significantly affected production.

Principal-agent theory was used to examine the relationship between AGC's management and the African workforce. This revealed labour's natural knowledge and control advantages over capital: namely, how and whether labour applies effort in view of management's incomplete information and lack of observability. Considerable difficulties were encountered as management attempted to align worker interests with their own. The evolution of internal institutions, principally the Salaried Staff Association, together with annual wage negotiations and management's 'usurpation' of the Obuasi union leadership, helped to maintain a workable relationship from 1957. The post-independence government effectively outlawed strikes and viewed industrial action as unpatriotic, this provided capital with significant state support to erode labour's initial advantages.

Yet still, unofficial strikes periodically disrupted production in every decade after 1957. For marginal mines, such as Tarkwa and Abosso, labour disruption made production uneconomic and forced closure. AGC enjoyed healthier margins from the richer ores as well as the geographic distance from other mines. This distance seems to have provided AGC with a separate, localised, labour market from that of the Tarkwa mining area, with different labour supply and demand characteristics.

The principal-agent framework was advantageous over the Marxist/class approach to examining the social relations of production because it highlighted both the inter-firm and intra-firm factors impinging on the employer-employee contract. Rather than stressing the exploitation of one class by another, the approach taken emphasised the compromises that had to be made by both AGC management and its African workforce.

Capital

Until the Jonah era AGC was a cash-rich, virtually debt-free company thanks to the rich ores as well as conservative investment and growth planning. This was undoubtedly a major contribution to the firm's longevity. The increasing use of debt from 1996 weakened the company's financial position in two major ways. First, rising gearing levels made it more and more difficult to service the debt. This exerted pressure on cash-generation from non-mining sources, namely from an ever-expanding and increasingly complex hedge book. Second, the borrowed funds were not deployed efficiently: although AGC achieved growth in terms of output following the acquisitions phase, return on capital employed deteriorated.

Capital was shown to be relatively more costly than the other factors of production, followed by labour. Land was the cheapest resource for AGC. The company was starved of capital in the late 1970s and early 1980s as persistent difficulties were endured in trying to obtaining import licences and foreign exchange. An extremely overvalued cedi further taxed the company's income. The mine could not be managed properly at this time because of the shortage of essential inputs. This culminated in AGC's first recorded pre-tax loss in 1982.

Shareholders consistently fared well up to 1968 when AGC shares ceased to be traded on the London Stock Exchange. The company's return to the stock market in 1994 was not so successful. In the following ten years shareholders suffered from share dilution, high debt levels, low liquidity and a cash dividend moratorium between 2000 and 2003. The severe financial crisis of 1999 nearly obliterated shareholder value when bankruptcy was narrowly averted.

It was seen that an appropriate taxation level was critical to growth. Government's tax revenue from AGC grew steadily, peaking in the Acheampong era when the tax level combined with economic conditions impacted detrimentally on AGC. It was argued that the tax provisions of the Minerals and Mining Act (1986) were, on the other hand, rather lenient. While the liberalisation legislation succeeded in rejuvenating the mine sector it did so perhaps to the cost of the state. The chapter on capital highlighted the difficulty for developing states to balance their revenue needs while also providing adequate incentives for capital to economically exploit finite resources.

Enterprise

Enterprise was distinguished from management by two factors: the appetite for risk and the focus on future corporate direction as opposed to day-to-day operations. The Jonah era was identified as the most entrepreneurial in AGC's history. While the Jonah era could be seen as a success in terms of indigenisation and the expansion of the firm's boundaries abroad, it was a failure in terms of financial performance, shareholder value and corporate independence. The solution package offered to the company in the face of bankruptcy in 1999 led to the Anglogold takeover in 2004.

Individual and corporate entrepreneurship were seen to be good for output growth but not for liquidity nor profitability. The pace of change was too great for the company's cash generation abilities leading to criticisms that Jonah's growth ambition was greater than his concern for shareholders. There were also management failures in the hedge portfolio supervision. Risk-taking is an important, perhaps the defining, aspect of entrepreneurship. The entrepreneurship of the Jonah era was a dramatic change from the conservative management of the past. Before 1986 it can be argued that AGC's managers were constrained by their perceptions of political risks. This encouraged them to be commercially cautious. However, in Jonah's case, his nomination as deputy MD from the Rawlings administration and the fact that he was a Ghanaian perhaps gave him a more positive assessment of the political influences on the firm thereby encouraging his appetite for commercial risk. Entrepreneurship in this case study, far from being a critical success factor for survival, had the opposite effect.

Although aspects of the factors of production were analysed in isolation, they were obviously interrelated. For instance, it was apparent that the hold-up ability of labour was mitigated by the geological value of AGC's land, which made the company financially able to withstand repeated production stoppages. Poor labour relations encouraged greater capital investment in machinery. It was from the land (gold) that AGC created new financial capital. Entrepreneurship, in turn, had direct effects on the firm's capital situation.

Some implications for other areas of economic history

It is often remarked that a single case study cannot make representative claims. However, this does not negate the usefulness and significance of lessons learnt when the subject of the study is of singular importance. The thesis revealed AGC's uniqueness and relevance to the Ghanaian economy in terms of gold production, export earnings, employment and the firm's status in the national psyche. The findings will contribute to certain historical topics affecting West Africa by providing evidence that either confirms our current understanding or highlights an exception, as well as by suggesting areas worthy of further research.

From a Ghanaian history perspective, the extensive literature on land tenure has focused on the role of cash crops inducing changes in property rights.[2] Less has been written on the impact of mining concessions and their associated timber concessions on changes in land tenure. This account showed the disruption AGC's activities had on local land ownership, land use and chieftaincy politics. The evidence, particularly from Chapter 4, adds to the existing knowledge of the economic factors impinging on the Ashanti institutions of land tenure and chieftaincy.

It was seen that Ghana's political junctures were less relevant to the firm's operations than economic junctures. With the exception of Acheampong's 1972 coup and the expropriation that followed, changes in government per se did not herald operational discontinuities. Changes in economic policy, however, had an immediate impact on the firm's fortunes. This was evidenced in fiscal policy as well as in the effects of increasingly state-led policies between 1961 and 1983. Ghana's paradigmatic shift to a free market economy from 1983 provided an external environment conducive to investment which enabled the mine to be rehabilitated and to grow. AGC was an excellent example of how big government is bad for business: government controls on imports, currency exchange, prices, distribution and the majority ownership of AGC itself progressively shackled the company. The effects of macroeconomic policies on microeconomics was apparent. The benefits of Structural Adjustment on this single enterprise and on the gold sector were undeniable.

[2] See for example, G. Benneh, 'The impact of cocoa cultivation on the traditional land tenure system of the Akan of Ghana', *Ghana Journal of Sociology*, 6, 1970, pp. 43-61; E.A. Gyasi, 'The adaptability of African communal land tenure to economic opportunity: the example of land acquisition for oil-palm farming in Ghana', *Africa*, 64, 1994, pp. 391-405; Austin (2005).

Several observations are noteworthy from an imperial history perspective. First, sufficient evidence was provided in the thesis to support Hopkins and Cain's gentlemanly capitalism thesis. A critical role was played in the establishment of the firm by founding directors with aristocratic, financial and industrial links such as Frederick Gordon and Viscount Duncannon who became the Earl of Bessborough. Later directors recognised the fact that without these personalities Cade's Cote d'Or company would never have raised the capital needed nor obtained government approval for the mine concession. The reputation of these men and the fact that the original capital was wholly obtained from them and their circle of friends no doubt contributed to AGC's long-term profit maximisation motive, as opposed to a rent-seeking one. This distinguished the firm from many other Gold Coast mine start-ups.

Second, although AGC fitted the free-standing company model, it was in many ways atypical of this genre of enterprise. This was attributed to a genuine shareholder-driven ethos, the firm's ability to develop quickly suitable management structures at home and at the mine (particularly technical management), and geological good fortune.

Third, colonial government and imperial business are often portrayed by both liberals and radicals as being hand-in-glove. This is the long held view of dependency theorists,[3] and it re-emerges in the more recent radical pessimist perspective of Acemoglu, Robinson and Johnson. They use cross country regression analysis to connect the development problems of former colonies to the joint predatory behaviour of colonial administrators and colonial businessmen.[4] The liberal, Euro-centric perspective of Cain and Hopkins also propagates the idea of "unity" and an "extraordinarily high degree of cohesion" among colonial entrepreneurs and politicians.[5] This assessment was valid only for AGC's early history when there was indeed strong cooperation between the imperialists and AGC's imperial business. The evidence for this was the unique land concession granted to the firm, the tacit support provided by government which enabled AGC to ignore African surface rights and to damage the environment without cost, as

[3] See for example, W. Rodney, *How Europe Underdeveloped Africa*, Washington D.C.: Howard University Press , 1982, p. 169; S. Amin, 'Underdevelopment and dependence in black Africa – their historical origins and contemporary forms', *Social and Economic Studies* 22, 1, 1973, pp.188-193; and with specific reference to Ghana, Howard (1978), pp.19-20.
[4] D. Acemoglu, S. Johnson and J. A. Robinson, 'The Colonial Origins of Comparative Development: An Empirical Investigation', *The American Economic Review*, vol. 91, 5, 2001, p. 1375.
[5] Cain and Hopkins (2001), p. 43.

well as the company's low fiscal burden up until the 1930s. In the early colonial period the government's and AGC's incentives for establishing a British enterprise in Ashanti were aligned. However, from the 1930s, a combination of external shocks and internal changes in the colony broke up this close and cooperative relationship.

External factors such as the collapse of the gold standard and the consequent increases in the market price for bullion and the Second World War triggered the introduction of new taxes which dramatically increased AGC's fiscal burden. The Gold Coast government's chief source of customs revenue from cocoa exports was threatened over the war years as cocoa prices plummeted,[6] and hence the need to widen the tax base. During this period too, labour disturbances in the Caribbean forced the imperialists to reassess their responsibilities towards their colonies. Greater welfare and development contributions were now demanded in addition to economic extraction. This resulted in increased labour regulation for AGC.

The internal economic and political factors in the Gold Coast following the war introduced a new force for the colonial government to contend with of greater priority than any individual imperialist business.

AGC's growing labour costs and rising tax burden from 1933 to 1957 reflected the removal of the hand from the glove. This micro-level investigation highlighted the potential for conflict and divergence between the motives of private imperial business and the political and economic ones of the metropole and the government on the spot in the later colonial period.

In terms of business history, the case study exposed the importance of growth management. The potentially negative effects of entrepreneurial dynamism was seen when profitability was compromised because of growth in the Jonah era. Contrary to the sentiment of modern management theories, caution and imitation, rather than risk-taking and innovation, stood AGC in good stead for most of its history.

[6] Kay (1972), table 21A: 'Value of major exports, 1900-60', between 1939 and 1942 cocoa export values drop by 55%, pp. 334-5.

Further research from AGC primary sources

The primary sources consulted provided a wealth of data outside the time and thematic constraints of this thesis, but nevertheless worthy of further research. The Guildhall MS 14170 series, for example, contain details of AGC's mine supplies showing quantity and frequency of shipments from worldwide ports. This would allow changes in imperial trade networks to be mapped. In addition, the information could be analysed with respect to historical developments in mine mechanical and metallurgical technology. The types of machinery ordered and their specifications, the problems encountered with their use on the mine, the different chemical reagents used in extraction processes and some of the results obtained from experiments are found in the company records and would be of great interest to historians specialising in mining and technology. Case studies into the process of technology transfer could be carried out from AGC's adoption of specific inventions such as the Macarthur Forest cyanide technique.

The firm's records would also allow an analysis to be made of the development of the modern concept of corporate social responsibility as well as the growth in public awareness of environmental damage, restoration and conservation issues. What AGC and its stakeholders perceived the company's responsibilities to be, how these perceptions changed over time, and the factors influencing this would be a fruitful area of research of interest to economic historians.

Detailed changes in the internal management structure, health and safety practices, Africanisation and the provision of African welfare are further areas that a comprehensive history of AGC would need to cover.

The topical issue of the role of multinationals in host country development was not treated in this thesis. AGC, having imperial beginnings and mining a non-renewable asset, would, on the face of it, appear to be a typical example supporting accusations of exploitation. Although this important question was not addressed in the scope of this thesis the primary sources would provide sufficient data to explore this complicated question. The evidence is unlikely to lead to a simplistic answer.

The Ashanti Goldfields Corporation was the single largest gold producer in Ghanaian history. Putting geological good fortune aside, the thesis attempted to explore the endogenous decisions and behaviour of the firm that allowed the company to survive for 107 years. In summary, this longevity can be attributed to the managerial characteristics of reliance on technical expertise, long service, and conservative growth and investment strategies. These combined successfully with a valuable land concession. Longevity was threatened by poor labour relations and eventually halted by adverse effects of entrepreneurial risk-taking.

APPENDICES

Appendix 1: AGC's contribution to colonial and post-colonial Ghana's gold production

Year	Total gold output (ounces)	AGC gold output (ounces)	AGC% of total
1901	5,223*	4,786¤	92%
1911	253,977*	96,275¤	38%
1921	203,395*	68,817¤	34%
1931	246,075*	169,245¤	69%
1940/41	882,241¤	264,079¤	30%
1950/51	694,886¤	188,339¤	27%
1960/61	878,459¤	380,776¤	43%
1970/71	693,770¤	520,080¤	75%
1980/81	349,871¤	252,498¤	72%
1990/91; 1991	846,269¤	569,480*	67%
2001	2,205,473*	1,583,535*	72%

* Calendar year

¤ Financial year end (either 30 June or 30 September)

Sources: AGC Annual Reports, Ghana Chamber of Mines Annual Reports.

Appendix 2: Gold industry contribution to export earnings in colonial and postcolonial Ghana

Year	Total Export value	Gold export value	Gold% of total	Cocoa% of total
1900*	£797,000	£38,000	5%	3%
1910*	£2,509,000	£790,000	31%	35%
1920*	£12,170,000	£889,000	7%	83%
1930*	£9,848,000	£1,056,000	11%	71%
1940*	£13,449,000	£7,208,000	54%	33%
1950*	£75,393,000	£8,719,000	12%	72%
1960*	£111,408,000	£11,088,000	10%	60%
1970[¤]	¢460 mn	¢26 mn	6%	72%
1980[¤]	¢3,104 mn	¢540 mn	17%	65%

Sources: * Kay (1972), Table 21A, pp. 334-5; ¤ Huq (1988), Table 10.5, p. 203; ± Earth Trends Country Profiles, Economic Indicators Ghana: http://earthtrends.wri.org/pdf_library/country_profiles/eco_cou_288.pdf, accessed 15 May 2006.

Appendix 3: Spreadsheet of AGC financial data, 1899-2003

Year (1)	Short tons milled (2)	Declared gold troy ounces	Avge mill head grade (dwt/t; g/t from 1991) (3a)	Gold recovery rate (3b)	Gold yield (dwt/t) g/t from 1991(3c)	Proved & probable ore reserves (tons; m oz from 1991) (4)	Devpt footage	Gross bullion turnover (5)	Total turnover	Operating costs (6)
1899	3,108	2,742	19.76					£8,037	£8,572	£4,230
1900	4,673	8,519	40.83					£32,984	£33,268	
1901	4,204	4,786	25.49				31,176	£17,977	£215,995	£6,526
1902	10,020	7,259	18.23					£26,858	£37,508	£15,546
1903	40,788	31,050	17.05					£115,834	£129,986	£71,406
1904	59,552	43,802	16.47				15,579	£161,100	£173,030	£92,128
1905	121,995	49,075	8.03					£172,962	£174,776	£131,917
1906	48,982	30,855	13.06					£131,346	£132,201	£72,168
1907	54,443	44,272	18.21			56,800	15,922	£188,528	£191,081	£63,549
1908	66,255	40,825	13.71	92%	12.61	215,000	14,721	£173,809	£177,562	£77,091
1909	78,786	41,014	11.66	94%	10.90	519,300	14,763	£174,369	£177,585	£87,014
1910	101,763	72,115	15.87	92%	14.60	485,566	15,213	£306,322	£309,592	£119,047
1911	124,554	96,275	17.31	91%	15.75	508,200	12,925	£428,129	£430,778	£190,508
1912	153,554	111,266	14.49	88%	12.68	392,840	17,929	£488,597	£493,462	£229,930
1913	148,447	107,977	14.55	93%	13.47	365,300	18,278	£470,659	£471,052	£237,686
1914	117,867	101,579	17.24	93%	16.07	432,500	18,278	£443,277	£447,948	£238,383
1915	131,236	104,634	15.95	93%	14.83	433,900	8,981	£447,257	£452,799	£228,878
1916	136,994	111,739	16.31	92%	15.07	436,000	9,216	£475,958	£482,975	£241,124
1917	112,853	111,337	19.73	94%	18.45	534,100	7,587	£476,322	£486,702	£240,787
1918	105,452	108,390	20.56	93%	19.20	526,200	6,151	£484,102	£472,943	£244,633
1919	85,566	97,717	22.84	93%	21.29	529,500	4,200	£418,057	£429,271	£217,327
1920	71,411	76,522	21.43	93%	19.99	510,000	5,550	£410,227	£420,965	£240,340
1921	62,259	68,617	22.11	89%	19.61	511,400	3,802	£383,168	£393,144	£254,488
1922±	108,506	98,056	18.07	82%	14.76	512,100	5,227	£486,419	£493,873	£358,310
1923	88,509	70,404	15.91	75%	11.88	502,400	6,056	£323,894	£329,769	£245,006
1924	83,479	75,539	18.09	81%	14.63	421,500	4,175	£359,736	£371,589	£232,710
1925	91,924	89,818	19.54	90%	17.55	362,600	3,988	£393,031	£403,937	£225,412
1926	100,246	92,162	18.4	91%	16.82	441,700	5,855	£392,080	£400,408	£206,915
1927	100,312	95,613	19.06	93%	17.84	534,700	8,915	£406,971	£418,784	£210,328
1928	102,985	104,612	21.9	93%	20.41	549,400	8,435	£445,508	£459,050	£192,105
1929	108,007	118,095	23.6	93%	21.86	590,200	10,358	£502,441	£513,615	£217,258
1930	124,200	144,548	24.92	93%	23.28	607,600	9,511	£614,615	£629,894	£229,240
1931	142,910	169,245	25.53	93.20%	23.79	667,400	7,516	£720,173	£750,579	£238,113
1932	158,350	175,063	23.84	93.60%	22.13	642,100	8,950	£743,668	£1,043,119	£249,091
1933	161,200	177,143	23.49	93.60%	21.98	629,750	10,894	£1,098,399	£1,129,131	£210,180
1934	173,350	186,885	22.18	92.70%	20.56	584,918	12,610	£1,299,347	£1,299,347	£220,482
1935	192,110	199,560	22.42	92.70%	20.78	1,059,224	17,216	£1,418,810	£1,484,030	£236,484
1936	213,713	206,332	21.17	91.21%	19.31	1,458,031	21,037	£1,446,836	£1,503,930	£309,202
1937	216,602	218,647	20.19	88.01%	17.77	1,595,113	20,787	£1,544,155	£1,598,262	£336,409
1938	223,800	224,119	21.60	92.10%	20.08	1,834,289	29,485	£1,581,305	£1,659,729	£360,656
1939	234,175	263,427	23.80	94.46%	22.48	1,861,233	30,865	£1,994,131	£2,083,389	£360,954
1940	242,865	273,107	23.31	96.48%	22.49	1,935,808	27,314	£2,294,098	£2,388,613	£426,670
1941	228,300	284,079	23.86	96.93%	23.13	2,076,516	21,882	£2,218,255	£2,291,426	£448,700
1942	210,000	235,526	23.16	97.04%	22.47	2,036,011	7,304	£1,979,769	£2,044,019	£424,106
1943	198,000	218,799	22.78	97.00%	22.10	1,917,523	6,247	£1,838,877	£1,999,248	£411,407
1944	161,870	181,882	23.17	97.00%	22.47	1,829,176	6,974	£1,527,807	£1,731,289	£456,186
1945	179,000	197,773	23.10	95.70%	22.11	1,718,853	11,812	£1,694,285	£1,747,476	£523,679
1946	183,700	195,844	22.19	96.00%	21.30	1,684,292	13,689	£1,688,976	£1,744,449	£552,576
1947	194,000	192,840	20.78	95.40%	19.83	1,636,244	18,319	£1,657,292	£1,730,314	£849,538
1948	177,922	159,310	19.52	89.10%	17.39	1,541,138	15,511	£1,373,931	£1,357,206	£574,664
1949	216,130	182,901	18.66	90.72%	16.93	1,643,530	19,786	£1,644,218	£1,679,358	£653,396
1950	218,670	189,815	19.01	91.31%	17.36	1,616,463	27,894	£2,357,184	£2,394,839	£767,861
1951	237,637	188,339	17.24	91.91%	15.85	1,506,977	29,398	£2,339,006	£2,381,251	£852,857
1952	226,971	165,913	16.18	90.33%	14.62	1,410,411	30,502	£2,183,750	£2,216,098	£967,586
1953	281,021	180,218	14.37	89.24%	12.62	1,406,421	26,211	£2,368,302	£2,399,491	£1,151,401
1954	297,690	192,494	14.36	90.04%	12.93	2,212,884	29,745	£2,405,841	£2,447,456	£1,278,420
1955	310,911	196,236	14.45	87.40%	12.63	2,021,674	26,281	£2,467,936	£2,501,515	£1,288,056
1956	215,486	183,707	19.21	88.80%	17.06	1,869,715	24,619	£2,304,211	£2,335,429	£1,291,852
1957	338,727	275,217	18.24	89.10%	16.25	1,449,984	33,284	£3,468,809	£3,521,763	£1,542,097
1958	365,198	282,530	17.39	89.00%	15.48	1,566,300	43,537	£3,544,973	£3,588,473	£1,674,552
1959	406,365	321,366	17.45	90.84%	15.62	1,993,105	42,827	£3,984,126	£4,037,000	£1,808,968
1960	436,781	357,335	17.74	92.27%	16.37	2,558,287	57,127	£4,482,128	£4,567,372	£2,085,771
1961	451,790	380,776	18.49	91.16%	16.86	3,001,539	58,668	£4,804,429	£4,905,837	£2,259,851
1962	480,598	417,447	19.3	90.01%	17.37	2,932,638	53,765	£5,224,879	£5,291,095	£2,532,527
1963	468,139	444,251	21.58	87.96%	18.98	2,990,239	58,357	£5,575,291	£5,635,223	£2,608,043
1964	489,611	471,421	21.68	88.82%	19.26	3,323,254	65,318	£5,924,895	£5,988,133	£2,883,333
1965	514,584	466,953	20.87	88.99%	18.57	3,291,925	60,378	£5,895,069	£5,986,654	£2,965,452
1966	498,445	459,617	20.47	90.08%	18.44	3,673,760	56,084	£5,790,964	£5,985,110	£2,920,939
1967	545,337	473,217	19.51	88.97%	17.36	3,420,126	61,340	£5,967,657	£6,077,152	£2,950,373
1968	562,000				16.91	3,266,182		£7,377,458	£7,527,937	£3,139,236
1969	618,523	485,532	19.82	87.78%	17.40	3,642,638		£8,741,940	£8,952,682	£3,707,242
1970	620,042	487,578	20.06	87.23%	17.50	3,751,822		£7,334,856	£7,532,351	£4,162,905
1971	696,506	520,080			15.01	3,835,088		£8,518,060	£8,736,450	£4,892,117
1972*	794,097	533,015	15.55	86.31%	13.42	4,427,654	85,332	£11,206,365	£11,384,650	£5,227,253
1973*	869,019	527,827	14.1	86.20%	12.15	5,161,602		£17,210,887	£17,822,571	£5,788,902
1974*	875,417	451,369	10.30	84.43%	8.70	6,580,251	91,516	£22,966,571	£23,346,657	£7,853,090
1975*	954,438	384,712	8.10	83.42%	6.76	7,103,235	87,120	£23,701,501	£24,094,112	£10,181,662
1976*	1,044,576	372,689				3,634,250				
1977*	1,000,863	361,512				3,932,418				
1978*	767,267	265,684	8.61	80.46%	6.93	4,478,789	58,345	£11,248,370	£13,345,108	£9,529,636
1979*	768,133	237,935	7.98	77.69%	6.20	5,598,629	70,610	£28,975,419	£32,146,605	£17,597,364
1980*	778,060	232,036				6,527,393				
1981*	856,728	252,498				5,557,097				
1982*	836,619	268,080				5,076,278				
1983*	731,776	243,171				7,377,878				
1984*	741,743	243,279				6,584,625		£64,050,475	£68,476,103	£2,507,051
1985*	886,381	259,126				8,263,464				
1986*	897,580	242,313				8,041,214				
1987*	955,854	275,487	7.87	82.08%	6.46	8,623,508				
1988*	1,213,643	292,932	7.39	79.57%	5.88	8,142,452	69,936	£89,239,630	£69,243,898	£32,569,796
1989*	1,547,729	317,858	7.87	82.08%	6.46	14,870,831	61,930	£73,812,000	£79,503,139	£34,286,908
1990*	2,289,334	400,750	7.86	83.21%	6.54	22,358,295	85,606	£78,072,843	£82,789,342	£38,135,396
1991*	5,266,720	569,480	12.41	83.56%	10.37	8,611,871	78,034	£114,973,911	£117,321,927	£57,207,863
1992∞	6,710,000	654,289	13.27	84.25%	11.18	8,602,270	72,637	£130,677,966	£134,802,260	£70,169,492
1993∞	5,823,851	770,410	12.74	82.81%	10.55	18,078,000	72,355	£183,933,333	£183,400,000	£84,466,667
1994∞	8,522,834	822,954	10.21	80.41%	8.21	19,679,000	89,717	£206,209,150	£208,627,451	£89,477,124
1995∞	9,310,760	932,323	9.48	81.75%	7.75	20,200,000	112,020	£226,455,696	£245,379,747	£122,911,392
1996∞±	12,506,000	1,253,354	8.01	81.30%	6.51	24,200,000		£311,666,667	£381,538,462	£202,884,615
1997∞	12,007,000	1,169,156	6.60	81.40%	7.00	23,000,000		£235,609,756	£323,963,415	£181,158,537
1998∞	20,391,000	1,547,610	8.65	81.80%	7.06	23,000,000		£275,481,928	£361,626,506	£203,313,253
1999∞	23,453,000	1,561,536	8.31	93.00%	6.90	22,600,000		£270,432,099	£359,320,988	£197,407,407
2000∞	24,401,000	1,737,264	8.01	82.40%	6.60	25,300,000		£319,210,526	£383,026,316	£213,881,579
2001∞	24,168,000	1,656,784	7.53	83.50%	6.29	26,100,000		£316,527,778	£385,000,000	£218,888,889
2002∞	25,842,000	1,621,919	7.35	84.80%	6.23	27,800,000		£337,600,000	£368,133,333	£215,400,000
2003∞	28,176,000	1,603,821	7.00	83.40%	5.84	25,700,000		£360,000,000	£346,584,417	£218,588,957

Year (1)	Gross bullion profit	Gross bullion profit £2002	Earnings before income tax (7)	Operating costs/ton	RDCE (8)	Interest payments on l-t debt	# Shares authorised	# Shares issued	Fully paid-up shares
1899	£3,807	£322,625	£3,738	£1.36	3%	£0	250,000	155,000	£125,000
1900	£32,964	£2,658,390		£0.00	0%	£0	250,000	155,000	£125,000
1901	£11,451	£946,365	£173,749	£1.55	29%	£0	250,000	155,000	£155,000
1902	£11,312	£934,875	£17,493	£1.55	4%	£0	250,000	155,000	£155,000
1903	£44,428	£370,230	£45,906	£1.75	12%	£0	1,250,000	775,000	£155,000
1904	£68,972	£5,795,965	£56,794	£1.55	16%		1,250,000	775,000	£155,000
1905	£41,045	£3,449,160	£25,581	£1.08	8%	£1,643	1,250,000	775,000	£155,000
1906	£59,178	£4,850,655	£40,454	£1.47	15%	£5,600	1,250,000	775,000	£155,000
1907	£124,979	£10,078,950	£56,424	£1.17	22%	£5,600	1,250,000	775,000	£155,000
1908	£96,718	£1,863,250	£40,956	£1.16	20%	£5,600	1,250,000	775,000	£155,000
1909	£87,355	£7,160,245	£36,074	£1.10	13%	£5,600	1,250,000	883,926	£168,584
1910	£187,275	£15,102,820	£103,562	£1.17	24%	£0	1,250,000	1,004,500	£200,900
1911	£237,621	£19,009,680	£133,505	£1.53	24%	£0	1,250,000	1,071,466	£214,293
1912	£258,667	£20,051,705	£190,707	£1.50	30%	£0	1,250,000	1,071,466	£214,293
1913	£232,973	£18,059,920	£151,613	£1.60	40%	£0	1,250,000	1,071,466	£214,293
1914	£204,894	£16,007,340	£123,567	£2.02	31%	£0	1,250,000	1,103,057	£220,611
1915	£218,379	£15,060,620	£137,292	£1.74	34%	£0	1,250,000	1,103,057	£220,611
1916	£234,834	£13,978,215	£149,483	£1.76	35%	£0	1,250,000	1,103,057	£220,611
1917	£235,535	£11,215,950	£152,869	£2.13	35%	£0	1,250,000	1,103,057	£220,611
1918	£219,469	£8,921,505	£136,416	£2.32	30%	£0	1,250,000	1,103,057	£220,611
1919	£200,730	£6,994,075	£131,493	£2.54	31%	£0	1,250,000	1,103,057	£220,611
1920	£169,887	£4,895,880	£101,821	£3.37	21%	£0	1,250,000	1,250,000	£250,000
1921	£128,680	£4,085,080	£60,720	£4.09	13%	£0	1,250,000	1,250,000	£250,000
1922±	£128,109	£4,709,890	£39,635	£3.30	9%	£0	1,250,000	1,250,000	£250,000
1923	£78,888	£3,130,475	£17,367	£2.77	4%	£0	1,250,000	1,250,000	£250,000
1924	£127,026	£5,142,750	£68,009	£2.79	13%	£0	1,250,000	1,250,000	£250,000
1925	£167,619	£6,786,195	£101,960	£2.45	19%	£0	1,250,000	1,250,000	£250,000
1926	£185,165	£7,527,030	£116,951	£2.06	20%	£0	1,250,000	1,250,000	£250,000
1927	£196,843	£8,159,460	£121,124	£2.10	20%	£0	1,250,000	1,250,000	£250,000
1928	£253,403	£10,602,635	£163,440	£1.87	26%	£0	1,250,000	1,250,000	£250,000
1929	£285,185	£12,099,120	£203,584	£2.01	29%	£0	1,250,000	1,250,000	£250,000
1930	£385,375	£16,398,935	£313,146	£1.85	40%	£0	1,875,000	1,875,000	£375,000
1931	£482,060	£20,868,400	£390,234	£1.67	46%	£0	2,500,000	2,500,000	£375,000
1932	£494,577	£21,981,200	£689,299	£1.57	66%	£0	2,500,000	2,500,000	£500,000
1933	£888,219	£40,009,865	£747,217	£1.30	49%	£0	5,000,000	2,500,000	£500,000
1934	£1,078,885	£49,040,230	£846,572	£1.27	57%	£0	5,000,000	5,000,000	£1,000,000
1935	£1,182,346	£53,258,830	£955,343	£1.23	44%	£0	5,000,000	5,000,000	£1,000,000
1936	£1,137,634	£50,787,230	£964,915	£1.45	42%	£0	5,000,000	5,000,000	£1,000,000
1937	£1,207,746	£52,058,020	£1,014,041	£1.55	44%	£0	5,000,000	5,000,000	£1,000,000
1938	£1,220,449	£51,495,740	£1,042,064	£1.61	44%	£0	5,000,000	5,000,000	£1,000,000
1939	£1,613,177	£66,113,810	£1,354,722	£1.63	40%	£0	6,250,000	6,242,787	£1,248,557
1940	£1,867,426	£69,184,000	£1,442,480	£1.76	41%	£0	6,250,000	6,242,787	£1,248,557
1941	£1,769,555	£59,182,440	£1,326,696	£1.97	38%	£0	6,250,000	6,242,787	£1,248,557
1942	£1,555,663	£48,312,515	£1,156,537	£2.02	35%	£0	6,250,000	6,242,786	£1,248,558
1943	£1,427,470	£42,358,160	£1,088,971	£2.08	41%	£0	6,250,000	6,242,789	£1,248,558
1944	£1,071,621	£30,186,510	£820,225	£2.82	31%	£0	6,250,000	6,242,789	£1,248,558
1945	£1,170,606	£32,337,180	£695,976	£2.93	27%	£0	6,250,000	8,242,789	£1,248,558
1946	£1,134,400	£30,331,550	£700,118	£3.01	25%	£0	6,250,000	6,242,789	£1,248,558
1947	£1,007,754	£24,639,460	£711,240	£3.35	26%	£0	6,250,000	6,242,787	£1,248,557
1948	£799,267	£18,123,970	£505,867	£3.23	18%	£0	6,250,000	6,242,787	£1,248,557
1949	£990,822	£21,824,270	£667,632	£3.02	23%	£0	6,250,000	6,242,787	£1,248,557
1950	£1,589,323	£34,550,000	£1,138,426	£3.51	37%	£0	6,250,000	6,242,787	£1,248,557
1951	£1,486,149	£29,902,395	£1,075,926	£3.59	34%	£0	6,250,000	6,242,787	£1,248,557
1952	£1,216,184	£22,647,374	£850,927	£4.26	27%	£0	6,250,000	6,242,787	£1,248,557
1953	£1,216,901	£21,926,145	£886,107	£4.10	27%	£0	6,250,000	6,242,787	£1,248,557
1954	£1,127,421	£19,989,735	£785,205	£4.29	24%	£0	6,250,000	6,242,787	£1,248,557
1955	£1,179,880	£20,134,470	£836,068	£4.14	25%	£0	6,250,000	6,242,787	£1,248,557
1956	£1,012,359	£16,249,745	£642,352	£6.00	20%	£0	9,375,000	9,384,161	£1,872,836
1957	£1,926,712	£29,825,265	£1,349,657	£4.55	35%	£0	9,375,000	9,384,182	£1,872,836
1958	£1,870,421	£27,916,730	£1,314,378	£4.59	32%	£0	12,500,000	12,485,576	£2,497,115
1959	£2,155,160	£31,740,205	£1,542,229	£4.45	35%	£0	12,500,000	12,485,576	£2,497,115
1960	£2,396,357	£34,881,470	£1,738,957	£4.78	37%	£0	15,000,000	14,982,696	£2,996,539
1961	£2,544,578	£35,889,675	£1,854,323	£5.00	37%	£0	15,000,000	14,982,696	£2,996,539
1962	£2,692,152	£36,627,920	£1,903,748	£5.27	36%	£0	15,000,000	14,982,696	£2,996,539
1963	£2,967,248	£39,828,830	£2,067,635	£5.57	39%	£0	15,000,000	14,982,696	£2,996,539
1964	£3,041,562	£39,500,805	£2,120,730	£5.89	39%	£0	15,000,000	14,982,696	£2,996,539
1965	£2,929,617	£36,034,770	£2,102,374	£5.76	38%	£0	15,000,000	14,982,696	£2,996,539
1966	£2,870,025	£33,804,770	£2,104,936	£5.66	39%	£0	15,000,000	14,982,696	£2,996,539
1967	£3,017,284	£34,522,700	£2,184,384	£5.41	39%	£0	15,000,000	14,982,696	£2,998,539
1968	£4,238,222	£46,676,450	£3,033,786	£5.59	60%	£0	15,000,000	14,982,696	£2,996,539
1969	£5,034,698	£52,554,260	£3,936,726	£5.99	20%	£0	20,000,000	18,728,370	£3,745,674
1970	£3,151,951	£30,631,205	£2,463,503	£6.75	12%	£0	20,000,000	18,728,370	£3,745,674
1971	£3,625,943	£32,230,605	£2,781,670	£7.02	14%	£0	20,000,000	18,728,370	£3,745,674
1972*	£5,979,112	£49,170,330	£4,547,829	£6.58	21%	£0	20,000,000	18,728,370	£3,745,674
1973*	£11,421,986	£97,524,795	£7,836,541	£6.66		£0	0	0	£0
1974*	£15,113,481	£100,958,455	£8,822,944	£8.97		£0	10,000,000	1,000	£0
1975*	£13,519,839	£71,082,225	£7,874,688	£10.67		£0	10,000,000	1,000	£0
1976*						£0	10,000,000	1,000	£0
1977*						£0	10,000,000	1,000	£0
1978*	£1,718,734	£6,189,175	£2,257,687	£12.42		£0	10,000,000	1,000	£0
1979*	£11,378,055	£35,780,050	£9,226,187	£22.91		£0	10,000,000	1,000	£0
1980*						£0	10,000,000	1,000	£0
1981*						£0	10,000,000	1,000	£0
1982*						£0	10,000,000	1,000	£0
1983*						£0	10,000,000	1,000	£0
1984*	£61,543,424	£122,988,455	£26,849,272	£3.38			10,000,000	1,000	£0
1985*							10,000,000	1,000	£0
1986*							10,000,000	1,000	£0
1987*							10,000,000	1,000	£0
1988*	£36,669,833	£59,967,020	£28,967,860	£26.84	22%	£3,812,394	10,000,000	1,000	£0
1989*	£39,525,093	£60,150,800	£31,337,528	£22.15	21%	£3,377,486	10,000,000	1,000	£0
1990*	£39,937,447	£58,480,620	£29,450,177	£16.66	19%	£4,698,377	10,000,000	1,000	£0
1991*	£57,766,048	£76,633,120	£37,424,160	£10.86	20%	£6,868,099	10,000,000	1,000	£0
1992∞	£60,508,475	£77,258,010	£43,163,842	£10.46	26%	£3,615,819	10,000,000	1,000	£0
1993∞	£99,466,667	£123,776,340	£60,333,333	£14.50	21%	£6,200,000	10,000,000	1,000	£0
1994∞	£116,732,026	£143,018,900	£73,484,052	£10.50	21%	£5,751,634	150,000,001	83,900,001	£83,900,001
1995∞	£103,544,304	£123,605,470	£67,215,190	£13.20	15%	£5,379,747	150,000,001	86,900,001	£86,900,001
1996∞±	£108,782,051	£125,498,440	£52,243,590	£16.22	10%	£14,294,872	150,000,001	108,059,481	£108,059,481
1997∞	£54,451,220	£61,037,125	£33,963,415	£15.09	7%	£14,146,341	200,000,001	109,019,501	£109,019,501
1998∞	£72,168,675	£78,675,105	£25,963,855	£9.97	6%	£13,975,904	200,000,001	108,801,583	£108,801,583
1999∞	£73,024,891	£77,951,205	-£113,333,333	£6.42	-16%	£18,458,790	200,000,001	112,896,348	£112,896,348
2000∞	£105,328,947	£111,071,335	-£86,052,632	£8.77	-11%	£33,750,000	200,000,001	112,896,348	£112,896,348
2001∞	£97,638,889	£100,689,790	£46,805,556	£9.06	12%	£20,416,667	200,000,001	112,336,942	£112,336,942
2002∞	£122,200,000	£122,200,000	£34,466,667	£8.34	9%	£15,066,667	200,000,001	127,453,321	£127,453,321
2003∞	£141,411,043	£141,411,043	£33,926,380	£8.35	9%	£8,711,656	200,000,001	131,043,956	£131,043,956

Year (1)	Dividend paid (9)	Dividend paid total £2002	Dividend paid % fully paid share capital	Shareholders' equity	Total debt	Long-term debt	Gross Gearing (10)	Year's new capital expenditure (11)	Tangible fixed assets (12)	Tangible fixed assets £2002	Avge # employees (13)
1899	£0	£0	0	£139,771	£3,477	£0	0%	£39,110	£24,359	£2,084,322	2,312
1900	£0	£0	0%			£0					
1901	£136,666	£11,294,710	88%	£591,077	£24,590	£0	0%	£67,815	£87,427	£7,225,371	4,126
1902	£77,500	£6,404,960	50%	£448,421	£21,551	£0	0%	£159,462	£91,068	£7,526,280	4,102
1903	£38,750	£3,229,165	25%	£397,747	£37,049	£0	0%	£114,403	£114,403	£9,533,583	
1904	£77,500	£6,512,605	50%	£324,567	£79,475	£21,000	6%	£119,138	£114,587	£9,629,159	4,900
1905	£0	£0	0%	£312,688	£81,829	£30,000	10%	£37,512	£119,949	£10,079,748	4,400
1906	£0	£0	0%	£228,026	£114,529	£80,000	35%	£46,419	£110,000	£9,016,393	
1907	£15,500	£1,250,000	10%	£197,644	£113,313	£80,000	40%	£61,412	£152,008	£12,258,710	
1908	£15,500	£1,260,160	10%	£155,029	£106,499	£80,000	52%	£68,592	£136,335	£11,084,146	
1909	£15,500	£1,270,490	9%	£272,117	£86,987	£47,800	18%	£70,560	£149,436	£12,248,852	
1910	£99,355	£8,012,500	49%	£440,280	£48,225	£0	0%	£150,107	£225,920	£18,219,355	
1911	£152,951	£12,238,080	71%	£555,665	£59,310	£0	0%	£81,342	£237,949	£19,035,920	
1912	£187,001	£14,496,200	87%	£633,307	£66,270	£0	0%	£50,856	£237,772	£18,431,938	
1913	£187,506	£14,535,350	88%	£378,105	£70,134	£0	0%	£38,149	£202,323	£15,683,953	
1914	£147,326	£11,509,845	67%	£400,204	£69,481	£0	0%	£46,743	£212,181	£16,576,640	
1915	£151,670	£10,460,000	69%	£406,189	£66,029	£0	0%	£14,634	£197,072	£13,591,172	
1916	£154,426	£9,192,140	70%	£427,041	£71,382	£0	0%	£21,041	£168,625	£11,227,679	
1917	£165,458	£7,876,950	75%	£438,268	£83,271	£0	0%	£16,382	£178,320	£8,491,429	
1918	£154,427	£6,277,520	70%	£448,677	£68,057	£0	0%	£2,085	£162,513	£6,606,220	
1919	£165,458	£576,090	75%	£430,399	£63,887	£0	0%	£7,535	£153,847	£5,360,522	
1920	£145,229	£4,185,275	58%	£474,514	£60,840	£0	0%	£21,791	£156,449	£4,508,617	
1921	£50,000	£1,587,300	20%	£478,515	£73,595	£0	0%	£47,252	£178,013	£5,651,206	
1922±	£62,500	£2,297,795	25%	£452,544	£41,901	£0	0%	£66,261	£222,522	£8,180,955	
1923	£0	£0	0%	£457,397	£39,635	£0	0%	£27,802	£222,573	£8,832,261	
1924	£62,500	£2,530,365	25%	£507,006	£45,791	£0	0%	£47,469	£235,709	£9,542,874	
1925	£93,750	£3,795,545	38%	£542,744	£44,415	£0	0%	£30,139	£234,754	£9,504,210	
1926	£112,500	£4,573,170	45%	£579,300	£42,519	£0	0%	£44,171	£246,103	£10,004,187	
1927	£125,000	£5,186,720	50%	£595,737	£56,338	£0	0%	£26,100	£235,050	£9,753,112	
1928	£137,500	£5,753,140	55%	£634,177	£59,026	£0	0%	£47,494	£310,993	£13,012,259	
1929	£162,500	£6,856,540	65%	£700,261	£60,405	£0	0%	£36,569	£316,483	£13,352,869	
1930	£250,000	£10,638,300	67%	£788,907	£116,480	£0	0%	£47,244	£332,062	£14,130,297	2,907
1931	£337,500	£14,610,390	90%	£851,142	£152,354	£0	0%	£39,777	£338,633	£14,659,437	2,885
1932	£625,000	£27,777,775	125%	£1,041,483	£202,560	£0	0%	£44,045	£344,004	£15,289,067	
1933	£650,000	£29,279,280	130%	£1,533,701	£109,011	£0	0%	£85,716	£395,320	£17,807,207	3,405
1934	£750,000	£34,090,910	75%	£1,491,377	£133,882	£0	0%	£97,022	£452,812	£20,582,363	3,741
1935	£850,000	£38,288,290	85%	£2,181,690	£97,398	£0	0%	£86,545	£524,670	£23,833,783	
1936	£950,000	£42,410,715	95%	£2,289,151	£90,518	£0	0%	£154,691	£629,376	£28,052,500	
1937	£950,000	£40,948,275	95%	£2,317,721	£103,240	£0	0%	£108,901	£657,242	£28,329,398	4,964
1938	£950,000	£40,084,390	95%	£2,377,906	£285,376	£0	0%	£248,548	£844,661	£35,639,704	5,278
1939	£1,186,129	£48,611,845	95%	£3,399,584	£254,494	£0	0%	£281,255	£1,047,842	£42,944,344	5,957
1940	£998,846	£36,994,295	80%	£3,528,013	£286,642	£0	0%	£261,844	£1,213,459	£44,942,925	
1941	£998,846	£33,406,220	80%	£3,498,610	£327,219	£0	0%	£148,272	£1,247,164	£41,711,170	
1942	£998,847	£31,020,060	80%	£3,297,883	£256,409	£0	0%		£1,288,667	£40,020,714	
1943	£499,423	£14,819,675	40%	£2,663,519	£134,480	£0	0%		£1,208,740	£35,867,655	
1944	£498,175	£14,033,100	40%	£2,618,514	£152,424	£0	0%		£1,129,828	£31,826,140	
1945	£429,192	£11,856,130	34%	£2,551,231	£202,266	£0	0%		£1,070,655	£29,576,104	6,873
1946	£412,023	£11,016,655	33%	£2,769,100	£147,643	£0	0%		£980,861	£26,226,229	6,598
1947	£291,851	£7,135,720	23%	£2,748,137	£120,174	£0	0%		£1,063,326	£25,998,190	5,885
1948	£188,844	£4,282,175	15%	£2,737,765	£629,607	£0	0%		£1,160,027	£26,304,467	5,817
1949	£274,683	£6,050,285	22%	£2,875,557	£766,276	£0	0%	£369,948	£1,420,105	£31,279,845	
1950	£429,192	£9,330,260	34%	£3,098,790	£1,205,572	£0	0%	£338,822	£1,623,703	£35,297,891	5,948
1951	£327,746	£6,594,485	26%	£3,206,795	£1,307,759	£0	0%	£288,040	£1,745,636	£35,123,460	6,552
1952	£327,746	£6,103,275	26%	£3,159,779	£1,405,609	£0	0%	£335,815	£1,923,548	£35,820,260	6,567
1953	£274,682	£4,949,225	22%	£3,258,323	£1,220,194	£0	0%	£395,598	£2,138,214	£38,526,378	6,736
1954	£274,682	£4,870,250	22%	£3,277,992	£1,229,157	£0	0%	£344,873	£2,289,725	£40,597,960	5,517
1955	£143,584	£2,450,240	11%	£3,355,790	£990,696	£0	0%		£2,419,611	£41,290,290	
1956	£251,272	£4,033,260	13%	£3,252,558	£1,087,066	£0	0%	£77,763	£2,343,153	£37,610,603	5,028
1957	£403,830	£6,251,240	22%	£3,905,955	£1,136,905	£0	0%	£258,690	£2,408,554	£37,284,117	
1958	£673,050	£10,045,520	27%	£4,151,372	£1,453,659	£0	0%	£357,880	£2,546,854	£38,012,746	4,426
1959	£784,742	£11,262,770	31%	£4,406,019	£1,446,195	£0	0%		£2,893,209	£42,609,852	
1960	£828,470	£12,059,245	28%	£4,733,971	£1,597,667	£0	0%	£363,308	£3,017,162	£43,917,933	4,395
1961	£841,216	£11,864,825	26%	£4,991,492	£1,481,188	£0	0%		£3,241,463	£45,718,801	
1962	£917,690	£12,485,580	31%	£5,260,738	£1,553,962	£0	0%	£323,913	£3,289,072	£44,749,278	4,625
1963	£688,268	£9,238,495	23%	£5,347,882	£1,231,854	£0	0%	£283,765	£3,287,545	£44,128,120	
1964	£686,268	£8,938,545	23%	£5,446,793	£1,472,146	£0	0%	£244,626	£3,229,637	£41,943,337	4,913
1965	£660,175	£8,120,235	22%	£5,519,069	£1,430,704	£0	0%	£368,583	£3,298,723	£40,574,698	
1966	£862,448	£10,158,400	29%	£5,414,282	£1,809,044	£0	0%	£258,258	£3,251,169	£38,294,099	4,986
1967	£695,780	£7,960,870	23%	£5,499,717	£81,686	£0	0%	£62,992	£3,242,121	£37,095,205	
1968	£749,712	£8,258,740	25%	£5,026,173	£3,790,827	£0	0%	£327,195	£3,238,783	£35,669,416	4,910
1969	£1,638,732	£17,105,760	44%	£19,755,021	£4,964,628	£0	0%	£768,041	£3,625,156	£37,872,192	
1970	£1,633,620	£17,821,380	49%	£20,509,749	£4,531,091	£0	0%	£1,023,918	£4,263,913	£41,437,444	6,426
1971	£2,131,289	£18,944,790	57%	£20,184,100	£8,457,090	£0	0%	£1,069,867	£4,978,667	£44,254,817	
1972*	£2,801,591	£23,039,400	75%	£21,682,652	£8,060,318	£0	0%	£677,434	£5,168,939	£42,507,722	
1973*	£3,134,796	£24,021,425		£3,650,192	£11,845,694	£0	0%	£698,488	£3,037,743	£23,277,724	7,565
1974*	£3,149,606	£21,039,450		£4,458,885	£13,913,587	£0	0%	£897,965	£3,262,107	£21,790,961	8,048
1975*	£2,515,723	£13,226,725		£5,460,798	£13,284,218	£0	0%	£1,944,849	£4,136,664	£21,749,022	8,258
1976*	£0	£0									
1977*	£0	£0									
1978*	£1,250,000	£4,501,260		£3,967,980	£6,170,327	£0	0%		£2,398,664	£8,637,608	7,824
1979*	£4,166,667	£13,102,725		£4,360,833	£11,322,947	£0	0%	£1,266,667	£2,927,376	£9,205,584	8,973
1980*	£4,166,667	£10,976,465									
1981*											
1982*	£0	£0									
1983*	£8,968,610	£18,723,610		£4,823,897	£11,278,151	£0	0%				
1984*	£2,533,249	£5,062,450		£17,118,092	£26,377,032	£0	0%	£5,984,779	£5,323,834	£10,639,156	
1985*	£1,504,945	£2,846,500									
1986*	£1,912,046	£3,499,350									
1987*	£9,951,041	£17,303,150									
1988*	£6,613,757	£10,815,630		£112,011,127	£57,247,894	£37,343,881	33%		£116,898,310	£194,437,138	
1989*	£5,514,868	£8,392,735		£129,658,961	£62,290,923	£33,909,192	26%	£20,071,713	£137,328,968	£208,992,494	
1990*	£4,737,540	£6,699,960		£133,031,710	£65,539,394	£42,595,356	32%	£43,879,008	£154,725,750	£218,817,352	
1991*	£6,067,225	£8,048,850		£170,960,745	£86,438,236	£53,632,751	31%		£196,325,446	£263,100,883	
1992∞	£11,073,448	£14,138,720		£130,451,977	£86,045,198	£46,384,181	36%	£28,972,192	£237,152,981	£302,800,026	9,558
1993∞	£9,733,333	£12,112,160		£203,066,667	£159,466,667	£109,666,667	54%	£125,533,333	£291,333,333	£362,535,257	9,756
1994∞	£13,725,490	£16,816,330	16%	£293,594,771	£169,281,046	£90,915,033	31%	£81,960,784	£339,934,641	£416,484,490	9,946
1995∞	£20,632,911	£24,630,430	24%	£370,696,203	£187,025,316	£127,341,772	34%	£113,397,436	£403,860,759	£482,106,671	10,499
1996∞±	£25,000,000	£28,841,715	23%	£358,397,436	£430,000,000	£314,358,974	88%	£157,692,308	£615,641,026	£710,245,761	12,199
1997∞	£13,292,683	£14,900,440	12%	£317,743,902	£511,097,561	£374,634,146	118%	£148,192,771	£670,121,951	£751,173,580	12,010
1998∞	£6,566,265	£7,158,250	6%	£333,253,012	£563,915,663	£380,843,373	114%	£95,903,614	£662,289,157	£721,998,426	12,850
1999∞	£0	£0	0%	£242,160,494	£583,395,062	£357,160,494	147%	£142,037,037	£622,222,222	£684,199,639	11,200
2000∞	£0	£0	0%	£183,421,053	£432,500,000	£300,460,526	164%	£87,236,842	£424,868,421	£448,031,657	10,429
2001∞	£0	£0	0%	£242,430,556	£456,319,444	£300,555,556	124%	£34,444,444	£310,416,667	£320,118,187	10,189
2002∞	£0	£0	0%	£298,333,333	£367,266,667	£239,133,333	80%	£43,000,000	£470,800,000	£470,800,000	9,941
2003∞	£0	£0	0%	£312,065,890	£297,423,313	£164,539,877	53%	£51,779,141	£437,914,110	£437,914,110	9,504

Year (1)	Royalty and minerals duty (14)	Export duty or Gold duty	Corporation tax and other African-based direct taxes (15)	Ghana govt's share dividends	Total gvmt direct financial benefit (16)	London Stock Exchange annual peak closing price	Annual peak share price in £2002
1899	£500	£0	£0	£0	£500		
1900	£500	£0	£0	£0	£500		
1901	£500	£0	£0	£0	£500		
1902	£500	£0	£0	£0	£500	£1.00	£82.64
1903	£3,447	£0	£0	£0	£3,447	£0.88	£72.92
1904	£8,157	£0	£0	£0	£8,157	£0.17	£14.01
1905	£8,798	£0	£0	£0	£8,798	£0.07	£5.60
1906	£6,567	£0	£0	£0	£6,567	£0.89	£72.75
1907	£9,426	£0	£0	£0	£9,426	£0.93	£74.80
1908	£8,690	£0	£0	£0	£8,690	£0.65	£52.85
1909	£8,718	£0	£0	£0	£8,718	£2.81	£230.53
1910	£15,316	£0	£0	£0	£15,316	£2.39	£192.54
1911	£21,406	£0	£0	£0	£21,406	£0.10	£8.33
1912	£23,718	£0	£0	£0	£23,718		
1913	£23,533	£0	£0	£0	£23,533		
1914	£22,184	£0	£0	£0	£22,164	£1.00	£77.80
1915	£22,363	£0	£0	£0	£22,363	£0.95	£65.52
1916	£23,798	£0	£0	£0	£23,798	£1.00	£59.28
1917	£23,816	£0	£0	£0	£23,816	£1.13	£53.57
1918	£23,205	£0	£0	£0	£23,205		
1919	£20,903	£0	£0	£0	£20,903		
1920	£20,511	£0	£0	£0	£20,511		
1921	£19,156	£0	£0	£0	£19,158	£0.81	£25.79
1922±	£24,321	£0	£0	£0	£24,321	£0.74	£27.27
1923	£16,195	£0	£0	£0	£18,195	£0.60	£23.97
1924	£17,987	£0	£0	£0	£17,987	£0.84	£25.81
1925	£19,652	£0	£0	£0	£19,652	£0.77	£31.04
1926	£19,604	£0	£0	£0	£19,604	£0.78	£31.50
1927	£20,349	£0	£0	£0	£20,349	£1.79	£74.17
1928	£22,275	£0	£0	£0	£22,275	£2.00	£83.86
1929	£25,112	£0	£0	£0	£25,112	£1.36	£57.49
1930	£30,731	£0	£0	£0	£30,731	£1.89	£80.50
1931	£36,009	£0	£0	£0	£36,009	£2.42	£104.80
1932	£37,183	£0	£0	£0	£37,183	£2.23	£98.89
1933	£54,920	£26,111	£0	£0	£81,031	£2.69	£121.06
1934	£64,967	£69,717	£0	£0	£134,684	£2.40	£109.09
1935	£70,941	£85,335	£0	£0	£156,278	£3.08	£138.51
1936	£72,342	£85,343	£0	£0	£157,685	£4.19	£186.94
1937	£77,208	£92,095	£0	£0	£169,303	£4.09	£176.36
1938	£79,065	£94,181	£0	£0	£173,246	£4.23	£178.62
1939	£99,707	£131,085	£0	£0	£230,792	£4.25	£174.18
1940	£114,705	£241,006		£0	£355,711	£3.28	£121.45
1941	£110,913	£247,634	£0	£0	£358,547	£2.54	£84.87
1942	£98,988	£220,834	£0	£0	£319,822	£2.77	£85.92
1943	£91,944	£205,114	£0	£0	£297,058	£3.08	£91.25
1944	£76,390	£170,490	£525,624	£0	£772,504	£3.28	£92.37
1945	£84,714	£201,335	£416,662	£0	£702,711	£3.55	£98.07
1946	£81,452	£185,975	£315,388	£0	£582,813	£3.44	£92.02
1947	£83,057	£168,121	£392,529	£0	£643,707	£3.03	£73.96
1948	£66,208	£94,123	£299,455	£0	£459,786	£2.66	£60.37
1949	£82,541	£141,621	£253,571	£0	£477,733	£2.56	£56.44
1950	£115,262	£163,950	£449,825	£0	£729,037	£2.08	£45.11
1951	£118,417	£188,871	£334,624	£0	£841,912	£1.73	£34.71
1952	£118,223	£85,742	£488,204	£0	£692,169	£1.32	£24.52
1953	£137,282	£0	£474,611	£0	£611,893	£1.41	£25.45
1954	£120,157	£0	£324,469	£0	£444,626	£1.51	£26.82
1955	£124,161	£0	£308,731	£0	£432,892	£1.28	£21.76
1956	£115,191	£0	£401,417	£0	£516,608	£1.08	£17.32
1957	£303,630	£0	£576,126	£0	£879,756	£0.82	£12.84
1958	£274,020	£0	£545,164	£0	£819,184	£0.89	£13.25
1959	£336,354	£0	£581,921	£0	£920,275	£1.26	£18.59
1960	£347,591	£0	£690,262	£0	£1,037,853	£1.26	£18.38
1961	£370,902	£0	£728,000	£0	£1,098,902	£0.68	£9.52
1962	£408,133	£0	£920,100	£0	£1,328,233	£0.58	£7.88
1963	£499,544	£0	£1,408,789	£0	£1,908,333	£0.79	£10.57
1964	£509,727	£0	£1,352,296	£0	£1,862,023	£0.68	£8.77
1965	£454,970	£0	£1,281,393	£0	£1,736,363	£0.47	£5.74
1966	£451,855	£0	£1,270,243	£0	£1,722,098	£0.61	£7.21
1967	£470,165	£0	£1,466,116	£0	£1,936,281	£0.66	£7.58
1968	£881,106	£0	£1,900,416	£0	£2,781,522		
1969	£539,648	£0	£1,936,043	£327,746	£2,803,437	£0.00	
1970		£0	£940,000	£366,784	£1,306,784	£0.00	
1971	£121,270	£0	£1,195,000	£426,258	£1,742,528	£0.00	
1972*	£560,318	£0	£2,192,503	£560,318	£3,313,139	£0.00	
1973*	£3,614,287	£0	£3,448,278	£1,724,138	£8,786,700	£0.00	
1974*	£5,961,919	£0	£4,874,214	£1,732,283	£12,568,417	£0.00	
1975*	£4,946,099	£0	£4,339,623	£1,385,827	£10,671,549	£0.00	
1976*						£0.00	
1977*						£0.00	
1978*	£1,237,321	£0	£1,166,667	£687,500	£3,091,487	£0.00	
1979*	£4,636,067	£0	£4,666,667	£2,291,667	£11,594,400	£0.00	
1980*						£0.00	
1981*						£0.00	
1982*						£0.00	
1983*						£0.00	
1984*	£6,789,094	£7,847,667	£11,821,828	£1,393,287	£27,831,877	£0.00	
1985*						£0.00	
1986*						£0.00	
1987*						£0.00	
1988*	£2,077,188	£0	£4,814,558	£3,637,566	£10,529,312	£0.00	
1989*	£2,214,361	£0	£8,362,058	£3,033,177	£13,609,596	£0.00	
1990*	£2,342,185	£0	£0	£2,605,647	£4,947,832	£0.00	
1991*	£3,449,217	£0	£1,770,113	£3,336,974	£8,556,304	£0.00	
1992∞	£4,237,288	£0	£8,926,554	£10,780,000	£23,943,842	£0.00	
1993∞	£5,533,333	£0	£200,000	£5,353,333	£11,086,667	£0.00	
1994∞	£6,209,150	£0	£326,797	£4,097,928	£10,633,875	£14.90	£18.26
1995∞	£7,278,481	£0	£253,165	£5,947,564	£13,479,209	£16.11	£19.23
1996∞±	£8,717,949	£0	£84,103	£4,848,250	£13,630,302	£17.63	£20.34
1997∞	£2,865,854	£0	£1,463,415	£2,630,189	£6,959,457	£9.36	£10.49
1998∞	£5,542,169	£0	£0	£1,312,186	£6,854,355	£6.48	£7.08
1999∞	£7,530,864	£0	£1,666,667	£0	£9,197,531	£6.45	£6.89
2000∞	£9,013,158	£0	£5,789,474	£0	£14,802,632	£2.47	£2.60
2001∞	£9,027,778	£0	£6,666,667	£0	£15,694,444	£2.95	£3.04
2002∞	£9,733,333	£0	-£2,466,667	£0	£7,266,667	£4.33	£4.33
2003∞	£10,797,546	£0	£3,006,135	£0	£13,803,681	£8.28	£8.28

NOTES:

N.B. Blank cells = data unobtainable.

(1) The year shown corresponds to the financial year end; this was June 30 from 1898 to 1921; 30 September from 1922 to 1995; then 31 December from 1996. For the changeover years (1922 and 1996) 15 months' results are shown.

(2) All tons are short tons of 2000 lbs; 1898-1910 long tons converted to short tons. Includes tailings retreated and heap leach tonnnage.

(3a), (3c) Numbers in red, 1991-2003, expressed in grammes/ tonne; 1991-2000 figures refer only to the Pampora Treatment Plant; 2001-2003 refers only to the Sulphide Treatment Plant after the closure of the PTP.

(3b) 1991-2000 figures refer only to the Pampora Treatment Plant; 2001-2003 refers only to the Sulphide Treatment Plant after the closure of the PTP.

(4) Numbers in red, 1991-2003, expressed in millions of ounces.

(5) All money amounts are shown in nominal pound sterling unless the column heading shows '£2002' in which case the amounts have all been converted to 2002 sterling values.

(6) Direct mine cash operating costs (salaries, materials consumed, other direct production costs); excludes head office costs.

(7) Earnings before deduction of income tax but after the deduction of royalty, minerals and export duties.

(8) Earnings before income tax and interest payments divided by the sum of shareholders funds and long-term debt.

(9) Dividend attributable to each financial year, and not the amounts paid during a calendar year.

(10) Long-term debt divided by shareholders funds.

(11) Annual additions to mines and shaft development, new plant and machinery, works and buildings.

(12) Net book value of plant and machinery, buildings, main shafts and mine development.

(13) The number shown may be a daily or monthly average, or the total on a specific date. It includes surface and underground workers, Africans and expatriates. The records mostly provide African employee numbers; where the exact number of expatriates was unavailable an estimated 100 has been added to the African total.

(14) Figures in red may include foreign royalties that were not separated in the records from Ghanaian royalties.

(15) Figures in red include foreign direct taxes that were not separated in the records from Ghanaian tax. 'Other direct taxes' inlcude compulsory savings, additional profits tax.

(16) The sum of columns AG-AJ.

± 15 months data shown, change in financial year end.

* Company accounts from 1972 to 1991 were presented in cedis. The table below shows the (official) sterling exchange rates as stated in the accounts available, or they have been calculated from the World Bank statistical database: http://unstats.un.org/unsd/snaama/SelectionCountry.asp.

Year	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cedis: £1	3.19	3.18	3.18	3.18	3.18	6.00	6.00	6.00	6.00	6.00	13.38	47.37	69.77	130.75	251.23	378.00	453.32	633.24	659.28

∞Company accounts from 1992 to 2003 were presented in US dollars, the table below shows the average annual exchange rate used to convert the dollar amounts into sterling.

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
US$: £1	1.77	1.50	1.53	1.58	1.56	1.64	1.66	1.62	1.52	1.44	1.50	1.83

COLOUR KEY:
Overvalued cedi
Figure includes non-Ghanaian amounts not separated in account
Conversion to 2002 pound sterling values using UK GDP deflator series, via www.eh.net.

Appendix 3: AGC financial data, 1898-2003

Appendix 4: AGC Chairmen

Year	Name
1897-1904	Frederick Gordon
1904-20	Viscount Duncannon
1920-30	Jeremiah Colman
1930-45	J.H. Batty
1945-71	Edward Spears
1971-73	Alan Ball
1973-77	Amon Nikoi
1977-9	A.E.K. Ashiabor
1979-81	J.N.A. Hyde
1981-84	O.A. Jackson
1984 –2000	Richard Peprah
2000-04	Michael Beckett

Appendix 5: AGC Managing Directors

Year	Name
1897-1903	E. A. Cade
1903-05	J. Daw
1905-13	No director held the M.D. title. The London Manager, CW Mann, assumed many M.D. roles.
1913-1929	No M.D. position; C.W. Mann, appointed a director in 1913, continued to act in this capacity.
1930-45	No M.D. position but a director, J. H. Batty, assumed many M.D. roles
1945-68	Edward Spears
1968-73	R.W. Rowland
1973-78	R.D. Power
1978-83	G. Cappendell
1983-86	M.I. Bottomley
1986-2004	S.E. Jonah

Appendix 6: AGC Chief Consulting Engineers, 1903-1978

Year	Name
1903-1905	John Daw
1905 –1925	W.R. Feldtmann
1925-36	J.S. Watkins
1936-47	G.W.M.E. Turner
1947-56	R.M. Park
1956-72	R.D. Power
1973-78	George Cappendell

Appendix 7: General Mine Managers Obuasi

Year	Name
1898-1903	J. Daw
1903-04	A. B. Litchfield
1904-10	A.B. Litchfield and T. Bowyer-Bower
1910-11	J.A. Mactear
1911-20	J.S. Watkins
1920-24	W. Ulrich
1925-1936	G.W.E. Turner
1936-37	G.M.O. Barclay
1937-38	E.W. Spencer
1938-45	G.W. Thomson
1945-48	O.G.H. Gale
1948-51	A.I. George
1951-57	J.I.L. Edwards
1957-61	P.H. Brown
1961-66	R. Wilson
1966-67	D.A.R. Hanvey
1967-76	I.D.B. Corner
1976-77	M.I. Bottomley
1977-80	W.M. Box
1980-82	C.J.G. Russell
1982-85	D.J. Clarke
1985-92	W.J. Hussey
1992-94	C. Barker
1994-	Role ceases to exist

Appendix 8: Internal Questionnaire Responses[7]

- Would you describe the following motivating factors to expand abroad as insignificant, quite significant or very significant? (1= Not significant, 2= quite significant, 3= very significant)

	Jonah	**Keatley**	**Clark**	**Rounded Average**
Inability to achieve 1m ounces from Obuasi	1	1	1	**1**
Shareholder expectation	3	2	3	**3**
Declining share price	2	1	1	**1**
To further exploit the firm's managerial skills	3	3	2	**3**
To further exploit the firm's technical skills	3	3	1	**2**
To further exploit the firm's financial skills	3	3	1	**2**
To exploit the firm's entrepreneurial culture	3	2	3	**3**
To diversify in order to reduce risks	3	2	3	**3**
To take advantage of the firm's reputation in raising international capital	3	2	2	**2**
Ability to issue new shares to pay a significant part of acquisition costs	3	2	3	**3**
To avoid or reduce pressure of competition from other firms	2	2	1	**2**
To defend or expand existing market share	1	3	3	**2**
Any other motivating factor(s)?	Opportunities presented themselves	To take advantage of new opportunities in post-Cold War Africa	African-ness; managing subsidiaries with their own national focus	

[7] The questions have been adapted from E.K.Y. Chen, 'Multinationals from Hong Kong' in S. Lall (ed.), *The New Multinationals: The Spread of Third World Enterprises*, 1983, pp. 88-136.

▪ Would you describe the following criteria in selecting international acquisitions as insignificant, quite significant or very significant? (1= Not significant, 2= quite significant, 3= very significant)

	Jonah	Keatley	Clark	Rounded Average
Geological and technical feasibility results	3	3	3	**3**
Availability of joint venture partners	1	2	1	**1**
Capital availability	2	1	3	**2**
Availability of advanced technology	1	1	1	**1**
Confidence in property rights and rule of law	3	3	3	**3**
Ease of acquiring mining leases	3	3	2	**3**
Availability of technical and skilled labour	3	2	1	**2**
Availability of cheap labour	1	1	1	**1**
Good infrastructure	2	2	2	**2**
Political stability	2	2	2	**2**
Absence of foreign exchange controls and profit repatriation limits	3	3	3	**3**
Tax breaks	2	2	2	**2**
Cultural affinity	1	2	1	**1**
Business and family connections	1	1	1	**1**
Any other selection criteria?		Geological areas that were strategicallly attractive, eg NW Tanzania, DRC, Guinea/Mali		

Appendix 9: Interview questions discussed

- Please recount how AGC became an MNE and your involvement in this transformation.
- When was the prospect of operating internationally first mooted?
- Had Obuasi been able to produce and sustain 1m ounces per year would an internationalisation strategy have followed anyway?
- What limited growth within the Obuasi concession?
- What limited growth within Ghana but outside Obuasi?
- Was growth in non-mining activities (such as the pineapple farm) ever mooted? And if so, why was this alternative growth path not pursued?
- What was the remit of the New Business Division established in 1994?
- What informal avenues of gathering information on potential acquisitions were employed?
- Why was internationalisation limited to Africa?

Appendix 10: The 3 June 1897 Concession Agreement

Source: ARG 1/5/4/9

AN AGREEMENT made this Third day of June 1897 BETWEEN SIR WILLIAM EDWARD MAXWELL, K.C.M.G., Governor and Commander-in-Chief of the Gold Coast Colony (hereinafter called "the Governor" which expression shall in this Agreement mean and include the Officer for the time being administering the Government of the said Colony) of the first part JOSEPH EDWARD BINEY, JOSEPH ETTRUSON ELLIS AND JOSEPH PETER BROWN all of Cape Coast in the said Colony Merchants of the second part and THE COTE D'OR COMPANY LIMITED having its Registered Offices at No. 38 Finsbury Pavement in the City of London of the third part and ASHANTI GOLDFIELDS CORPORATION LIMITED having its Registered Offices at No. 2 Aldermanbury Postern in the same City (hereinafter called "the Company" which expression shall in this Agreement where the context so admits include its successors and assigns) of the fourth part.

WHEREAS by an Indenture dated the 1st day of August 1895 and made between Yaw Boyakey then King of Bekwai of the one part and the said Joseph Edward Biney, Joseph Ettruson Ellis and Joseph Peter Brown of the other part an Indenture therein mentioned made by Quacoe Osai then late King of Bekwai and dated 3rd day of March 1890 was expressed to be confirmed and modified and the land hereinafter described together with the mining and other liberties specified in the Indenture now in recital were expressed to be leased to the said Joseph Edward Biney, Joseph Ettruson Ellis and Joseph Peter Brown for a term of 99 years from the 3rd day of March 1890 at the yearly rental of £100 until the said premises should be sold or disposed of and after the lapse of one year from the time when the said premises should have been sold or disposed of at the yearly rent of £133.

AND WHEREAS by an Agreement dated the 15th day of August 1895 and made between Kwakū Nkansa then King of Adansi of the one part and the said Joseph Edward Biney, Joseph Ettruson Ellis and Joseph Peter Brown of the other part the said King of Adansi purported to confirm the hereinbefore recited Indenture subject to the payment of the yearly rent of £66 to the King of Adansi for the time being and the said Indenture of the 3rd day of March 1890 and the 1st day of August 1895 and the said Agreement of the 15th day of August 1895 are hereinafter collectively referred to as "the Concessions".

AND WHEREAS by an Agreement made the 27th day of August 1895 between the said Joseph Edward Biney, Joseph Ettruson Ellis and Joseph Peter Brown of the one part and the Cote d'Or Company Limited of the other part the premises comprised in the said Indenture of the 1st day of August 1895 and the said Agreement of the 15th day of August 1895 were agreed to be sold to the Cote d'Or Company Limited for the consideration therein mentioned and it was thereby agreed that such sale should be completed on the 1st day of May 1896.

AND WHEREAS the Territories of Bekwai and Adansi are now under the protection of Her Majesty the Queen of Great Britain and Ireland Empress of India and are under the control of the Governor on behalf of Her Majesty.

AND WHEREAS the Governor does not admit the validity of the Concessions or any of them but has in exercise of his authority agreed at the request of the said parties hereto of the second and third parts to authorize the Company to occupy the said land as being part of the unoccupied lands of the said Protectorate.

AND WHEREAS for the purpose of settling all disputes or questions as to the validity of the Concessions or any of them it was agreed by the said parties hereto that the Concessions should be surrendered and delivered to the Governor and concelled and that in lieu thereof the Company should accept such an Authority to occupy the said land as in hereinafter contained.

AND WHEREAS in pursuance of such Agreement the Concessions have been surrendered and delivered to the Governor and have been cancelled.

NOW IT IS HEREBY AGREED AND DECLARED That the Company is hereby authorised to occupy during the term of 90 years from the 1st day of January 1897 for the purposes and subject to the conditions hereinafter mentioned All that rectangular piece or parcel of land (hereinafter called "the said land") situated in that part of the Territory of Bekwai known as Adansi bounded on the North by a line running East to West ten miles distant from the Obuaasi Mine and on the South by a Line ten miles distant from the said Obuaasi Mine and parallel to the Northern boundary on the East by a line drawn at right angles to the boundaries of the North and South and two miles distant from the said Obuaasi Mine and on the West by a line parallel to the Eastern boundary and three miles distant from the said Obuaasi Mine which said land shall for the purposes of this Agreement be deemed to contain 64,000 acres and with the position and boundaries thereof is more particularly delineated and shewn on the plan hereto annexed and therein surrounded with a red line.

AND IT IS HEREBY FURTHER AGREED that the said land shall be held upon the following conditions which shall be binding on the Company.

1. The Company shall pay to the Colonial Treasurer of the Gold Coast Colony at Accra:

(a) A commuted royalty of £500 during each of the first five years of the said term, the first payment to be made on the 1st day of January 1898;

(b) A royalty of 5 per cent commencing as from the 1st day of January 1903 and payable on each subsequent 1st day of January and 1st day of July on the gross value (to be ascertained in such manner as the Governor may require) of all gold and other metals precious stones and mineral oil gotten from or out of the said land or any part thereof during the then last preceding half year but such royalty may from time to time be commuted for any one or more years for such an annual sum as may be agreed upon between the Governor and the Company and so that every commuted royalty payable under this and the last preceding Section shall be payable in advance by equal half-yearly payments on every 1st day of January and 1st day of July Provided always that if at the end of any half-year such royalty (no commutation as aforesaid having been made) shall amount to a sum less than two hundred and fifty pounds then a sum of two hundred and fifty pounds shall be paid in lieu of such royalty: and

(c) A sum of £133 per annum to be received by the said Colonial Treasurer on behalf of the person recognised by the Governor to be the Head-Chief or King of Bekwai for the time being.

(d) A sum of £66 per annum to be received by the said Colonial Treasurer on behalf of the person recognised by the Governor to be the Head-Chief or King of Adansi for the time being and so that each or the said sums of £133 and £66 shall be payable in advance on the 1st day of January in each year the first of each such payments to be made on or before the execution of this Agreement.

2. The Company shall use or occupy the said land for the purpose only of mining operations trading cultivation of rubber or agricultural produce or for any other purposes which may from time to time have previously been expressly sanctioned in writing by the Governor and the Company may for the purpose of any such operations make roads and bridges lay out townships in connection with any mining or agricultural operations and erect buildings and machinery and cut and fell timber (but without destroying rubber trees or other valuable timber) and use any waters but this Agreement is to be subject in every respect to the existing rights of any native or natives in respect of the said land or any part thereof and accordingly every operation hereby authorised must be conducted so as in no way to affect or interfere with any such rights.

3. The Governor and all persons authorised by him may at any time :

(e) Take and retain possession of any part of the said land which in the opinion of the Governor may be required for the purposes of any works objects or things which in the like opinion may be of public utility or convenience without making any compensation therefor except that such compensation as the Governor may deem reasonable shall be made for any buildings works or improvements erected or made by the Company on any land taken under this Section. Any land so taken shall thenceforth cease to be subject to this Agreement; and

(f) Use for any purposes and in any manner any roads made by the Company hereunder.

4. The Company at all times during which a royalty shall be payable hereunder shall provide and maintain all such machinery and do and permit to be done all such acts and things as the Governor may from time to time require for weighing and ascertaining the amount of the gold and other metals precious stones and mineral oil gotten from the said land.

5. The Company at all times during the said term shall keep such books make such entries and do and permit to be done all such acts and things as the Governor may from time to time require for the purpose of shewing the amount and value of the gold and other metals precious stones and mineral oil gotten from the said land.

6. The Company within 60 days after each 1st day of January and 1st day of July on which a royalty shall be payable hereunder shall render to the Governor such an account together with such particulars as the Governor

may require for shewing the amount of such royalty and will verify each such account in such manner as the Governor may require.

7. The Company will at all times during the said term make and keep true and correct plans of all the mines in or under the said land and of all the Company's workings thereof (hereinafter called "the mines") in such manner and form as the Governor may from time to time reasonably require and will keep the same at the office of the Company on the said land and will permit the Governor or any persons appointed by him at all reasonable times to inspect and take copies of the said plans or any of them.

8. The Company shall carry on and conduct all operations hereby authorised in a proper and workmanlike manner and will at all times during the said term carry on bona fide mining operations on the said land and employ therein continuously such numbers of natives (being not less than one man for every acre of the said land for the time being occupied for mining purposes) as the Governor may from time to time require reasonable regard being had to the possibility of such employment being profitable to the Company.

9. The Company shall at all times during the said term keep so much of the said land as shall be occupied by it in a proper sanitary condition and shall not foul any river spring or watercourse and the Governor and his agents may enter into and upon any part of the mines for the purpose of ascertaining the condition thereof or for any other purpose which the Governor may deem reasonable and he or they may for that purpose use free of charge all the shafts tackle machinery tramways and things for the time being erected or constructed under this Agreement and the Company shall render all such assistance as may in the opinion of the Governor be required for the purposes of this Clause.

10. The Company will not at any time during the said term without the previous consent in writing of the Governor carry on upon any part of the said land any operation not authorised by this Agreement.

11. The Company will not assign underlet or part with all or any part of the Company's interest under this Agreement without the previous consent in writing of the Governor such consent not to be unreasonably withheld, and so that such consent shall not be necessary in the case of any underletting of any part of the said land for any purpose (other than mining) which may for the time being be authorised by or under this Agreement.

12. The Company will at all times during the continuance of this Agreement observe and comply with all such ordinances orders and regulations as any from time to time be in force with respect to the tenure or occupation of lands in the Territories of Bekwai or Adansi for mineral or other purposes and this Agreement shall be subject in all respects to every such Ordinance order or regulation.

13. The Governor shall not at any time during the continuance of this Agreement deal with or dispose of the lands surrounding the said land in such a manner as to prevent reasonable access being obtained to the said

land by proper roads but so that nothing herein contained shall render the Governor liable to make any such road.

14. If any one or more of the following events shall happen, namely:

(g) If the Company shall at any time after the 1st day of February, 1902, during the said term (except when prevented by war native disturbances pestilence famine strike or combination of workmen or other cause which shall in the opinion of the Governor be beyond the control of the Company) cease to carry on bona fide mining operations under this Agreement and to employ therein continuously such labour as ought to be employed therein under Clause 8 hereof;

(h) If any rent or royalty payable hereunder shall be in arrear or unpaid for 60 days after the same shall be payable whether the same shall be formally demanded or not;

(i) If the Company shall assign underlet or part with all or any part of the Company's interest under this Agreement without the previous written consent of the Governor except in the case of any such underletting as under the provisions hereinbefore contained may be made without such consent;

(j) If the Company shall commit any breach of the conditions hereinbefore contained with reference to the keeping or rendering of accounts;

(k) If without the previous consent in writing of the Governor the Company shall use any part of the said land otherwise than for some purpose for the time being authorised by or under the provisions of this Agreement, then and in any such case the Governor may re-enter upon the said land or any part thereof in the name of the whole and thereupon this Agreement shall (subject to the provisions of the next succeeding clause hereof) determine but without prejudice to any rights then accrued to the Governor hereunder.

15. The Company may within twelve calendar months from the determination of this Agreement remove its machinery and buildings from the said land.

16. The Governor may from time to time delegate to any person or persons all or any of the powers or discretions vested in the Governor by this Agreement and may give such directions as he may from time to time think fit as to the person to whom any rent or royalty payable hereunder shall be paid and the Company shall comply with every such direction. The Company shall not be liable for any failure to carry on mining operations which shall in the opinion of the Governor have been caused by anything beyond the control of the Company.

17. Nothing herein contained shall impose any personal liability on the Governor or on any person acting under the authority of the Governor.

IN WITNESS whereof the parties of the first and second part have hereunto set their respective hands and seals and the parties of the third and fourth have hereunto caused their respective Common Seals to be affixed the day and year first above written.

SIGNED saled and delivered by the above-named SIR WILLIAM EDWARD MAXWELL in the presence of)	William Maxwell	Seal of the Governor of the Gold Coast
M. J. Holland J. Sampson Hagan		
SIGNED sealed and delivered by the above-named JOSEPH EDWARD BINEY JOSEPH ETTRUSON ELLIS and JOSEPH PETER BROWN in the presence of)	J. Edward Biney L.S. J. Ettruson Ellis L.S. J. P. Brown L.S.	
Gerald H. Cowie, D.C.		Seal of the Cote d'Or Company Limited
THE Common Seal of THE COTE D'OR COMPANY LIMITED was hereunto affixed in the presence of)		Seal of Ashanti Goldfields Corporation Limited
Geo. Bishop F. V. Marment)	Directors	
E. J. Wickenden	Secretary	
The Common Seal of ASHANTI GOLD-FIELDS CORPORATION LIMITED was hereunto affixed in the presence of)		
Fredk. Gordon Duncannon)	Directors	
C. W. Mann	Secretary.	

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Mark Horn, Horn and Co Ltd, mining and metals industry analyst, London, 17 February 2005.

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Victor Jonah former Obuasi resident, Accra, 7 May 2004.

Reverend Arthur Garnett Prah, Obuasi resident, Obuasi, 8 May 2004.

Mark Keatley, former CFO AGC, London, 17 and 19 February 2004.

Martin Martineau, former non-executive director AGC, Hildenborough, 16 May 2004.

Andrew Quinn, banker, Canadian Imperial Bank of Commerce mining division, London, 3 and 17 March 2004.

Srinivasan Venkatakrishnan, former CFO AGC and currently CFO Anglogold Ashanti, Accra 6 May 2004; Johannesburg, 16 December 2004.

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