

**THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in any doubt about the contents of this document, you should consult a person authorised under the Financial Services and Markets Act 2000 ('FSMA') who specialises in advising on the acquisition of shares and other securities.**

If you have sold or transferred all of your Existing Ordinary Shares, please forward this document, together with the accompanying Form of Proxy, to the purchaser or transferee or to the stockbroker or other agent through whom the sale or transfer was effected for transmission to the purchaser or transferee. If you have sold part only of your holding of Existing Ordinary Shares, please contact your stockbroker, bank or other agent through whom the sale or transfer was effected immediately.

The Directors, the Proposed Directors (whose names appear on page 2 of this document) and the Company accept responsibility for the information contained in this document including individual and collective responsibility for compliance with the AIM Rules for Companies and the recommendation set out in paragraph 26 of Part I of this document (for which the Directors are solely responsible). To the best of the knowledge and belief of the Company, the Directors and the Proposed Directors, who have taken all reasonable care to ensure that such is the case, the information contained in this document is in accordance with the facts and does not omit anything likely to affect the import of such information.

**Application will be made for the Existing Ordinary Shares to be re-admitted to trading on AIM and for the New Ordinary Shares to be admitted to trading on AIM. AIM is a market designed primarily for emerging or smaller companies to which a higher investment risk tends to be attached than to larger or more established companies. AIM securities are not admitted to the Official List of the United Kingdom Listing Authority.**

**A prospective investor should be aware of the risks of investing in such companies and should make the decision to invest only after careful consideration and, if appropriate, consultation with an independent financial adviser. Attention is drawn, in particular, to Part VI of this document entitled "Risk Factors". Each AIM company is required pursuant to the AIM Rules for Companies to have a nominated adviser. The nominated adviser is required to make a declaration to the London Stock Exchange on admission in the form set out in Schedule Two to the AIM Rules for Nominated Advisers. It is expected that Admission will become effective and dealings in the New Ordinary Shares will commence and the Existing Ordinary Shares will be re-admitted to trading on AIM on 6 June 2008. The London Stock Exchange has not itself examined or approved the contents of this document.**

This document is an admission document which has been drawn up in accordance with the AIM Rules for Companies and has been issued in connection with the application for Admission. This document does not constitute a prospectus for the purposes of Part VI of FSMA and it has not been, and will not be approved by or filed with the Financial Services Authority. This document contains no offer to the public within the meaning of section 102B of FSMA, the Act, or otherwise.

## **GEMFIELDS RESOURCES PLC**

*(incorporated and registered in England and Wales under the Companies Act 1985 with registered number 05129023)*

**Proposed acquisition of Greentop International Inc. and Krinera Group S.A.  
Option to acquire a licence to use the Fabergé brand name in respect of gemstones (excluding diamonds)  
Option to acquire Oriental Mining S.a.r.l.  
Placing of 66,666,667 Ordinary Shares at 45 pence per share  
Proposed change of name to Gemfields plc  
Application for re-admission of the Existing Ordinary Shares and admission  
of the New Ordinary Shares to trading on AIM  
Notice of Extraordinary General Meeting  
Nominated Adviser  
Canaccord Adams Limited  
Joint Brokers, Joint Bookrunners and Joint Co-lead Managers**

**Canaccord Adams Limited**

**JPMorgan Cazenove Limited**

### **Share capital immediately following the Acquisition, Placing and Admission\***

<b>Authorised</b>			<b>Issued and fully paid</b>	
<b>Number</b>	<b>Amount</b>		<b>Number</b>	<b>Amount</b>
600,000,000	£6,000,000	Ordinary Shares of 1p each	309,152,740	£3,091,527.40

\* assuming no options are exercised between the date of this document and Admission

The Acquisition is conditional, *inter alia*, on Admission taking place. The New Ordinary Shares to be issued in connection with the Acquisition will rank *pari passu* in all respects with the Existing Ordinary Shares on Admission including the right to receive all dividends and other distributions declared on the Ordinary Shares after Admission.

A notice convening an extraordinary general meeting of the Company to be held at the offices of Reed Smith Rambaud Charot, 42, Avenue Raymond Poincaré, 75782 Paris Cedex 16 France at 10.00 a.m. (CET)/9.00 a.m. (BST) on 5 June 2008 is set out at the end of this document. To be valid the Form of Proxy accompanying this document must be completed and returned in accordance with the instructions printed thereon so as to be received by the Company's registrars as soon as possible, but in any event not later than 48 hours before the time fixed for the EGM. Completion of a Form of Proxy will not preclude a member from attending the EGM and voting in person.

Canaccord Adams Limited ("Canaccord"), which is regulated and authorised in the United Kingdom by the Financial Services Authority, is acting as nominated adviser, joint broker, joint bookrunner and joint co-lead manager to the Company in relation to the Admission and the Placing. Canaccord is not acting for any other persons and will not be responsible to anyone other than the Company for providing the protections afforded to customers of Canaccord or for providing advice in relation to the contents of this document, the application for Admission or the Placing. Canaccord has not authorised any part of this document. No liability is accepted by Canaccord for the accuracy of any information or opinions contained in or for the omission of any information from this document for which the Directors, the Proposed Directors and the Company are responsible.

JPMorgan Cazenove Limited ("JPMorgan Cazenove"), which is regulated and authorised in the United Kingdom by the Financial Services Authority, is acting as joint broker, joint bookrunner and joint co-lead manager to the Company in relation to the Admission and the Placing. JPMorgan Cazenove is not acting for any other persons and will not be responsible to anyone other than the Company for providing the protections afforded to customers of JPMorgan Cazenove or for providing advice in relation to the contents of this document, the application for Admission or the Placing. JPMorgan Cazenove has not authorised any part of this document. No liability is accepted by JPMorgan Cazenove for the accuracy of any information or opinions contained in or for the omission of any information from this document for which the Directors, the Proposed Directors and the Company are responsible.

This document does not constitute an offer to sell, or the solicitation of an offer to buy, shares in any jurisdiction in which such offer or solicitation is unlawful and, in particular, is not for distribution into Australia, the Republic of Ireland, the Republic of South Africa or Japan or to any national, resident or citizen of Australia, the Republic of Ireland, the Republic of South Africa or Japan. The issue of the New Ordinary Shares has not been and will not be registered under the applicable securities laws of the United States, Canada, Australia, the Republic of Ireland, the Republic of South Africa or Japan. The distribution of this document in other jurisdictions may be restricted by law and therefore persons into whose possession this document comes should inform themselves about and observe any such restriction. Any failure to comply with these restrictions may constitute a violation of the securities law of any such jurisdictions.

The Ordinary Shares have not been, and will not be, registered under the United States Securities Act of 1933, as amended ("US Securities Act"), or under the securities legislation of any state of the United States. The Ordinary Shares may not be offered or sold in the United States or to, or for the account or benefit of, US Persons as defined in Regulation S under the US Securities Act ("Regulation S"), except as part of the Placing, by affiliates of Canaccord or JP Morgan Cazenove to institutional accredited investors as defined in Rule 501(a) (1), (2), (3) or (7) of Regulation D under the US Securities Act ("Regulation D") that are also "qualified institutional buyers" within the meaning of Rule 144A under the US Securities Act or in other transactions exempt from, or not subject to, the registration requirements of the US Securities Act. In addition, all purchasers in the United States must agree to resell such securities only to the Company or outside the United States in a transaction meeting the requirement of Rule 904 of Regulation S under the US Securities Act. All other purchasers must agree to resell such securities only in accordance with the provisions of Regulation S, pursuant to registration under the US Securities Act or pursuant to an available exemption from or a transaction not subject to registration under the US Securities Act. All purchasers must further agree not to engage in hedging transactions with regard to the Ordinary Shares except as permitted under the US Securities Act. The Company will be obligated to refuse to register any transfer of the Ordinary Shares not made in accordance with Regulation S or another appropriate exemption.

Copies of this document, which is dated 13 May 2008, will be available free of charge to the public during normal working hours on any weekday (except Saturdays, Sundays and public holidays) from the registered office of the Company and from the offices of Canaccord at 7th Floor, Cardinal Place, 80 Victoria Street, London, SW1E 5JL from the date of Admission for a period of not less than one month.

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**Prospective investors should read the whole of this document and should rely only on the information in this document. No person has been authorised to give any information or to make any representations other than those contained in this document in connection with the Proposals and, if given or made, such information or representations must not be relied upon as having been authorised by or on behalf of the Company, the Directors, the Proposed Directors, Canaccord or JPMorgan Cazenove. No representation or warranty, express or implied, is made by Canaccord, JPMorgan Cazenove or any selling agent as to the accuracy or completeness of such information, and nothing contained in this document is, or shall be relied upon as, a promise or representation by Canaccord, JPMorgan Cazenove or any selling agent as to the past, present or future. Without prejudice to any obligation of the Company to publish a supplementary admission document pursuant to Rule 3 of the AIM Rules for Companies, neither the delivery of this document nor any subscription or sale made under this document shall, under any circumstances, create any implication that there has been no change in the business or affairs of the Company or of the Group taken as a whole since the date hereof or following Admission or that the information contained herein is correct as of any time subsequent to such date.**

Apart from the responsibilities and liabilities, if any, which may be imposed on Canaccord or JPMorgan Cazenove by the AIM Rules, FSMA, or the regulatory regime established thereunder or any other applicable regulatory regime, neither Canaccord nor JPMorgan Cazenove accepts any responsibility whatsoever for the contents of this document or for any other statement made or purported to be made by it, or on its behalf, in connection with the Company, the Ordinary Shares or the Proposals. Canaccord and JPMorgan Cazenove accordingly disclaim all and any liability whether arising in tort, contract or otherwise (save as referred to above) which they might otherwise collectively or independently have in respect of this document or any such statement.

This document includes statements that are, or may be deemed to be, “forward-looking statements”. These forward-looking statements can be identified by the use of forward-looking terminology, including the terms “believes”, “estimates”, “plans”, “projects”, “anticipates”, “expects”, “intends”, “may”, “will” or “should” or, in each case, their negative or other variations or comparable terminology, or by discussions of strategy, plans, objectives, goals, future events or intentions. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this document and include, but are not limited to, statements regarding the Group’s intentions, beliefs or current expectations concerning, among other things, the Group’s results of operations, financial position, liquidity, prospects, growth, strategies and expectations of the gemstone industry.

By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances. Forward-looking statements are not guarantees of future performance and the development of the markets and the industry in which the Group operates, may differ materially from those described in, or suggested by, the forward-looking statements contained in this document. In addition, even if the development of the markets and the industry in which the Group operates are consistent with the forward-looking statements contained in this document, those developments may not be indicative of developments in subsequent periods. A number of factors could cause developments to differ materially from those expressed or implied by the forward-looking statements including, without limitation, general economic and business conditions, industry trends, competition, commodity prices, changes in regulation, currency fluctuations (including the US dollar and Zambian Kwacha), the Group’s ability to recover its reserves or develop new reserves, including its ability to convert its gemstone resources into gemstone reserves and its mineral potential into gemstone resources or gemstone reserves, changes in its business strategy, political and economic uncertainty and other factors discussed in Part I and Part VI.

Any forward-looking statements in this document reflect the Group’s current view (assuming Admission has occurred) with respect to future events and are subject to risks relating to future events and other risks, uncertainties and assumptions relating to the Group’s operations and growth strategy. Investors should specifically consider the factors identified in this document which could cause results to differ before making an investment decision. Subject to the requirements of the AIM Rules, the Group undertakes no obligation publicly to release the result of any revisions to any forward-looking statements in this document that may occur due to any change in the Company’s expectations or to reflect events or circumstances after the date of this document. Investors should note that the contents of these paragraphs relating to forward-looking statements are not intended to qualify the statements made as to sufficiency of working capital on paragraph 14 of Part IX of this document.

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## DIRECTORS, PROPOSED DIRECTORS, SECRETARY AND ADVISERS

### Current Directors of the Company

Graham Edward Mascall (*Non-Executive Chairman*)  
Rajiv Ramlal Gupta (*Executive Vice Chairman*)  
Richard Paul James (*Chief Financial Officer*)  
Geoffrey Clive Newall (*Non-Executive Director*)

all of whose business address is MWB Business Exchange,  
1 Berkeley Street, London, W1J 8DJ

### Directors of the Company following Admission

Graham Edward Mascall (*Non-Executive Chairman*)  
Rajiv Ramlal Gupta (*Executive Vice Chairman*)  
Sean Thomas Gilbertson (*Proposed Interim Chief Executive Officer*)  
Richard Paul James (*Chief Financial Officer*)  
Geoffrey Clive Newall (*Non-Executive Director*)  
Finn Stuart Behnken (*Proposed Non-Executive Director*)

the Proposed Directors business address is 54 Jermyn Street,  
London, SW1Y 6LX

### Company Secretary

Richard Paul James

### Company's Registered Office

Tenth Floor  
Beaufort House  
15 St Botolph Street  
London EC3A 7EE

### Nominated Adviser, Joint Broker, Joint Bookrunner and Joint Co-lead Manager

Canaccord Adams Limited  
7th Floor  
Cardinal Place  
80 Victoria Street  
London SW1E 5JL

### Joint Broker, Joint Bookrunner and Joint Co-lead Manager

JPMorgan Cazenove Limited  
20 Moorgate  
London  
EC2R 6DA

### Auditors and reporting accountant

BDO Stoy Hayward LLP  
55 Baker Street  
London W1U 7EU

### Solicitors to the Company (English and US law)

Reed Smith Richards Butler LLP  
Minerva House  
5 Montague Close  
London SE1 9BB

### Solicitors to the Company (Zambian law)

Buta Gondwe & Associates  
3<sup>rd</sup> Floor  
Development House  
P.O. Box 34491  
Katondo Street  
Lusaka

### Solicitors to the Company (BVI law)

Maples and Calder  
Sea Meadow House, PO Box 17  
Road Town  
Tortola  
British Virgin Islands

### Solicitors to the Company (Ontario law)

Blake, Cassels & Graydon LLP  
199 Bay Street  
Suite 2800, Commerce Court West  
Toronto, Ontario, M5L 1A9  
Canada

### Solicitors to the Company (New Brunswick law)

Stewart McKelvey Stirling Scales  
Suite 1000, Brunswick House  
44 Chipman Hill  
P.O. Box 7289 Postal Station A  
Saint John, New Brunswick, E2L 4S6  
Canada

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**Solicitors to Nominated Adviser, Joint Brokers, Joint Bookrunners and Joint Co-lead Managers**  
Charles Russell LLP  
8 – 10 New Fetter Lane  
London EC4A 1RS

**Solicitors to Rox (BVI law)**  
Walkers  
6 Gracechurch Street  
London  
EC3V 0AT

**Solicitors to Rox (Zambian law)**  
Chibesakunda & Co Advocates  
Abacus House  
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PO Box 30279  
Lusaka

**Solicitors to Rox (Madagascar law)**  
FIDAFRICE Madagascar  
Rue Rajakoba Augustin – Ankadivato  
101 Antananarivo  
Madagascar

**Solicitors to Nominated Adviser, Joint Brokers, Joint Bookrunners, Joint Co-lead Managers and the Company (Canadian law)**  
McCarthy Tétrault  
5 Old Bailey, 2nd Floor  
London  
EC4M 7BA

**Competent Person**  
SRK Consulting (UK) Limited  
5<sup>th</sup> Floor Churchill House  
17 Churchill Way  
Cardiff CF10 2HH

**Website as at Admission**

**Solicitors to Rox (English law)**  
Norton Rose LLP  
3 More London Riverside  
London SE1 2AQ

**Solicitors to Rox (Panamanian law)**  
Arosemena, Noriega & Contreras  
Elvira Mendez Street N° 10  
Interseco Building, 2nd Floor P.O. Box 0816-01560  
Panamá, Republic of Panama

**Solicitors to Rox (Cayman Islands law)**  
Walkers  
6 Gracechurch Street  
London  
EC3V 0AT

**Solicitors to Nominated Adviser, Joint Brokers, Joint Bookrunners and Joint Co-lead Managers (US law)**  
White & Case LLP  
5 Old Broad Street  
London  
EC2N 1DW

**Registrars**  
Capita Registrars  
The Registry  
34 Beckenham Road  
Kent BR3 4TU

**Principal Bankers**  
Barclays Bank Plc  
United Kingdom House  
180 Oxford Street  
London W1D 1EA

[www.gemfields.co.uk](http://www.gemfields.co.uk)

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## PLACING STATISTICS AND EXPECTED TIMETABLE OF PRINCIPAL EVENTS

### PLACING STATISTICS

Issue Price	45p
Number of Existing Ordinary Shares as at the date of this document	104,575,733
Number of New Ordinary Shares to be issued, as follows:	
Consideration Shares	137,910,340
Placing Shares	66,666,667
Percentage of Enlarged Share Capital represented by:	
Consideration Shares	44.61%
Placing Shares	21.56%
Number of Ordinary Shares in issue immediately following the Acquisition, Placing and Admission*	309,152,740
Estimated net proceeds of the Placing receivable by the Company	£27.50 million
Market Capitalisation of the Company on Admission at the Issue Price*	£139.12 million

\* assuming no options are exercised between the date of this document and Admission

### EXPECTED TIMETABLE OF PRINCIPAL EVENTS

Announcement of the Acquisition	18 December 2007
Latest time and date for receipt of Forms of Proxy	9.00 a.m. (BST) on 3 June 2008
EGM, at the office of Reed Smith Rambaud Charot, Paris	10.00 a.m. (CET)/9.00 a.m. (BST) on 5 June 2008
Completion of the Acquisition and Admission becomes effective and dealings on AIM commence in respect of the Enlarged Share Capital	8.00 a.m. (BST) on 6 June 2008
CREST accounts credited	8.00 a.m. (BST) on 6 June 2008
Expected date of despatch of definitive share certificates (where appropriate)	by 11 June 2008

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## DEFINITIONS

In this document, where the context permits or unless otherwise stated, the definitions set out below shall apply:

<b>“Acquisition Agreement”</b>	the conditional agreement dated 17 December 2007 made between Rox and Gemfields relating to the Acquisition, the principal terms of which are summarised in paragraph 10.1.2 of Part IX of this document
<b>“Acquisition”</b>	the acquisition of a 75 per cent. interest in the Kagem Emerald Mine via the acquisition of the entire issued share capital of Greentop and Krinera, the put and call option to acquire a licence to use the Fabergé brand name and the put and call option to acquire Oriental Mining, further details of which are set out in paragraph 3 of Part I of this document
<b>“Act”</b>	the Companies Act 1985, as amended and to the extent still in force, and the Companies Act 2006
<b>“Admission”</b>	the re-admission of the Existing Ordinary Shares and the admission of the New Ordinary Shares of the Company to trading on AIM
<b>“Admission Document”</b>	this document
<b>“AIM”</b>	the market of that name operated by the London Stock Exchange
<b>“AIM Rules”</b>	the AIM Rules for Companies and the AIM Rules for Nominated Advisers
<b>“AIM Rules for Companies”</b>	the rules for companies and guidance notes as published by the London Stock Exchange from time to time
<b>“AIM Rules for Nominated Advisers”</b>	the rules for nominated advisers to companies as published by the London Stock Exchange from time to time
<b>“Board”</b>	the board of directors of the Company from time to time
<b>“BVI”</b>	the British Virgin Islands
<b>“Canaccord”</b>	Canaccord Adams Limited, the nominated adviser, joint broker, joint bookrunner and joint co-lead manager to the Company
<b>“CIBJO”</b>	Confederation Internationale de la Bijouterie, Joaillerie et Orfèvrerie, also known as the World Jewellery Confederation
<b>“City Code”</b>	the City Code on Takeovers and Mergers
<b>“Company” or “Gemfields”</b>	Gemfields Resources Plc, to be renamed Gemfields plc at the EGM
<b>“Completion”</b>	the Acquisition Agreement becoming unconditional in accordance with its terms, which is expected to be on Admission
<b>“Competent Person’s Report”</b>	the report prepared by SRK Consulting (UK) Limited set out in Part VII of this document

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<b>“Consideration Shares”</b>	the 137,910,340 new Ordinary Shares to be issued by the Company to Rox as consideration for the Acquisition
<b>“CREST”</b>	the relevant system (as defined in the Regulations) in respect of which CRESTCo Limited is the Operator (as defined in the Regulations)
<b>“Directors”</b>	the existing directors of the Company, whose names are set out on page 2 of this document
<b>“Enlarged Group”</b>	the Company and the Company’s subsidiaries, including the Target Group, following Completion
<b>“Enlarged Share Capital”</b>	the Ordinary Shares in issue immediately following completion of the Proposals
<b>“Executive Directors”</b>	the executive directors of the Enlarged Group following Admission, being Rajiv Gupta, Sean Gilbertson (until his replacement as chief executive officer) and Richard James
<b>“Existing Ordinary Shares”</b>	the 104,575,733 ordinary shares of £0.01 each in the capital of the Company in issue at the date of this document
<b>“Existing Shareholders”</b>	holders of Existing Ordinary Shares
<b>“EGM” or “Extraordinary General Meeting”</b>	the extraordinary general meeting of the Company, notice of which is set out at the end of this document
<b>“Fabergé Licence Agreement”</b>	a 15 year worldwide and exclusive licence between Gemfields and Fabergé Limited which, if entered into pursuant to the exercise of a put and call option set out in the Acquisition Agreement, would give Gemfields the right (from the date such licence is entered into) to use the Fabergé name in branding, marketing and selling coloured gemstones excluding diamonds
<b>“Form of Proxy”</b>	the form of proxy to be used by Shareholders in connection with the EGM
<b>“FSMA”</b>	the Financial Services and Markets Act 2000 (as amended)
<b>“Gemstone Assets”</b>	the combined assets of the Enlarged Group following Completion, further details of which are set out in paragraph 4 of Part I of this document
<b>“Greentop”</b>	Greentop International Inc., a company registered in the British Virgin Islands with company number 88894
<b>“Group”</b>	the Company and its subsidiaries and associated undertakings from time to time (or any one of them, as the context requires)
<b>“Hagura BVI”</b>	Hagura Mining Limited, a company registered in the British Virgin Islands with company number 74702
<b>“Hagura UK”</b>	Hagura Mining Limited, a company registered in England and Wales with company number 01491197

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<b>“ISIN”</b>	International Securities Identification Number
<b>“Issue Price”</b>	45 pence per Placing Share
<b>“JPMorgan Cazenove”</b>	JPMorgan Cazenove Limited, joint broker, joint bookrunner and joint co-lead manager to the Company
<b>“Kagem”</b>	Kagem Mining Limited, a company registered in Zambia with certificate number 12958 which holds the mining licence (with registration number GL713) in respect of the Kagem Emerald Mine and an indirect subsidiary of Greentop and Krinera
<b>“Kagem Lapidaries”</b>	Kagem Lapidaries Limited, a company registered in Zambia with company number 64755 and a subsidiary of Kagem
<b>“Kagem Emerald Mine”</b>	the mining operations located in the Zambian Fwaya-Fwaya belt area and subject to the mining licence granted to Kagem (with registration number GL713), further details on which are set out at Part III of this document
<b>“Krinera”</b>	Krinera Group S.A., a limited Panamanian company (No. 9171 Ficha (card) 46750, Rollo (Reel) 2958 Imagen (Frame) 86)
<b>“LIBOR”</b>	London Interbank Offered Rate
<b>“London Stock Exchange”</b>	London Stock Exchange plc
<b>“LSML”</b>	large scale mining licence
<b>“New Ordinary Shares”</b>	the Consideration Shares and the Placing Shares
<b>“Non-Executive Directors”</b>	the non-executive directors of the Enlarged Group following Admission being Graham Mascall, Geoffrey Newall and Finn Behnken
<b>“NRERA”</b>	the Ndola Rural Emerald Restricted Area of the Kafubu emerald area in Zambia
<b>“Official List”</b>	the Official List of the UKLA
<b>“Ordinary Shares”</b>	the ordinary shares of £0.01 each in the capital of the Company
<b>“Oriental Mining”</b>	Oriental Mining S.a.r.l., a company registered in Madagascar with company number 2007B00881 and the holder of (subject to certain registration requirements) certain licences for gemstone exploration in Madagascar
<b>“Optionholders”</b>	the holders of the options to subscribe for Ordinary Shares more particularly described in paragraph 7 of Part IX of this document
<b>“Pallinghurst Resources”</b>	an investment consortium advised by Pallinghurst Resources LLP
<b>“Panel”</b>	the Panel on Takeovers and Mergers

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<b>“Placing”</b>	the proposed placing by Canaccord and JPMorgan Cazenove, on behalf of the Company, of the Placing Shares on the terms and conditions of the Placing Agreement
<b>“Placing Agreement”</b>	the conditional agreement dated 13 May 2008 between (1) the Company, (2) Canaccord, (3) JPMorgan Cazenove, (4) the Directors and (5) the Proposed Directors relating to the Placing, further details of which are set out in paragraph 10.1.3 of Part IX of this document
<b>“Placing Shares”</b>	the 66,666,667 new Ordinary Shares to be issued in connection with the Placing
<b>“Proposals”</b>	the Acquisition, Placing and Admission
<b>“Proposed Directors”</b>	Sean Gilbertson, the proposed executive director and interim chief executive, and Finn Behnken, the proposed non-executive director, further details on whom are set out in paragraph 9 of Part I of this document
<b>“Rox”</b>	Rox Limited, the current holder of 100 per cent. of the issued share capital of Greentop and Krinera
<b>“Rox Escrow Agreement”</b>	the lock-in and escrow agreement to be entered into between Rox and Gemfields on the date of Completion more fully described in paragraph 10.1.2 of Part IX of this document
<b>“Regulations”</b>	the Uncertificated Securities Regulations 2001
<b>“Relationship Agreement”</b>	the agreement to be entered into between Gemfields and Rox on the date of Completion, further details of which are set out in paragraph 10.1.2 of Part IX of this document
<b>“Resolutions”</b>	the resolutions set out in the notice of EGM at the end of this document
<b>“Shareholder(s)”</b>	the person(s) who are registered as holder(s) of Ordinary Shares from time to time
<b>“SRK”</b>	SRK Consulting (UK) Limited
<b>“Target Group”</b>	Greentop, Krinera and their subsidiaries at the date of Admission
<b>“TMS”</b>	talc magnetite schist
<b>“UK” or “United Kingdom”</b>	the United Kingdom of Great Britain and Northern Ireland
<b>“UK GAAP”</b>	UK General Accepted Accounting Practice
<b>“UKLA”</b>	the Financial Services Authority acting in its capacity as a competent authority for the purposes of Part VI of FSMA, including where the context so permits any committee, employee or servant of such authority to whom any function of such competent authority may from time to time be delegated
<b>“Unapproved Scheme”</b>	the Company’s share scheme, details of which are set out in paragraph 7 of Part IX of this document

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**“US” or “United States”**

the United States of America, its territories and possessions,  
any state of the United States and the District of Columbia

For interpretation of technical terms please see the glossary set out in the Competent Person’s Report set out in Part VII of this document.

References in this document to “pounds Sterling”, “pence”, “£” or “p” are to the lawful currency of the United Kingdom, references to “US dollars”, “\$”, “US\$” or “cents” are to the lawful currency of the United States and the BVI, references to “Kwacha”, “K”, “ZMK” or “Zambian Kwacha” are to the lawful currency of the Republic of Zambia.

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## PART I

### LETTER FROM THE CHAIRMAN OF GEMFIELDS

## GEMFIELDS RESOURCES PLC

(incorporated in England and Wales with registered number 05129023)

Directors:

Graham Edward Mascal  
Rajiv Ramlal Gupta  
Richard Paul James  
Geoffrey Clive Newall

Registered Office:

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13 May 2008

To: *the holders of Existing Ordinary Shares, and for information only, Optionholders*

Dear Shareholder

**Proposed acquisition of Greentop International Inc. and Krinera Group S.A.**

**Option to acquire a licence to use the Fabergé brand name in respect of gemstones  
(excluding diamonds)**

**Option to acquire Oriental Mining S.a.r.l.**

**Placing of 66,666,667 Ordinary Shares at 45 pence per share**

**Proposed change of name to Gemfields plc**

**Application for re-admission of the Existing Ordinary Shares and admission  
of the New Ordinary Shares to trading on AIM**

**Notice of Extraordinary General Meeting**

### 1. Introduction

I am delighted to provide you with more information regarding the Company's proposed Acquisition which we announced on 18 December 2007 and which the Directors and Proposed Directors believe will transform Gemfields into a leading international coloured gemstone producer. The Directors and Proposed Directors believe that this development will help drive Gemfields forward and support its vision for expansion in the future. This is an exciting time for the Shareholders and the Group as the Company seeks to become the leading source of high quality Zambian emeralds.

As announced by the Company on 18 December 2007, Gemfields has conditionally agreed to purchase from Rox, a company controlled by Pallinghurst Resources, a 75 per cent. interest in Kagem, the holder of the licence for the Kagem Emerald Mine located in the Zambian Fwaya-Fwaya belt adjacent to Gemfields' existing emerald mining operations and close to its exploration operations. This will be achieved via the purchase from Rox of the entire issued share capital of Greentop and Krinera, the indirect holders of a 75 per cent. interest in Kagem. The consideration for the acquisition of Greentop and Krinera will be satisfied by the issue to Rox of 137,910,340 new Ordinary Shares in Gemfields which, at the Issue Price, implies a price of approximately £62.06 million.

The Acquisition also includes:

- a put and call option to acquire a worldwide exclusive 15 year licence to use the Fabergé brand name in respect of coloured gemstones (excluding diamonds); and
- a put and call option to acquire, for the additional consideration of £1.00, the entire issued share capital of Oriental Mining, which is the holder of and applicant for (subject to certain registration requirements more fully described at paragraph 4 of this Part I) 15 licences for gemstone exploration in Madagascar.

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The Directors and Proposed Directors believe that the Acquisition will provide the Group with substantial and important building blocks for the future through the addition of an immediate cash generating business (through the 75 per cent. ownership of Kagem), the significant exploration upside (through Kagem's exploration rights and Oriental Mining's exploration licences) and the opportunity to optimise the value of the Company's best gemstones (through the use of the Fabergé brand name). The Directors and Proposed Directors believe that these factors, together with Gemfields' existing mining and exploration assets and management team, will help the Company in achieving its long term strategy, to pursue consolidation and vertical integration in the coloured gemstone industry.

The Directors and Proposed Directors believe that the coloured gemstone industry is ripe for the emergence of a significant industry participant who can supply this market with suites of high quality gemstones. Gemfields and Rox share the view that the coloured gemstone industry (which now forms a significant part of the luxury goods industry) is currently fragmented and undercapitalised. Given the increasing popularity of coloured gemstones and the price increases that have resulted in recent years, both companies believe that a significant opportunity exists in pursuing consolidation and vertical integration of the coloured gemstone industry on an international scale.

In view of the size of the Acquisition in relation to Gemfields, the Acquisition is classed as a reverse takeover under the AIM Rules for Companies. Accordingly, the Acquisition is conditional upon Gemfields obtaining Shareholder approval for the Acquisition. In conjunction with the Acquisition, Gemfields proposes to change its name to Gemfields plc. An EGM for the purpose of approving the Acquisition and the change of name is to be held at the offices of Reed Smith Rambaud Charot, 42 Avenue Raymond Poincaré, 75782, Paris at 10.00 a.m. (CET)/9.00 a.m. (BST) on 5 June and a notice convening this EGM is set out at the end of this document.

Gemfields' Existing Ordinary Shares were suspended from trading on 18 December 2007 pending the preparation and publication of this document and the notice of EGM. It is envisaged that trading in Gemfields' Existing Ordinary Shares will resume at 8.00 a.m. (BST) on 13 May 2008 (the same date as this document) and, conditional upon the passing of the Resolutions and Completion, Admission and trading in the New Ordinary Shares will commence at 8.00 a.m. (BST) on 6 June 2008, being the first business day immediately following the EGM.

The purpose of this document is to provide you with information on, and seek your approval for, the proposed Acquisition and change of name. Further information on the Acquisition Agreement and the consideration payable is given in paragraph 10.1.2 of Part IX of this document. Further information on the assets of the Enlarged Group including the Kagem Emerald Mine is given in the Competent Persons Report set out in Part VII of this document.

## **2. Background to and reasons for the Acquisition**

Gemfields was the inspiration of Rajiv Gupta who formed the predecessor company to Gemfields in 2000 when he identified a significant opportunity in the gemstone industry and has since pursued a primary objective of identifying, acquiring and developing coloured gemstone mines. The proposed Acquisition forms the next logical step in achieving consolidation in the coloured gemstone industry and is expected to transform Gemfields into a leading international coloured gemstone producer.

Significantly, Gemfields already owns two significant assets on the Fwaya-Fwaya emerald belt in Zambia (where the Kagem Emerald Mine is also located): Mbuva-Chibolele and Kamakanga. Gemfields has, during its development of Mbuva-Chibolele from a greenfield project, assembled an experienced management and operating team. The Directors and Proposed Directors believe the Kagem Emerald Mine is presently the single most desirable emerald mine on the Fwaya-Fwaya belt and has a long and demonstrated history of producing high quality emeralds. Hence, Gemfields and Rox believe that significant synergies can be achieved by pooling their respective assets and skill sets. Gemfields is already managing operations at Kagem after signing a management agreement with Hagura UK (which holds the Target Group's interest in Kagem) in 2007. A significant review of operations has already been concluded and a revised production plan implemented to increase production to a run rate of in excess of 1.4 million tonnes of TMS per annum by July 2009. On completion of the Acquisition, the Enlarged Group will be the largest operator on the Fwaya-Fwaya belt by a substantial margin and the Directors and Proposed Directors believe that the Enlarged Group will be in a good position to further consolidate the belt and thereby achieve economies of scale. In addition, as the primary producer of emeralds in Zambia, the Enlarged Group will be in a position to restructure the sale process that has historically been characterised by inconsistent supply and quality.

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The Directors and Proposed Directors believe that this initial footprint in the emerald market will form the cornerstone for expansion into other coloured gemstones. This will be achieved via Gemfields' existing rights in respect of amethyst, the option to acquire gemstone licences in Madagascar (which includes ruby, emerald and sapphire licences) currently owned (subject to certain registration requirements more fully, described in paragraph 4 of this Part I) by Rox via Oriental Mining and by further focussed acquisitions of various coloured gemstone varieties.

In addition, the branding potential inherent in the Fabergé name, particularly given the recent re-unification of the Fabergé brand with the direct descendents of Peter Carl Fabergé, should position the Enlarged Group to optimise the value of its cut and polished production by branding its best stones with the Fabergé name.

Accordingly, the Directors believe that the Acquisition represents an attractive opportunity for Shareholders to participate in the Enlarged Group. The Acquisition enables Gemfields to draw together the following key components to accelerate the Directors' and Proposed Directors' vision of consolidating and vertically integrating the coloured gemstone industry:

- the operational expertise, infrastructure and extensive tenement portfolio of Gemfields;
- the renowned Kagem Emerald Mine;
- a put and call option to enter into an exclusive worldwide licence to use the Fabergé brand name on coloured gemstones for a period of 15 years;
- a base from which to add value through the development of in-house cutting and polishing facilities;
- modernisation of the mining process at the Kagem Emerald Mine to increase throughput, increase yield and lift overall efficiency;
- a put and call option to acquire Oriental Mining, which holds (subject to certain registration requirements more fully described in paragraph 4 below) 15 licences for gemstone exploration in Madagascar;
- enhanced leadership with deal making capabilities; and
- greater access to capital.

### **3. Terms of the Acquisition**

Under the terms of the Acquisition Agreement, Gemfields has conditionally agreed to acquire the entire issued share capital of Greentop and Krinera. The aggregate consideration for the acquisition of Greentop and Krinera is the allotment and issue of 137,910,340 Ordinary Shares (to rank *pari passu* in all respects with the Existing Ordinary Shares) to Rox at Completion which will represent 56.9 per cent. of the enlarged share capital of the Company immediately following the Acquisition but before the Placing. Rox is also participating in the Placing and following the Placing will hold approximately 56.35 per cent. of the Enlarged Share Capital. The Company has also been notified that, pursuant to an agreement between Rox and a vehicle of which Rajiv Gupta is a beneficiary, 8,888,890 Ordinary Shares in which Rajiv Gupta is interested will be transferred to Rox within three months of Admission in return for shares in Rox. This will mean Rox will hold 183,091,453 Ordinary Shares representing approximately 59.22 per cent. of the Enlarged Share Capital following such transfer (assuming no options are exercised between the date of this document and the date of such transfer).

Following the issue of the Consideration Shares and the Placing Shares, the Existing Shareholders will own, in aggregate approximately 33.83 per cent. of the Enlarged Share Capital. For details of significant shareholders, please see paragraph 8 of part IX of this document.

The Acquisition Agreement contains certain warranties and an indemnity given by Rox to Gemfields in relation to the Target Group and certain warranties given by Gemfields to Rox in relation to the Group (in both cases subject to certain financial and other limitations). The Acquisition includes an escrow arrangement whereby the Consideration Shares and certain cash sums will be held in escrow for a defined period to be accessed in the event of any successful warranty claims by the Company. The Consideration Shares and cash may be released from escrow under certain specific circumstances, further details of which are set out in paragraph 10.1.2 of Part IX.

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In addition, the Acquisition Agreement includes restrictions on Gemfields and Rox entering into certain transactions with third parties in the period prior to Completion and a requirement on Gemfields and Rox to operate their groups in the ordinary course until Admission. The Acquisition Agreement may be terminated in a number of circumstances which are detailed in paragraph 10.1.2 of Part IX.

The Acquisition Agreement includes a put and call option, in consideration of an additional sum of £1.00, for the acquisition of the entire issued share capital of Oriental Mining. Gemfields has the right to exercise the option to acquire Oriental Mining, and Rox has the right to require Gemfields to exercise such option, within three months of Completion. The Acquisition Agreement contains certain warranties given by Rox to Gemfields in relation to Oriental Mining and its licences.

The Acquisition Agreement further contains a put and call option for Gemfields to enter into a worldwide exclusive 15 year licence with Fabergé Limited to use the Fabergé brand name in respect of coloured gemstones (excluding diamonds). Each of the Company and Fabergé Limited can require the other party to enter into such licence agreement within three months of Completion.

The Acquisition is conditional upon, amongst other things, the approval by Shareholders of the Resolutions to be proposed at the EGM (other than resolutions 3 and 5) and Admission.

Further details of the Acquisition Agreement and related documents are set out in paragraph 10.1.2 of Part IX of this document.

#### **4. Information on Enlarged Group**

##### ***Enlarged Group assets***

The Enlarged Group's assets will comprise 17 licences which cover an area of 1,344.17km<sup>2</sup> in Zambia, Southern Africa and include: two advanced gemstone assets (assets upon which mineral resources reported in accordance with an internationally recognised reporting code have been defined), six exploration properties (assets upon which either historical mining or recent exploration activities have occurred) and nine exploration prospects (assets upon which limited or no exploration activity has been undertaken to date). In addition the Company will have the option to purchase Oriental Mining (more fully described below).

Gemfields is a holding company which currently manages (and will continue to manage following Completion) the Gemstone Assets through various subsidiaries and currently derives its revenues entirely from the Gemstone Assets. The subsidiaries comprise holding companies, intermediate holding companies, coloured gemstone exploration and mining companies and various dormant companies. The principal operating companies are:

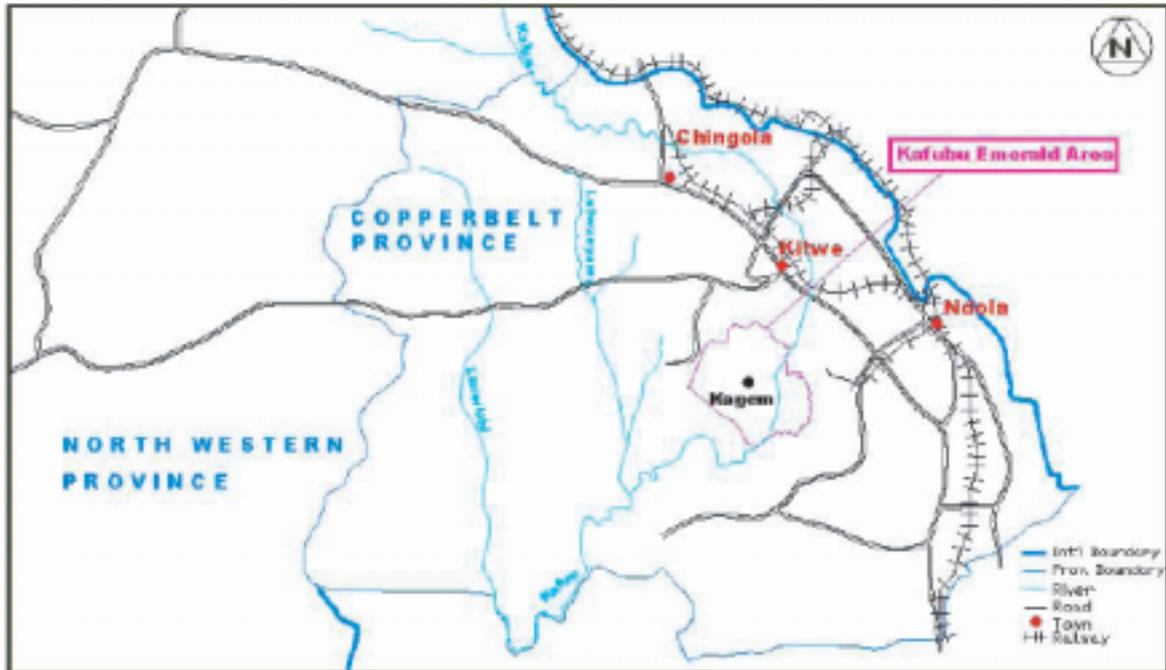
- Kagem (in which Gemfields will, following Completion, have a 75 per cent. beneficial interest) will manage the Kagem Emerald Mine comprising an open-pit emerald and beryl mine and associated processing facilities;
- Kariba Minerals Limited (in which Gemfields has a 50 per cent. beneficial interest) which operates the Kariba mine comprising an open-pit amethyst mine and an associated processing facility; and
- Gemfields Holdings Zambia Limited (in which Gemfields has a 100 per cent. beneficial interest) which operates the Mbuva-Chibolele mine comprising an open-pit emerald and beryl mine and an associated processing facility (currently on care and maintenance).

The exploration properties and the exploration prospects in Zambia are all held by the Company's subsidiary, Gemfields Holdings Zambia Limited. Exploration and development activities are conducted through its representative office in Zambia which manages the licences for the advanced gemstone assets, the advanced exploration properties and the exploration properties. The Company also provides management services to each of the operating companies including: sales and marketing; finance; legal and technical support. Other administrative and regulatory aspects will also be provided in respect of co-ordinating group operating companies as well as public domain reporting.

*The above information is extracted from paragraph 2.2 of the Competent Person's Report set out in Part VII of this document.*

The Enlarged Group's assets are predominantly located in the NRERA of the Kafubu Emerald Area, Zambia as shown in the maps below.

*Map of the Kafubu Emerald Area*



Source: Gemfields

*Map showing the Enlarged Group's interests in prospecting and mining licences in the NRERA, Zambia*



Source: Gemfields

### Tables of consolidated resources

The Competent Persons Report set out in Part VII of this document notes that emerald deposits, owing to the distribution of economic concentrations of reaction zones are notoriously difficult to sample, estimate and classify as their thickness and grade are highly variable and their exact location very difficult to predict. Current drilling techniques are inappropriate to provide sufficient data density to enable direct estimation of reaction zone tonnage and grade. Accordingly drilling as currently employed can only provide information to determine the volume of the geological entity in which such reaction zones are present and the location of such entities relative to other lithology and geological structures. Derivation of mineral resources is largely dependent on the availability of the results of bulk samples or equivalent data such as historical production statistics. All the above uncertainties and the use of extrapolated grade and geological information require that only an Inferred Mineral Resource category can be assigned to the resources associated with the Gemstone Assets.

#### Gemstone Assets: Emeralds and Beryl Mineral Resource statement (1 January 2008)<sup>(1)</sup>

Mineral Resources	Tonnage		Grade		Content		
	(kt)	(g/t Emeralds)	(g/t Beryl)	(g/t Total)	(Mct Emeralds)	(Mct Beryl)	(Mct Total)
Total Measured + Indicated	0	0.0	0.0	0.0	0.0	0.0	0.0
Inferred	1,462	22.6	57.4	80.0	164.9	419.9	584.8
Subtotal	1,462	22.6	57.4	80.0	164.9	419.9	584.8
Mineral Resources							
Total Resources	<u>1,462</u>	<u>22.6</u>	<u>57.4</u>	<u>80.0</u>	<u>164.9</u>	<u>419.9</u>	<u>584.8</u>

(1) No Measured or Indicated Mineral Resources are defined at Kagem and no Mineral Resources are defined at Mbuva-Chibolele.

#### Gemstone Assets: Amethyst Mineral Resource statement (1 January 2008)<sup>(1)</sup>

Mineral Resources	Tonnage (kt)	Grade (kg/t Amethyst)	Content (kt Amethyst)
Total Measured + Indicated	0	0.0	0.0
Inferred	325	37.1	12.1
Subtotal	325	37.1	12.1
Mineral Resources			
Total Resources	<u>325</u>	<u>37.1</u>	<u>12.1</u>

(1) No Measured or Indicated Mineral Resources are defined at Kariba.

#### Enlarged Group Assets: Attributable Emeralds and Beryl Mineral Resource statement (1 January 2008)<sup>(1), (2)</sup>

Mineral Resources	Tonnage		Grade		Content		
	(kt)	(g/t Emeralds)	(g/t Beryl)	(g/t Total)	(Mct Emeralds)	(Mct Beryl)	(Mct total)
Total Measured + Indicated	0	0.0	0.0	0.0	0.0	0.0	0.0
Inferred	1,097	22.6	57.4	80.0	123.7	314.9	438.6
Subtotal	1,097	22.6	57.4	80.0	123.7	314.9	438.6
Mineral Resources							
Total Resources	<u>1,097</u>	<u>22.6</u>	<u>57.4</u>	<u>80.0</u>	<u>123.7</u>	<u>314.9</u>	<u>438.6</u>

(1) No Measured or Indicated Mineral Resources are defined at Kagem and no Mineral Resources are defined at Mbuva-Chibolele.

(2) Reported using 75 per cent. equity participation for Kagem.

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**Enlarged Group Assets: Attributable Amethyst Mineral Resource statement (1 January 2008)<sup>(1), (2)</sup>**

<b>Mineral Resources</b>	<b>Tonnage (kt)</b>	<b>Grade (kg/t Amethyst)</b>	<b>Content (kt Amethyst)</b>
Total Measured + Indicated	0	0.0	0.0
Inferred	163	37.1	6.0
Subtotal	163	37.1	6.0
Mineral Resources	—	—	—
Total Resources	<u>163</u>	<u>37.1</u>	<u>6.0</u>

(1) No Measured or Indicated Mineral Resources are defined at Kariba.

(2) Reported using 50 per cent. equity participation for Kariba.

*The above tables are extracted from paragraph 2.2 of the Competent Person's Report set out in Part VII of this document. Details of key assumptions, parameters and methods used to estimate mineral resources are set out in the Competent Person's Report.*

***Oriental Mining***

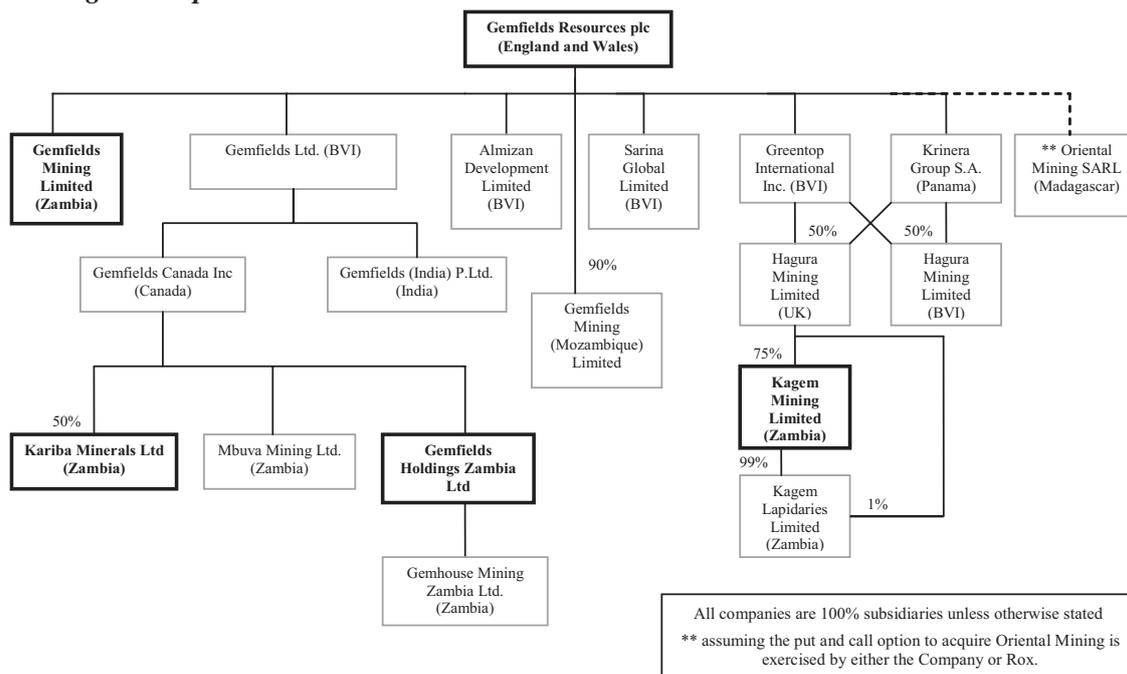
Oriental Mining is a company which was registered in Madagascar in September 2007 and is prior to the Acquisition, a wholly owned subsidiary of Rox. Oriental Mining is (subject to certain registration requirements which are further explained below and in the risk factors set out in Part VI of this document) the holder of 15 licences in the Antananarivo, Fianarantsoa and Toliara provinces of Madagascar covering rubies, sapphires and emeralds, as well as garnets and tourmalines. Madagascar is presently believed to be one of the most prospective mineral provinces in the world for coloured gemstones.

The rights in the 15 exploration mining licences to be held by Oriental Mining were transferred to Oriental Mining pursuant to a sale and purchase agreement in October 2007. As at the date of this document, applications have been filed for the transfer of these licences to Oriental Mining with the Bureau de Cadastres Miniers de Madagasca ("BCCM"), the Madagascar Ministry of Mines but, until new mining titles are issued by the BCCM in the name of Oriental Mining, the transfer is not complete.

***Fabergé brand name***

Fabergé Limited was established during 2006 for the purpose of acquiring the Fabergé brand and pursuing Fabergé's heritage of excellence in creativity, design and craftsmanship. In January 2007, Fabergé Limited acquired Unilever plc's worldwide portfolio of Fabergé trademarks, licences and associated rights. Gemfields has conditionally acquired the option (also exercisable by Fabergé Limited), within 3 months of Completion, to enter into a 15 year worldwide and exclusive licence with Fabergé Limited to use the Fabergé name in branding, marketing and selling coloured gemstones excluding diamonds. The Fabergé name carries exceptional branding potential and it is intended that, following the completion of the Fabergé Licence Agreement, it will become the Enlarged Group's premium brand.

## Enlarged Group Structure



Further information on Gemfields and Kagem is set out in Parts III, VIII and IX of this document.

### 5. Strategic development plan

The Enlarged Group intends to pursue vertical integration in the coloured gemstone industry on an international scale. Its vision is to become a leading integrated supplier of rough and cut and polished coloured gemstones. The principal methods of achieving this vision will be by establishing cutting and polishing facilities in Jaipur, India and securing suitable sales and marketing contracts.

Further details of the Enlarged Group's strategic development plan are set out in Part II of this document and can be broken down to include:

- continuing the improvements in efficiency and processes at the Kagem Emerald Mine with a view to ramping up production from 200-300,000 tonnes per annum to a run rate of in excess of 1.4 million tonnes of TMS per annum by July 2009. The Directors and Proposed Directors believe that cash costs per tonne of TMS produced are expected to be in the range of \$18-19 per tonne upon reaching the 1.4 million tonnes annual production rate. The Directors and Proposed Directors expect that these costs will rise over time as stripping requirements increase.
- improving security at the Kagem Emerald Mine. Theft is a material risk of any precious stone operation and, based on the experiences which the Group has in implementing security measures and mining processes at the Mbuva-Chibolele mine, steps have already begun to improve security at the Kagem Emerald Mine;
- modifying sales formats for example by pursuing direct sales, increasing the number of buyers attending an auction and increasing the scope to include manufacturing jewellers and buyers from a larger number of countries;
- processing, cutting and polishing via the establishment of cutting and polishing facilities in Jaipur, India;
- focussing marketing and branding by developing appropriate marketing campaigns to promote coloured gemstones in general and, at the outset, emeralds in particular, and the use the Fabergé brand name on coloured gemstones to extract premium prices for the Enlarged Group's very best gemstones;
- developing a structured and consistent supply chain. The coloured gemstone industry is renowned for the unstructured nature of its supply chain and erratic supplies to customers. By working with gemstone processors, manufacturing jewellers and retailers, the Directors and Proposed Directors believe that the Enlarged Group should be well positioned to create a structured pipeline which will ensure consistent supply and enhance credibility with, and therefore prices from, consumers;

- ethical sourcing and assured provenance, obtaining premium pricing by building strong consumer allegiance to its gemstones through supplying only natural, “organic” and CIBJO-approved gemstones, adopting the highest ethical standards and a “direct from source” capability to guarantee the provenance of high-end gemstones and operating its mines in accordance with the highest environmental, social and safety standards;
- drilling and exploration programmes to grow and refine resources figures at existing operations and particularly at the Kagem Emerald Mine;
- appropriate restructuring and a reduction in the number of legal entities in the Enlarged Group’s structure; and
- recruitment of appropriate additional operational teams for mining, processing, marketing and sales.

The Enlarged Group is also actively seeking to acquire additional mine sites and licences in the NRERA and expand its geographic footprint by the acquisition of other coloured gemstone assets internationally, thereby also broadening its product portfolio.

The proposed worldwide and exclusive Fabergé licence will entitle the Enlarged Group to brand coloured gemstones with the Fabergé name. Fabergé will be used as the Enlarged Group’s premium brand and will pioneer the Enlarged Group’s policy of ethical sourcing, guaranteed provenance and strong branding to maximise the value and appeal of the Enlarged Group’s gemstones. It will be the ownership of the producing assets along with an integrated supply chain which will enable the Enlarged Group to guarantee the exact provenance of its gemstones and assure customers of their ethical legacy. The importance of such considerations to today’s consumer can be seen in how blood, conflict and origin issues have affected the diamond industry.

## **6. Overview of the gemstone market**

The worldwide gemstone industry is comprised of two distinct segments: the diamond market and the coloured gemstone market. According to Gemworld International Inc, the growth potential for the coloured stone sector is tremendous. The success of the DeBeers model in managing the production and distribution of diamonds is self evident in the dominant position that diamond enjoys in the market today, although competition at the retail level of the market and the alteration of once clearly defined boundaries between wholesale and retail have resulted in a sharp decline in the profit margins for diamonds sold to consumers. This is one reason that the traditional retail jewellery store model is evolving by dedicating greater retail space and resources to the promotion of coloured stone related products.

In addition to strong demand, prices for fine gemstones have continued to rise. One factor is the value of the dollar, which remains weak compared to its pre 2001 levels. Another factor is that top-end gemstones are more difficult to find and the competition for them is fierce. Some gem varieties have clearly benefited more than others from the current trends. A 2006 study showed that in terms of individual gemstones, emeralds saw the biggest jump in value while the import total only increased 12.4 per cent. from 2004 to 2005 the price per carat was up nearly 70 per cent..

In respect of emeralds, Colombia, Zambia and Brazil are the primary producers in the international gem trade. Colombia has been the principal producer of fine quality emeralds for centuries but, following controversy over treatments used for emerald enhancement in the late 1990’s, there has been a market appreciation of Zambian emeralds based on their quality. Zambian emerald tends to be higher clarity than that of the other two main sources (Colombia and Brazil). Many dealers prize Zambian emeralds for their transparency, with many stones exhibiting a clear “crystal” transparency that gives them an attractive appearance. Zambian emeralds are also prized for their rich bluish green colour, a colour which is generally considered unique to this area. As a result the need for treatment of Zambian emeralds is less than that of any other known active emerald source. This has proven increasingly important to treatment weary consumers.

Data from auctions held by Sothebys and Christies show that per carat prices for emeralds, rubies and sapphires can exceed the per carat prices achieved for diamonds at such auctions. By way of example, and while these are rare and exceptional stones, in October/November 2007: a 10.2 carat step-cut Colombian emerald was sold for US\$62,600 per carat; a 25.4 carat Kashmir sapphire was sold for US\$70,300 per carat; a 7.2 carat Burmese ruby was sold for a remarkable US\$262,700 per carat; and a 10.5 carat diamond (of colour/clarity:D/IF) was sold for US\$118,100 per carat.

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Traditional supply and demand thinking is not well suited to the coloured gemstone industry. For example, the Directors and the Proposed Directors believe that inconsistent supply impacts negatively on the demand for coloured gemstones and demand could therefore be increased by increasing regular supply. Marketing and branding are an important ingredient in delivering this strategy successfully. Tanzanite One Limited is a good example of how this can be achieved: worldwide production of tanzanite increased in recent years and prices more than doubled in the last ten years.

Further details on the gemstone market are set out in the Gemstone Market Report prepared by Gemworld International, Inc at Part IV of this document.

## **7. Overview of Zambia**

Zambia is an important source of gemstones for the world's jewellery market. In 1995, Zambia enacted investor friendly mineral and mining legislation (which has recently been revised) and dozens of international mining companies have since established mining and/or exploration activities in the country. In addition, over US\$750 million has been earmarked by mining companies for investment in the Zambian copper mining industry in the foreseeable future. In November 2007, Zambia won the Mining Journal's Country Award for its expanding mineral production, transparent mining law, excellent infrastructure and improved corporate governance.

Politically, Zambia has maintained amicable relations with its neighbouring countries resulting in continued stability. It is a member of the Southern African Development Community and has had four different consecutive democratically elected governments over the past 16 years. No government has been overthrown by a coup d'etat and the risk of armed conflict is low. In terms of infrastructure, Zambia's exports are sent to ports in neighbouring countries via railway. Investment in Zambia's road network has been scaled up since the launch of a 10 year US\$1 billion investment program in 1998. Zambia's main source of power is its hydroelectricity resources and the Zambia Electricity Supply Corporation is addressing a rising demand by upgrading the existing infrastructure through construction of new hydroelectric projects.

## **8. Current trading and prospects**

### *Gemfields*

As announced on 21 December 2007, the Group recorded an audited loss of US\$7,274,446 for the year ended 30 June 2007 in its audited financial statements for the year ended 30 June 2007, prepared under UK GAAP and, as announced on 31 March 2008, the Group recorded an unaudited loss of US\$3,006,199 for the six months ended 31 December 2007 and recorded an unaudited loss of US\$7,267,169 for the year ended 30 June 2007, in its unaudited interim financial statements, prepared under International Financial Reporting Standards as adopted by the EU. A summary of the Group's financial information is set out in Part III of this document and in order to make a proper assessment of the current trading of the Group, a prospective investor should read the whole of this document.

### *Mbuva-Chibolele Emerald Mine*

Production has continued at the Mbuva-Chibolele mine since 30 June 2007. Although some high quality emeralds have been mined, including the 10,050 carat emerald previously reported, the overall yield at Mbuva-Chibolele has so far been disappointing. The Group has only mined a relatively low amount of ore from this pit so it is too early to say if this trend is likely to continue. The right geological conditions exist for the occurrence of emeralds and there have been some encouraging signs as the mine gets deeper.

No emerald sales have taken place since 30 June 2007. This decision was taken by the Directors in order to build up a larger inventory of emeralds than that which was offered at previous sales. When the next sale does take place the larger inventory will mean larger suites of similar emeralds will be offered for sale and it is anticipated that this will lead to higher prices being achieved.

The Directors have also decided to temporarily cease production at Mbuva-Chibolele from the first quarter of 2008. It has been decided that all mining management and staff resources and also machinery should be devoted to the Kagem Emerald Mine for now given its proven history of production which suggests that greater yields will be achieved. The intention is to return to

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production at Mbuva-Chibolele at some stage in the future. The Directors anticipate that the selling prices of emeralds will improve over time as a result of Gemfields' overall strategy and this could make Mbuva-Chibolele profitable if and when that occurs.

#### *Kariba Amethyst Mine*

Production at the Kariba amethyst mine has also continued since 30 June 2007. However the privatisation agreement to purchase a further 26 per cent. of Kariba Minerals Limited (the company which holds the mining licence to the Kariba amethyst mine in which the Group holds a 50 per cent. interest with the remaining 50 per cent. held by the Government of the Republic of Zambia) from the Zambian government remains unsigned. The Company has not received any explanation regarding the delay. The Directors remain confident that production can be improved but Gemfields will not be committing any substantial funds to the expansion plan until this matter is resolved.

#### *Kamakanga Emerald Mine*

Exploratory trenching carried out at the Kamakanga emerald mine has indicated the TMS bands to be discontinuous and patchy. All the geological, geophysical and geochemical data generated so far has been assimilated to understand the complex structure in this part of the emerald belt but it remains inconclusive. Exploration will be resumed with core drilling after the rainy season during the second quarter of 2008 to assess the potential of the area to support large scale mining.

#### *NRERA Prospecting Licences*

A high resolution airborne magnetic and radiometric survey has been carried out in an 863 sq km area over the prospecting licences in the NRERA leading to the identification of anomalies pointing at possible TMS belts and pegmatitic zones. The Company intends to carry out exploratory pitting and geochemical sampling over the course of the next year.

#### *Jagoda*

An option agreement for the acquisition of a mining licence for the Jagoda mine, a pink tourmaline mine, was signed in December 2006 and the option was extended (in August 2007) to March 2008. However the results of the exploration carried out by the Group at the mine remained inconclusive hence the Board decided to allow the option to lapse without exercise.

#### *Kagem*

Kagem recorded an audited loss of K292,913,000 (US\$75,973 based on an exchange rate of US\$1:ZMK3,855.5) for the six months ended 30 September 2007. This information has been extracted from Part VIII of this document.

Gemfields was awarded a management contract with Hagura UK in November 2007 to manage and operate the Kagem Emerald Mine in anticipation of the acquisition of the Target Group. The contract will remain in place until Completion. Under the management contract, Gemfields provides all day to day management and operational skills including the provision of personnel and equipment. Kagem recognised the wealth of experience in emerald exploration and mining techniques held by Gemfields which can assist in the development of the mine. The Directors believe that the awarding of the contract signifies a vote of confidence in the management and operational teams the Group has built. Several steps have already been taken to improve operations at Kagem including the following:

- a mining contract has been awarded to speed up the removal of a backlog in waste and mining capacity has already risen from 150,000 tonnes per month to 600,000 tonnes;
- in-house mining machinery is undergoing a major overhaul to increase capacity;
- management has been improved and strengthened. Staffing levels in various departments have been rationalised in numbers and skills by recruitment, promotions and terminations;
- the security department is undergoing a complete revamp with the introduction of expatriate security personnel;
- an infrastructure upgrade on the mine is in progress with additional buildings, a training centre for personnel and various facilities being erected;

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- resource drilling is in progress to define the resources of the FF-F10 pit and other prospects. So far approximately 3,000 metres has been completed; and
  - an upgrade of the treatment plant is in progress to increase its capacity to match the projected ore production.

Immediately prior to the acquisition of the Target Group by Rox, one emerald auction took place in Kitwe, Zambia (in October 2007) at which approximately 2,000,000 carats were sold producing gross revenues of approximately US\$1.4 million.

As mentioned above, the Directors have decided to temporarily cease production at Mbuva-Chibolele from the first quarter of 2008 in order to focus management, staff resources and machinery on the Kagem Emerald Mine given its proven history of production.

## 9. The Board

It is proposed that Sean Gilbertson and Finn Behnken will join the Board on Completion as interim chief executive officer and non-executive director respectively. Graham Mascall will remain as non-executive chairman, Rajiv Gupta will remain as executive vice-chairman, Richard James will remain as chief financial officer and Clive Newall will remain as a non-executive director. Prior to the publication of this document, Peter Kitchen, Sanjay Khandelwal and Valentine Chitalu resigned from the Board. The Company expresses its thanks to Messrs. Kitchen, Khandelwal and Chitalu for their contribution during their time at Gemfields and in recognition of their contribution during that time, the Directors have proposed that the share options held by Messrs Kitchen, Khandelwal and Chitalu continue to be exercisable after their resignation and for a period of up to three years following Admission. This proposal will be subject to approval by the Shareholders at the EGM in accordance with the rules of the Unapproved Scheme.

In addition to remaining as executive vice chairman of the Company, Rajiv Gupta will continue in his significant role of helping the Group to acquire prospective gemstone properties. He will also have key responsibility for implementing the marketing, cutting and polishing aspects of the Group's strategy.

Brief biographies of the Directors and Proposed Directors post-Admission are set out below. Details of their letters of appointment or service contracts are summarised in paragraph 6 of Part IX of this document. The Company will seek to appoint a permanent chief executive officer in the future.

### *Graham Mascall, Non-Executive Chairman, aged 61*

Graham Mascall graduated in 1969 as a mining engineer from the Cambourne School of Mines and gained a Master of Engineering, Mineral Economics from McGill University, Montreal in 1972. He has developed his career in the mining finance sector and from 1997 to 2001 held various senior level positions with Billiton plc. He has also held the following positions of responsibility: director of Deutsche Morgan Grenfell International; vice president (Corporate Development) of Outokumpu Metals & Resources Oy; assistant director of Kleinwort Benson Securities Ltd; and assistant director (Mining Finance) at Barclays Bank plc. He is currently chief executive officer of Lubel Coal Company (UK) Limited. Graham Mascall has been a director of the Company since 20 November 2004.

### *Rajiv Gupta, Executive Vice-Chairman, aged 45*

Rajiv Gupta originates from Jaipur, a prominent gemstone cutting and polishing centre in India, one of the largest in the world for emeralds in terms of volume. Rajiv Gupta has a bachelors degree in commerce from Bombay University. He has over 22 years experience of coloured gemstone mining, processing and marketing gained through his family's extensive interests in the coloured gemstone industry. As a member of the Gupta family, who have been mining, processing and trading gemstones for over 30 years, he has extensive international exposure and experience in the global gemstones industry. Rajiv Gupta has been a director of the Company since 11 June 2004.

### *Sean Gilbertson, Interim Chief Executive Officer, aged 35 — Proposed Director*

Sean Gilbertson graduated as a mining engineer from the University of the Witwatersrand in South Africa having spent time in the country's deep-level gold and platinum mines. From 1995 he worked for Deutsche Bank Ag and Deutsche Morgan Grenfell in Frankfurt and London specialising in

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project finance. He co-founded globalCOAL in 1998 and was appointed chief executive officer in 2001 when the business was acquired by industry players including, inter alia, Anglo American plc, BHP-Billiton Ltd, Glencore International Ag and Rio Tinto plc. He joined the office of Brian Gilbertson in late 2003, working on a variety of natural resources projects and culminating in the establishment of Pallinghurst Resources LLP in 2005. Sean Gilbertson is a partner of Pallinghurst Resources and is a director of certain Pallinghurst portfolio companies including Rox Limited and Fabergé Limited. He will be appointed as interim chief executive of the Company on Admission and will dedicate two thirds of his professional time to the Company.

*Richard James, Chief Financial Officer, aged 35*

Richard James graduated from Auckland University in 1993 with a Bachelor of Commerce degree. He subsequently joined Price Waterhouse and qualified as a Chartered Accountant in 1997. He has worked in London in various positions. Immediately prior to joining Gemfields he was the chief financial officer of a Toronto Stock Exchange listed gold mining company with mines in Central Asia. Richard James has been a director of the Company since 8 March 2005.

*Clive Newall, Non-Executive Director, aged 58*

Clive Newall graduated from the Royal School of Mines in 1971 and has an MBA from the Scottish Business School. He is a founder and president of First Quantum Minerals Ltd. Earlier in his career he held senior management positions with Amax Exploration Inc and the Robertson Group. More recently he has been a director of a number of junior mining companies including Anvil Mining Ltd and Kensington Resources Ltd. Clive Newall has been a director of the Company since 19 April 2005.

*Finn Behnken, Non-Executive Director, aged 36 — Proposed Director*

Finn Behnken graduated as a mining engineer from the University of the Witwatersrand in South Africa having worked in coal and gold mining. He furthered his career by specialising in mining finance and spent almost 10 years with South Africa's Nedbank Ltd serving, *inter alia*, as a non-executive director in relation to certain of its producing mining investments. Nedbank moved him to London in 2006 to develop their international business. He has had wide ranging interaction with small and mid-size listed mining companies across the commodity spectrum and has travelled extensively visiting mines around the globe. Finn Behnken joined Pallinghurst Resources in 2007 and will join the Board as a non-executive director on Admission.

## **10. Senior management and employees**

In addition to the experience of the Directors and Proposed Directors, Alok Sood will continue as chief operating officer. Alok Sood is a geologist with over 24 years of professional experience, and brings a thorough understanding of gemstone geology and has first hand operational and mining experience in Zambia. He has worked in emerald belts extensively, and in other gemstones including amethyst and yellow tourmaline. He has been instrumental in developing an extensive database and understanding of emerald geology in the Ndola region of Zambia over the last 10 years. The Company will take full advantage of his skills in these areas.

Further information on other members of the senior management and employees of the Enlarged Group is set out in Part III of this document.

## **11. Share options and management incentives**

The Company operates the Unapproved Scheme to incentivise directors and employees of the Group. The Directors intend to grant options over a total of 4,430,000 Ordinary Shares under the Unapproved Scheme, including to each of the Directors or Proposed Directors (save for Rajiv Gupta), together with certain other employees on Admission. These options will have an option exercise price equal to the Issue Price. The aggregate number of Ordinary Shares over which options have been granted and will be outstanding as at the date of Admission (assuming no options are exercised between the date of this document and Admission) will be 12,690,000. The percentage of the Enlarged Share Capital that the Ordinary Shares under option would represent on exercise is approximately 4.10 per cent. Further details of the Unapproved Scheme and grants thereunder are set out in paragraph 7 of Part IX of this document.

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## 12. Corporate governance and share dealing code

The Non-Executive Directors and Proposed Directors acknowledge the importance of the Combined Code on Corporate Governance and intend, following Admission, to apply its principles so far as is practicable and appropriate to a company of the size and nature of the Company.

The Company has established an audit committee, a nomination committee, a remuneration committee and a health, safety, social and environmental committee (the “**HSSE committee**”), each with formally delegated rules and responsibilities.

### *Audit Committee*

The audit committee will receive and review reports from management and the Company’s auditors relating to the annual and interim accounts and the accounting and internal control systems of the Company. It will meet at least twice a year with the Company’s auditors. The audit committee will have unrestricted access to the Company’s auditors. The proposed members of the audit committee following Admission are Graham Mascall (as chairman), Clive Newall and Finn Behnken. The Board has identified that Finn Behnken is not considered fully independent for the purposes of the Combined Code because of his appointment to the Board at the nomination of Rox, a significant shareholder. However, the Board considers that he will be a valuable member of the audit committee because of his expertise in mining finance.

### *Nomination Committee*

The nomination committee will meet as required (but not less than twice a year) for the purpose of considering new or replacement appointments to the Board and to regularly review the structure, size and composition required of the Board and make recommendations to the Board with regard to any changes. The proposed members of the nomination committee following Admission are Graham Mascall (as chairman), Clive Newall and Finn Behnken.

### *Remuneration Committee*

The remuneration committee will review the performance of the Executive Directors and will set and review the scale and structure of their remuneration and the terms of their service contracts with due regard to the interests of Shareholders. No Executive Director will be permitted to participate in discussions or decisions concerning his own remuneration. In determining the remuneration of the Executive Directors, the remuneration committee will seek to enable the Company to attract and retain executives of the highest calibre. The remuneration and terms and conditions of appointment of the Non-Executive Directors will be set by the Board. The remuneration committee will also make recommendations to the Board concerning the allocation of share options to employees. The remuneration committee will meet at least twice a year and the proposed members of the remuneration committee following Admission are Graham Mascall, Clive Newall (as chairman) and Finn Behnken.

### *HSSE Committee*

The HSSE committee has responsibility for formulating and recommending to the Board the Group’s policy for HSSE issues as they affect the Group’s operations. The HSSE committee will also be responsible for reviewing management investigations of incidents or accidents that occur in order to assess whether policy improvements are required. The ultimate responsibility for establishing HSSE policy shall remain with the Board. The HSSE committee will invite specialists with appropriate technical expertise to attend committee meetings on a regular basis. The HSSE committee will meet at least four times each year. The proposed members of the HSSE committee following Admission are Graham Mascall, Clive Newall and Finn Behnken (as chairman). However, other Directors or members of senior management may be invited to attend all or part of any meeting as and when appropriate.

### *Share Dealing Code*

The Company has adopted a code for directors’ and key employee share dealings which is appropriate for an AIM quoted company. The Directors and Proposed Directors will comply with Rule 21 of the AIM Rules for Companies relating to directors’ dealings and will take all reasonable steps to ensure compliance by the Enlarged Group’s applicable employees as required by the AIM Rules for Companies.

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### 13. Details of the Placing and Admission

The Company is proposing to raise approximately £30 million by the placing of 66,666,667 Placing Shares of which 36,292,223 will be placed with Rox. The Placing Shares have been placed at a price of 45p per share representing a premium of 46.07 per cent. to the 30 day volume weighted average Gemfields' share price prior to 18 December 2007, the date of the announcement of the proposed Acquisition. The Placing Shares will represent approximately 21.56 per cent. of the Enlarged Share Capital on Admission (assuming no options are exercised between the date of this document and Admission). The Directors and Proposed Directors intend to use the proceeds of the Placing as set out below:

• Capital expenditure (Kagem, Kariba, Jaipur and corporate)	US\$15m
• Exploration and other mining operating expenditure	US\$4m
• Corporate operating expenditure	US\$8m
• Cutting and polishing expenditure (including marketing)	US\$5m
• Acquisitions and working capital	US\$23m

In the interim period prior to Completion, Rox has agreed to advance up to US\$15 million to Kagem for operating expenditure, capital expenditure and working capital purposes at the Kagem Emerald Mine. Part of the proceeds from the Placing will be used to repay this loan (further details of which are set out in paragraph 10.1.2 of Part IX of this document).

Under the terms of the Placing Agreement, Canaccord and JPMorgan Cazenove have each agreed to act as agent for the Company (conditional on Admission), and to use their reasonable endeavours to procure placees for the Placing Shares at the Issue Price. The Placing Agreement contains provisions entitling Canaccord and JPMorgan Cazenove to terminate the Placing Agreement at any time prior to completion of the Placing in certain circumstances. The Placing has not been underwritten. Further details of the Placing Agreement are set out in paragraph 10.1.3 of Part IX of this document.

### 14. The City Code on Takeovers and Mergers

Although the Company is incorporated in England and Wales and the Existing Ordinary Shares are admitted to trading on AIM, the Company is not currently considered to be resident in the UK for the purposes of the City Code as its assets and place of management and control are considered to be outside the UK. It is the Directors' and Proposed Directors' intention to maintain the Enlarged Group's assets and place of management and control outside the UK and accordingly, the Company will not be subject to takeover regulation in the UK until such time as this position changes. Investors should therefore be aware that the protections afforded to shareholders by the City Code which are designed to regulate the way in which take-overs are conducted will not be available. It is therefore possible that an offeror may gain control of the Company in circumstances where the non-selling shareholders do not receive, or are not given the opportunity to receive, the benefit of any control premium paid to the selling shareholder(s).

### 15. Shareholdings

Immediately following the Acquisition, the Placing and Admission, the approximate percentages of the Enlarged Share Capital held by Rox, the placees and the Existing Shareholders will be as follows:

Rox	56.35 per cent.
Placees (excluding Rox)	9.83 per cent.
Existing Shareholders	33.83 per cent.

The Company has been notified that pursuant to an agreement between Rox and a vehicle of which Rajiv Gupta is a beneficiary, Rajiv Gupta has agreed to transfer his entire beneficial shareholding in the Company to Rox within 3 months of Admission which will mean Rox will hold 183,091,453 Ordinary Shares representing 59.22 per cent. of the Enlarged Share Capital following such transfer (assuming no options are exercised between the date of this document and the date of such transfer).

Further details of significant shareholders are set out in paragraph 8 of Part IX of this document.

### 16. Lock-in and escrow arrangements

The continuing Directors and Proposed Directors have agreed (subject to certain standard exceptions) not to dispose of any interests in any of the Ordinary Shares for a period of 12 months

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from Admission other than through Canaccord or JPMorgan Cazenove in such orderly manner as Canaccord or JPMorgan Cazenove respectively shall reasonably require with a view to the maintenance of an orderly market in the Ordinary Shares.

Rox will, on Completion, enter into the Rox Escrow Agreement whereby it has agreed to put into escrow the Consideration Shares or the proceeds from any sale of the Consideration Shares up to a maximum amount of US\$60 million until 30 June 2009 unless a claim has been brought in which case such shares or proceeds would be retained pending settlement of such claim. The terms of the Rox Escrow Agreement are described more fully in paragraph 10.1.2 of Part IX of this document.

In addition, Rox has agreed (save for certain standard exceptions) not to dispose of any interest in any Ordinary Shares held by it (save for any Placing Shares issued to Rox in connection with the Placing) for a period of 12 months following Admission. For a further period of 12 months after the expiry of the above period, Rox has agreed not to dispose of any interests in any Ordinary Shares other than through Canaccord or JPMorgan Cazenove in such orderly manner as Canaccord or JPMorgan Cazenove respectively shall reasonably require with a view to the maintenance of an orderly market in the Ordinary Shares.

#### **17. Irrevocable undertakings**

The Directors have irrevocably undertaken to the Company, to vote in favour of the Resolutions in respect of their own beneficial holdings of, in aggregate, 8,934,606 Existing Ordinary Shares, representing approximately 8.5 per cent. of the existing issued share capital of the Company.

#### **18. Relationship Agreement**

The Company will, on Completion, enter into a Relationship Agreement with Rox. Under the Relationship Agreement, the parties agree to regulate their relationship so that the Group is capable of carrying on its business and making decisions independently of Rox. The Board considers this Relationship Agreement necessary given that following the Placing and Admission it is intended that Rox will own approximately 59.22 per cent. (following the transfer of Rajiv Gupta's entire beneficial shareholding to Rox) of the Enlarged Share Capital of the Group and will have two representatives on the Board. The terms of the Relationship Agreement are described more fully in paragraph 10.1.2 of Part IX of this document.

#### **19. Admission, settlement and CREST**

It is expected that dealings in the Existing Ordinary Shares will resume at 8.00 a.m. (BST) on 13 May 2008 being the date of this document. Application will be made for the Existing Ordinary Shares to be re-admitted and the New Ordinary Shares to be admitted to trading on AIM. If the Resolutions are duly passed and the other conditions set out in the Acquisition Agreement and Placing Agreement are met, dealings in the New Ordinary Shares are expected to commence at 8.00 a.m. (BST) on 6 June 2008, being the first business day immediately following the EGM.

CREST is a paperless settlement procedure enabling securities to be evidenced otherwise than by a certificate and transferred otherwise than by a written instrument in accordance with the Uncertificated Securities Regulations 2001. The articles of association of the Company permit the holding of Ordinary Shares under the CREST system and the Ordinary Shares are capable of being held in certificated or uncertificated form. All the Ordinary Shares will be in registered form and no temporary documents of title will be issued. The Existing Ordinary Shares are already admitted to CREST and the New Ordinary Shares will also be issued through and capable of settlement through CREST following Admission.

Accordingly, settlement of transactions in the Ordinary Shares following Admission may take place within the CREST system if any Shareholder so wishes. CREST is a voluntary system and holders of the Ordinary Shares who wish to receive and retain share certificates will be able to do so.

#### **20. Dividend policy**

The Directors and Proposed Directors do not intend to commence the payment of dividends in the immediate future. They consider that it is likely to be more prudent to retain cash generated to fund the expansion of the Company. They will reconsider the Company's dividend policy from time to

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time. The declaration and payment by the Company of any dividends will depend on the results of the Company's operations, its financial condition, cash requirements, future prospects, profits available for distribution and other factors deemed to be relevant at the time.

## **21. Extraordinary General Meeting**

Given the size of the proposed Acquisition it is conditional upon the approval of Shareholders which is to be sought at the EGM convened for 10.00 a.m. (CET)/9.00 a.m. (BST) on 5 June 2008 at 42 Avenue Raymond Poincaré, 75782, Paris. A notice convening the EGM is set out at the end of this document.

At this meeting, the following resolutions will be proposed:

### ***Ordinary Resolutions***

1. Resolution 1 to approve the Acquisition.
2. Resolution 2 (which is conditional upon the Acquisition Agreement and the Placing Agreement becoming unconditional in all respects save for Admission and on resolution 1 being passed) to increase the authorised share capital of the Company from £2,000,000 to £6,000,000 and authorise the Directors to allot sufficient Ordinary Shares to effect the Acquisition and the Placing and also to allot further shares up to an aggregate nominal amount of £1,000,000.
3. Resolution 3 to approve, pursuant to the Unapproved Scheme, the extension to the term during which share options over an aggregate of 1,275,000 Ordinary Shares granted to Peter Kitchen, Sanjay Khandelwal and Valentine Chitalu (directors of the Company who resigned immediately prior to publication of this document) will be exercisable at any time prior to the third anniversary of Admission.

### ***Special Resolutions***

4. Resolution 4 (which is conditional upon the Acquisition Agreement and the Placing Agreement becoming unconditional in all respects save for Admission and on resolutions 1 and 2 being passed) to empower the Directors, pursuant to section 95(1) of the Act, to allot equity securities on a non pre-emptive basis in respect of, *inter alia*, the Acquisition and the Placing and up to an additional aggregate nominal amount of £650,000.
5. Resolution 5 to approve the change of name from Gemfields Resources plc to Gemfields plc.

Following the passing of the Resolutions, the Company will have an authorised but unissued ordinary share capital comprising Ordinary Shares representing approximately 94.08 per cent. of the Enlarged Share Capital (assuming that no options over Ordinary Shares are exercised between the date of this document and Admission). The Directors and Proposed Directors believe this will give them sufficient headroom for the foreseeable future.

The passing of Resolution 2 will, following completion of the Acquisition and Placing, give the Directors authority under section 80 of the Act to allot 100,000,000 Ordinary Shares, representing approximately 32.35 per cent. of the Enlarged Share Capital (assuming that no options over Ordinary Shares are exercised between the date of this document and Admission) until the expiry of 15 months from the date of the EGM or the date of the next annual general meeting of the Company.

The passing of Resolution 4 will, following completion of the Acquisition and Placing, give the Directors authority under section 95 of the Act to allot, for cash, up to 65,000,000 Ordinary Shares representing approximately 21.03 per cent. of the Enlarged Share Capital (assuming that no options over Ordinary Shares are exercised between the date of this document and Admission) without first being required to offer such securities to existing shareholders in accordance with statutory pre-emption rights until the expiry of 15 months from the date of the EGM or the date of the next annual general meeting of the Company. Whilst there is no present intention to issue any Ordinary Shares pursuant to this authority other than in connection with the exercise of options, the Directors believe that this authority provides them with the flexibility to react rapidly to business and financing opportunities as they arise.

## **22. UK taxation**

Further information regarding UK taxation is set out in paragraph 12 of Part IX of this document. If you are in any doubt as to your tax position, you should contact your professional adviser.

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### **23. Further information**

The attention of investors is drawn to the information contained in the whole of this document which provides additional information on the Company and the Target Group.

If the Resolutions are not passed at the EGM the conditions of the Acquisition Agreement and the Placing Agreement will not be satisfied. Consequently, neither the Acquisition nor the Placing will occur.

### **24. Action to be taken**

You will find enclosed with this document a Form of Proxy for use by Shareholders at the Extraordinary General Meeting.

Whether or not you propose to attend the Extraordinary General Meeting in person you are requested to complete the Extraordinary General Meeting Form of Proxy in accordance with the instructions printed thereon. To be valid, completed Extraordinary General Meeting Forms of Proxy must be returned by post or by hand to the Company's registrars, Capital Registrars (details of which are set out in the Form of Proxy) as soon as possible, but in any event so as to arrive no later than 10.00 a.m. (CET)/9.00 a.m. (BST) on 3 June 2008, whether or not you propose to be present at the Extraordinary General Meeting.

If you complete and return the Form of Proxy you may still attend and vote at the meeting in person should you decide to do so.

### **25. Risk factors**

Investing in the Enlarged Group involves a degree of risk. The price of Ordinary Shares could decline due to any of a number of risks and investors could lose all or part of their investment. An investment in the Enlarged Group is only suitable for investors who are capable of evaluating the risks and merits of the investment and who have sufficient resources to bear any loss which might result from such investment.

The Directors and Proposed Directors have identified the risks set out in Part VI of this document, and, if any of them were to materialise the Enlarged Group's business, financial conditions and results of operations could be materially and adversely affected.

### **26. Board recommendation**

The Directors consider, having consulted with Canaccord Adams Limited, its nominated adviser, that the terms of the proposed placing are fair and reasonable in so far as the shareholders are concerned.

The Directors believe that the Proposals are in the best interests of the Company and the Shareholders as a whole. Accordingly, the Directors unanimously recommend Shareholders to vote in favour of the Resolutions as the Directors have irrevocably undertaken to do in respect of beneficial holdings amounting, in aggregate, to 8,934,606 Ordinary Shares, representing approximately 8.5 per cent. of the issued share capital of the Company.

Yours faithfully

*Graham Mascal*  
*Chairman*

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## PART II

### STRATEGIC DEVELOPMENT PLAN

The first part of the Directors and Proposed Directors' strategic development plan is to improve operations and production at the Kagem Emerald Mine. Increased production is to be achieved through two main drivers. Firstly, the Directors and Proposed Directors believe that, prior to Gemfields taking over management of the Kagem Emerald Mine in November 2007, it was run by an insufficiently qualified management team. Gemfields now employs two mining engineers, two mine managers and six expatriate geologists who have significantly higher expertise than their predecessors. Secondly, the Directors and Proposed Directors believe that Kagem was not efficiently capitalised in the past and equipment was not maintained sufficiently. Significant capital expenditure has been projected in order to purchase more equipment of a better quality and better suited to the operation than previously held at the Kagem Emerald Mine.

Further to the above, the Directors and Proposed Directors believe that the revenues derived from emerald sales can be increased materially by addressing, *inter alia*, the factors discussed in this Part II below.

#### ***Theft***

Theft is a material risk in any precious stone operation. An analysis of Kagem's historical production suggests that more than 80 per cent. of revenues are derived from less than 10 per cent. of the gemstones sold. Accordingly, the loss of only a small proportion of emeralds to theft can result in a significant reduction in revenue. This is exacerbated by the fact that perpetrators are naturally prone to focussing on better quality stones. Kagem has historically experienced considerable theft, both opportunistic and organised, and often as result of collusion between employees and security personnel. The Board believes that significant scope exists for making improvements.

Security at the mining face is vital, where manual chiselling has been the primary method of extracting emeralds at the Kagem Emerald Mine. Gemfields has gained important experience in maximising both security efficacy and the mechanisation of this aspect of the mining process at Mbuva-Chibolele. This experience is gradually being implemented to suit Kagem's circumstances. Camera systems, already in place at the Kagem Emerald Mine's sorting house, have yet to be expanded to cover the mining face, processing plant and picking belts. The use of automated optical sorting technology is being evaluated for implementation at the Kagem Emerald Mine's processing plant. Security measures already implemented include:

- the appointment of a new, expatriate head of security;
- replacement of the former contracted security team with a new, expatriate team;
- an overhaul of the physical search procedures used at the mining face, picking belts and sorting house; and
- random searches of employees.

The Directors and Proposed Directors believe that dealers in the nearby town of Kitwe purchase stolen gemstones from Kagem employees and from the Kamakanga licence area. Solutions to these practices are being sought at government level.

The Directors and Proposed Directors are considering implementing incenvisation and profit sharing arrangements with its employees with an aim to further reduce theft.

#### ***Sales Formats***

The bulk of the Kagem Emerald Mine's historic production has been sold by auction in Lusaka, Zambia. Three auctions were held during 2006 and 2007 in Jaipur, with mixed results. Data in respect of the 13 Lusaka auctions held since 2002 suggests that:

- on average, more than 90 per cent. of the participants were Indian-based or Indian-linked buyers;
- on average, some 15 buyers attended each auction;
- on average, 5 buyers actually bought at each auction;
- on 3 occasions, a single buyer purchased all available emeralds; and
- the 6 largest buyers account for more than 60 per cent. of the total sales over this period.

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The Directors and Proposed Directors believe that revenues from sales can be increased by modifying the sales formats. Measures will include, for example:

- increasing the number of buyers attending an auction and increasing the scope to include manufacturing jewellers also;
- inviting buyers from a larger number of countries (e.g. Israel, Germany, Brazil and the USA);
- optimising participation by selecting the right auction location with suitable pre-auction marketing;
- development of quantitative techniques in order to set appropriate reserve prices for auction parcels;
- increasing direct sales to customers dramatically, with a view to eliminating auctions altogether over time; and
- introducing direct sales of cut and polished gemstones.

### ***Processing, Cutting & Polishing***

The real value of a rough gemstone is only revealed when it has been cut and polished. Accordingly, the pricing for rough gemstones includes an inherent discount to account for this uncertainty. To date, production from the Kagem Emerald Mine has only been sold on a rough basis, without any value addition. Selling a material proportion of production on a cut and polished basis could enhance profits materially. Many trade experts would agree that cutting and polishing, combined with suitable marketing and branding, can increase the value of a rough gemstone by 2 to 3 fold.

Accordingly, the Directors and Proposed Directors believe that significant scope exists for increasing the value of sales by the Enlarged Group by creating the capacity to add value to, and then sell, cut and polished gemstones. This will form a key strategy for 2008 and the Board anticipates the Enlarged Group will be cutting and polishing more than one third of the Kagem's production by value by the end of the year.

The cutting and polishing process typically involves multiple steps:

- **Sorting and grading**, whereby the rough stones are graded according to size, colour and quality;
- **Marking**, whereby rough stones are marked by an expert depending on its natural shape and in accordance with its cleavage in order to maximise yield and account for inclusions and other imperfections;
- **Cleaving**, whereby a rough stones are split, often along a prevailing grain, to eliminate obvious inclusions or defects;
- **Cutting or sawing**, whereby the stones are cut to the desired size, typically on a circular saw, and based on the markings applied to the stone by a supervisor in order to approximate the final shape, but without actual facets;
- **Pre-forming**, whereby the final shape of the stone is created using an abrasive disk;
- **Dopping, calibrating and faceting**, whereby the stone is affixed to a pen-like "dop-stick" using wax or cement to facilitate girdling and faceting; and
- **Polishing**, whereby the cut stone is polished to a fine finish.

The Enlarged Group will headquarter its processing, cutting and polishing operations in Jaipur, India. Gemfields is planning to establish an interim Jaipur-based cutting and polishing facility, possibly in rented premises. This facility, which the Board believes will be operational in the third quarter of 2008, will house Gemfields' existing cutting and polishing machines (which will need some refurbishing).

Gemfields is also presently negotiating the purchase of two larger properties in Jaipur for the establishment of a permanent cutting and polishing plant. The Directors and Proposed Directors anticipate that the facility would employ approximately 80 people and take Gemfields' total Jaipur-based floor space to over 12,000 square foot. The Directors and Proposed Directors would expect it to be fully operational by the third calendar quarter of 2009 in return for an expected capital investment of some US\$ 2 million. The Directors and Proposed Directors believe that ongoing operating expenditure will not exceed 20 per cent. of annual revenue.

In addition, Kagem presently has a dormant cutting and polishing facility in Ndola, The Enlarged Group will review the merits of starting up this facility during the fourth quarter of 2008.

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Cutting and polishing of the highest value stones, and in particular those bearing the Fabergé name, will be undertaken by cutters and polishers selected by Gemfields (either internal or external), depending on the type of gemstone in question. The development of special cuts, unique to coloured gemstones, or to specific gemstone types, could further enhance value and branding potential.

### ***Marketing and Branding***

The diamond market has historically enjoyed significant marketing expenditure and this has led directly to the success of the industry. The ability to create demand by investing in and “telling the story” of a particular gemstone type is also demonstrated by the success of Tanzanite One, who created a successful market for what was previously a largely unknown gemstone.

The Directors and Proposed Directors believe that coloured gemstones have, in the last 5 years, enjoyed a resurgence of their own accord as consumers have sought to expand their horizons beyond ordinary white diamonds. This trend has also been facilitated by the extraordinary prices and media coverage achieved by coloured diamonds. Glamour magazines and the windows of high-end retailers increasingly feature coloured gemstones. The Directors and Proposed Directors believe that this trend is perfectly aligned with Gemfields’ strategic vision and that the Enlarged Group will be uniquely positioned in this regard.

The Enlarged Group propose to conduct appropriate marketing campaigns to promote coloured gemstones in general and, at the outset, emeralds in particular. This will include, for example, standardising the grading of coloured gemstones in order to promote consumer understanding and appreciation. In exercising the Fabergé option, Gemfields will also acquire a worldwide exclusive licence to use the Fabergé brand name in respect of coloured gemstones (excluding diamonds). The Directors and Proposed Directors believe the Fabergé name is one of the most revered in history, and has clear luxury connotations.

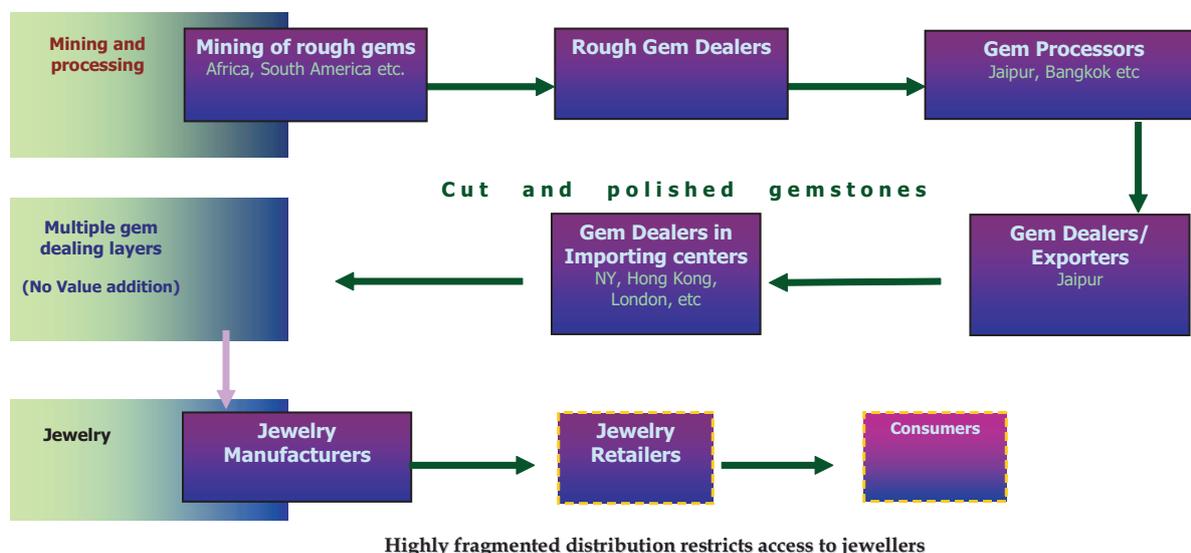
Critically, the Fabergé brand is presently undergoing profound change. Pallinghurst Resources acquired the Fabergé brand from Unilever in January 2007 with a view to developing it as one of the world’s leading luxury brands. In the fourth quarter of 2007, Pallinghurst Resources was able to deliver the reunification of the brand with the direct descendants of Peter Carl Fabergé, thereby re-establishing the authentic and family-backed House of Fabergé (the family had lost the rights to the Fabergé name in a legal settlement in the 1950’s). Accordingly, both Tatiana and Sarah Fabergé (great granddaughters of Peter Carl Fabergé) serve as members of Fabergé’s new Heritage Council.

Mr Mark Dunhill, the former president of Alfred Dunhill Ltd (and great-grandson of Alfred Dunhill), was appointed as the CEO of Fabergé in November 2007. Fabergé is planning the worldwide debut of its new collection at the BaselWorld luxury fair in March and April of 2009. The use of the Fabergé name on coloured gemstones is a natural association given the prevalence of coloured gemstones in original Fabergé pieces. The Directors and Proposed Directors believe that the Fabergé name will allow the Enlarged Group to extract premium prices for the very best gemstones. Fabergé coloured gemstones will be laser-encoded to ensure authenticity.

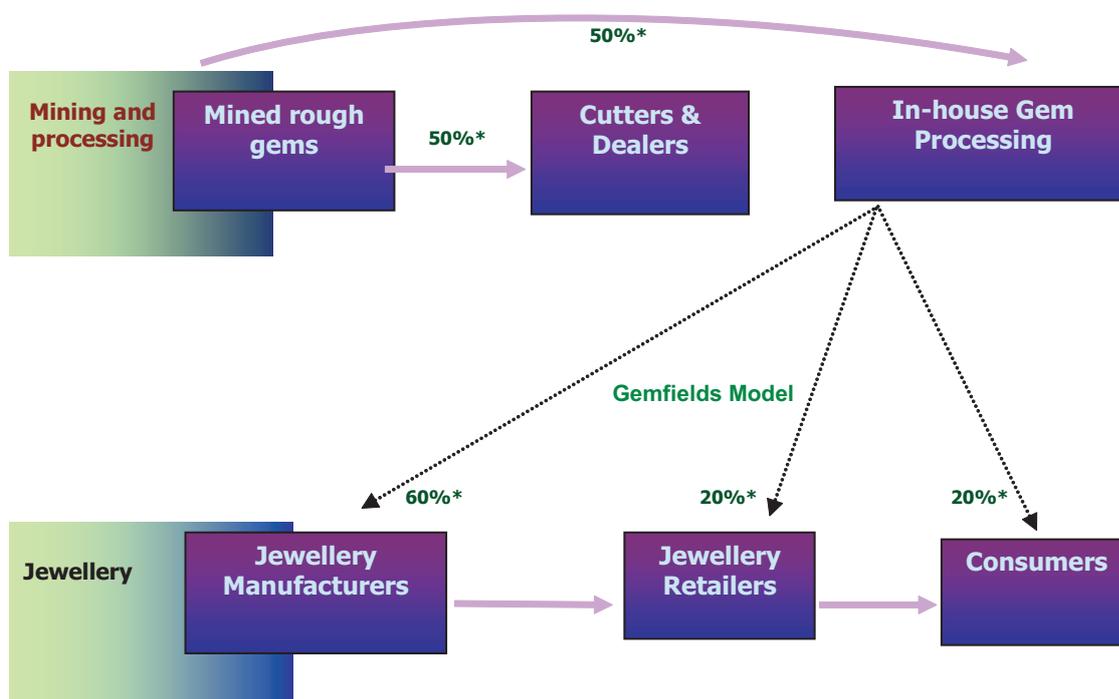
The Enlarged Group will headquarter its sales and marketing operations in Mumbai, India with a representative office in the London headquarters.

## Structured Supply Chain

Part of the diamond industry's success has arisen from its structured supply chain. Developing such a supply chain requires capital investment and time. By contrast, the coloured gemstone industry is renowned for the unstructured nature of its supply chain (which can be seen in the below diagram).



By working with gemstone processors and establishing in-house gem processing capabilities together with supplying manufacturing jewellers and retailers directly, the Directors and Proposed Directors believe that the Enlarged Group should be well positioned to create a structured pipeline which enhances credibility with, and therefore prices from, consumers.



\* By value: the Directors and Proposed Directors believe this will be achieved by financial year end 2010.  
Source: Gemfields

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### ***Consistent Supplies to Customers***

Erratic supply is one of the key inhibiting factors in the coloured gemstone market. Manufacturing jewellers and mass-market jewellers have historically been unwilling to invest significantly in the promotion of sizeable quantities of coloured gemstone jewellery because supply of the necessary coloured gemstones could not be assured. The Directors and Proposed Directors believe that the ability to assure consistent supply to jewellery manufacturing and marketing customers will result in premium pricing, greater investment in advertising and promotion of coloured gemstones, better awareness amongst customers and an increase in the overall value of the gemstone market.

### ***Ethical Sourcing and Assured Provenance***

The Directors and Proposed Directors believe that premium pricing can be obtained by building strong consumer allegiance to its gemstones and this can be achieved by, *inter alia*:

- supplying only natural, “organic” and CIBJO — approved (i.e. treatment approved) gemstones;
- the highest ethical standards by pursuing fair-trade practices, promoting local communities and workforce development in conjunction with appropriate government interaction;
- a “direct from source” capability to guarantee the provenance of high-end gemstones to the mine level, going beyond the “country only” — specific Kimberley Process deployed in the diamond industry;
- operating its mines in accordance with the highest environmental, social and safety standards;
- the possibility of having its mines assessed by independent third parties to assure customers of best practices; and
- guaranteeing conflict and child-labour free mining practices.

### ***Critical Mass, Market Share and Economies of Scale***

The coloured gemstone market is particularly fragmented, with very few players enjoying significant market share. The Enlarged Group would be the largest operator on the Fwaya-Fwaya belt and this will improve its ability to be a “price maker” rather than a “price taker”. Significant market share would also uniquely position the Enlarged Group to assemble matching pairs and suites for earrings, pendants, rings and necklaces. It is not uncommon for a matching set of emeralds for earrings to obtain a premium exceeding 30 per cent. when compared to a single stone.

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## PART III

### FURTHER INFORMATION ON KAGEM AND GEMFIELDS

#### A. FURTHER INFORMATION ON KAGEM

##### 1. Introduction

Kagem is a Zambian registered company founded in 1984 as a joint venture between Hagura UK (45 per cent.) and the Government of the Republic of Zambia (as Reserved Minerals Corporation Limited) (55 per cent.). Hagura UK provided start-up capital and had management control of Kagem. The government assumed management control of Kagem in 1990. However, after experiencing operational and financial difficulties and 12 months of frozen production, Hagura UK regained management control in 1996. The shareholding of Hagura UK was increased to 75 per cent. in November 2005. Hagura UK is a private limited company registered in the United Kingdom in 1980 and is held as to 50 per cent. by each of Greentop and Krinera. Hagura UK holds 45 per cent. of the shares in Kagem as nominee for Hagura BVI pursuant to a nominee agreement further details of which are set out at paragraph 10.2.1 of Part IX of this document.

In March 2005, Kagem was issued the gemstone licence No. 713 in respect of the Kagem Emerald Mine.

##### 2. Information on Kagem's Existing Interests

###### *Kagem Emerald Mine*

The Kagem Emerald Mine, the subject of the Kagem gemstone licence, covers an area of approximately 43 km<sup>2</sup> located in the central part of NRERA, in the copperbelt region of Zambia. The nearest town is Kitwe, to the northeast of Kagem Emerald Mine. The Kagem Emerald Mine is Zambia's largest emerald mine in terms of production and revenue.

There are several known TMS belts within the Kagem gemstone licence, the main area of emerald extraction being the Fwaya-Fwaya-Pirala belt in which the TMS has a drill established strike length of 2.1 km.

The assets at the Kagem Emerald Mine comprise a number of open pits and two processing plants. The main production pit FF-F10 is located on the eastern end of the Fwaya Fwaya-Pirala belt and currently has a strike length of 920m. The mine has been a consistent producer of some of the finest Zambian emeralds since 1984. Kagem has sold 11.4, 13.7 and 14.9 million carats of emerald and beryl generating revenues of US\$6.4, US\$9.5 and US\$12.6 million in 2005, 2006 and 2007 respectively.

Exploratory drilling is in progress in the FF-F10 area with the objective of demonstrating the eastward continuity and thickness of the TMS belt and assisting in assessing the reaction zone potential. Gemfields is already managing operations at the Kagem Emerald Mine after signing a management agreement with Hagura UK in 2007 and has initiated an expansion plan for achieving a run rate of in excess of 1.4 million tonnes of TMS per annum by July 2009 from the present level of 200,000 to 300,000 tonnes per annum. A semi-mechanised ore mining methodology is being adopted to facilitate faster ore mining, and the ore treatment capacity is being upgraded to match the increased ore production. Environmental, geotechnical and hydrological studies are being undertaken to support a ten year life of mine plan. Concurrent to the expanded mining operation in the FF-F10 area, additional resources will be established in the rest of the Fwaya-Fwaya belt and also in the other five belts.

Kagem intends to make applications for the renewal of Gemstones Licence No. 713 in accordance with the provisions of the new Mining Act 2008 (further details of which are set out at paragraph 6 of Part V of this document).

Licence	Principal Mineralisation	Status	Holder
GL-713	Emerald	Expires 31.03.2015	Kagem Mining Limited

### 3. Summary Financial Information

The attention of investors is drawn to the historical financial information relating to Kagem which is set out in Part VIII of this document. The table below summarises the audited financial position of Kagem as at 30 September 2007. This information has been extracted from historical financial information set out at Part VIII of this document. In order to make a proper assessment of the financial position of the Group, a prospective investor should not rely solely on the summary information set out below but should read the whole of this document.

	As at 30 September 2007 K000 (ZMK)	As at 30 September 2007** \$000 (USD)
<b>Fixed assets</b>		
Property, plant and equipment	34,189,588	8,868
Advance capital payments	—	—
	<u>34,189,588</u>	<u>8,868</u>
<b>Current assets</b>		
Inventories	7,616,249	1,975
Trade and other receivables	6,310,088	1,637
Cash and cash equivalents	<u>13,245,559</u>	<u>3,435</u>
	<u>27,171,896</u>	<u>7,048</u>
<b>Total assets</b>	<u>61,361,484</u>	<u>15,915</u>
<b>Liabilities</b>		
<b>Non-current liabilities</b>		
Long term liabilities	(2,459,905)	(638)
Deferred taxation	(1,151,180)	(290)
Provisions	<u>(18,475,000)</u>	<u>(4,792)</u>
<b>Total non-current liabilities</b>	<u>(22,086,085)</u>	<u>(5,728)</u>
<b>Current liabilities</b>		
Trade and other payables	(1,933,805)	(502)
Accruals and deferred income	(12,629,055)	(3,275)
Bank loans	(43,344,867)	(11,242)
Bank overdrafts (secured)	(12,379,661)	(3,211)
Obligations under finance leases and hire purchase agreements	(9,654,508)	(2,504)
Dividend payable	(975,000)	(253)
Current tax payable	<u>(404,537)</u>	<u>(105)</u>
<b>Total current liabilities</b>	<u>(81,321,433)</u>	<u>(21,092)</u>
<b>Total liabilities</b>	<u>(103,407,518)</u>	<u>(26,820)</u>
<b>Capital and reserves attributable to equity holders of the company</b>		
Share capital	20,000	5
Retained Earnings	<u>(42,066,034)</u>	<u>(10,910)</u>
<b>Total equity</b>	<u>(42,046,034)</u>	<u>(10,905)</u>
<b>Total equity and liabilities</b>	<u>61,361,484</u>	<u>15,915</u>

\*\* The financial information on Kagem contained in Part VIII of this document has been expressed in Zambian Kwacha which is the functional currency of Kagem. The US dollar numbers provided above are given solely for information purposes and have been calculated using an exchange rate as at 30 December 2007 of Zambian US\$1:ZMK3,855.5 subject to rounding to the nearest US\$000. This translation should not be construed as representations that the relevant currency could have been converted into US dollars at the rate indicated or any other rate.

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#### 4. Expert's report

The attention of investors is drawn to the Competent Person's Report carried out by SRK set out in Part VII of this document.

#### 5. Directors, senior management and employees

##### *Directors and senior management*

Gemfields is already managing operations at the Kagem Emerald Mine after signing a management agreement with Hagura UK on 1 November 2007. Details on the progress of management under Gemfields, and details of the management agreement can be found at paragraph 8 of Part I of this document and paragraph 10.2 of Part IX of this document respectively.

As at 30 September 2007 (being the end of the period covered by the financial information on Kagem set out in Part VIII of this document) and 7 May 2008 (being the latest practicable date prior to publication of this document) Kagem employed the following employees:

	As at 7 May 2008	As at 30 September 2007
Administration staff	37	46
Mining staff	388	339
Total	425	385

All employees of Kagem are based in Zambia.

### **B. FURTHER INFORMATION ON GEMFIELDS**

#### 1. Introduction

Gemfields is the holding company of the Group which has to date been an independent gemstone mine operator and gemstone prospecting company with a primary focus on Zambia. The Group has been actively involved in exploring opportunities in the gemstone mining sector in Zambia since 2000.

The principal founder of the Group is Rajiv Gupta who formed Gemhouse Inc., a company incorporated in New Brunswick, Canada in February 2000. In April 2004, the Group entered into a 50/50 joint venture with the Government of Zambia in an operating amethyst mine located in southern Zambia near Lake Kariba. In May 2004, the Group purchased a 51 per cent. interest in the Mbuva mine and an option over the remaining 49 per cent. interest which was exercised in May 2005.

Also in May 2004, the Company was incorporated as a UK holding company and in June 2004 Gemhouse Inc. was amalgamated with another Canadian corporation, Gemfields (Canada) Inc. The original amalgamated Canadian businesses were then acquired by the Company in June 2004 in preparation for admission to AIM.

In July 2004, the Group entered into a joint venture providing it with a 70 per cent. interest in the Chibolele mine and in January 2005 exercised an option to purchase the remaining 30 per cent. interest. In July 2005, the Group signed an agreement for the acquisition of various licences along with certain infrastructure, plant, property and offices at Kamakanga and Kitwe subject to the payment of an element of deferred consideration. The Company was admitted to AIM on 28 November 2005 and in December 2005, Gemfields made the deferred payment thereby giving the Group 100 per cent. control of Kamakanga. In December 2006, the Company raised a further £3.2 million through a private placing of shares. An option agreement for the acquisition of a gemstone mining licence covering approximately 3.75 km<sup>2</sup> including the Jagoda mine was also signed in 2006. The option expired at the end of September 2007 and an extension to the end of March 2008 was agreed in August 2007 but has since lapsed, without extension or exercise by the Group.

#### 2. Information on the Group's Existing Interests

##### *Mbuva-Chibolele Emerald Mine*

The Mbuva-Chibolele mine lies on the opposite side of the Kafubu River to the Kagem Emerald Mine, in a belt of favourable TMS intruded by pegmatites, which continues westwards and also hosts

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the emerald deposits of Pirala and Kamakanga further to the west. The Mbuva-Chibolele mine contains over 1000m of strike length of TMS cut by pegmatites suitable for the occurrence of emeralds.

The Group acquired Mbuva Mining Limited which owned gemstone licence No GL145 on Plot No 11A/2 in May 2005 and acquired Gemchib Minerals Limited which owned gemstone licence No GL288 on Plot 11A/1 in January 2005. Together these licences form the Mbuva-Chibolele mine. The Group also acquired Licence GL 744 on Plot 10B/1 formerly known as the Arinus mine in March 2006. This property is contiguous to the southern boundary of the Mbuva-Chibolele mine. The acquisition of this licence was strategic to the Company, as it allowed Gemfields to significantly extend the life of the Mbuva-Chibolele mine.

Trial mining began at Gemfields' Mbuva-Chibolele emerald mine in July 2006. Two emerald auctions have been held since then with emerald sales totalling approximately US\$1.8m. In August 2007 the Company discovered a 10cm long, 10,050 carat emerald at the Mbuva-Chibolele mine. No emerald auctions have been held since then and the Group is currently stockpiling its emeralds.

The Group has made applications for the renewal of gemstone licence No's GL145 and GL288 prior to their respective renewal dates, in each case, being 14 September 2007 but are entitled to continue their mining activities pending such renewal. The Group will also make applications for renewal of these licenses under the new Mining Act 2008 (further details of which are set out at paragraph 6 of Part V of this document).

As explained at paragraph 8 of Part I of this document, the Directors have decided to temporarily cease production at Mbuva-Chibolele from the first quarter of 2008 in order to devote management time and staff resources and machinery to the Kagem Emerald Mine. The intention is to return to production at Mbuva-Chibolele at some stage in the future.

#### ***Kamakanga Emerald Mine***

Kamakanga began production in the early 1970s and is one of the earliest mines to have come into operation and production in the Zambian emerald area. It was never managed professionally and had limited capital injected into operations until the late 1990s when second-hand medium sized earth-moving equipment was used to mine the emeralds. The mine produced emeralds worth in excess of US\$15 million between 1992 and 2003 without a washing facility (until 1998) or professional security in place.

Kamakanga is located 5-6km west-southwest along the regional strike from the Mbuva-Chibolele mine and Kagem Emerald Mine and 2km west of the active Grizzly mines. Previous mapping of the Kamakanga licence had suggested a relatively uniform TMS band, mined over a strike length of over 500m, within a possible strike length of 2,300m within the licence.

The Group acquired gemstone licence No's GL002 and GL078 on Plot No 6/1 which relate to the Kamakanga mine along with certain infrastructure, plant, property and offices in July 2005.

Exploratory trenching carried out in Kamakanga has indicated the TMS bands to be discontinuous and patchy. All the geological, geophysical and geochemical data generated so far has been assimilated to understand the complex structure in this part of the emerald belt but it remains inconclusive. Exploration will be resumed with core drilling after the rainy season during the second quarter of 2008 to assess the potential of the area to support large scale mining.

The Company made applications for the renewal and merger of gemstones licence No's GL002 and GL078 prior to their renewal dates of November 2006 and April 2007 respectively but are entitled to continue their mining activities pending such renewal. The Group will make applications for renewal of these licenses under the new Mining Act 2008 (further details of which are set out at paragraph 6 of Part V of this document).

#### ***NRERA Prospecting Licences***

In addition to the Mbuva-Chibolele and Kamakanga mining licences, Gemfields also commands control over eight prospecting licences (further details of which are set out in the table below) in the NRERA spread over a cumulative area of 405km<sup>2</sup> accounting for approximately 58 per cent. of the total known prospective area in NRERA. A high resolution airborne magnetic and radiometric survey has been carried out in an 863 sq km area over the prospecting licences in the NRERA leading

to the identification of anomalies pointing at possible TMS belts and pegmatitic zones. Selective exploratory pitting and geochemical sampling will be carried out over the next year.

These prospecting licences provide Gemfields with significant control over the NRERA, limiting the possibility that competitors could establish material operations in the area.

<b>Licence</b>	<b>Principal Mineralisation</b>	<b>Status*</b>	<b>Holder</b>
Miputu	Emerald	Expired 06.03.08 Applied for conversion to LSML	Gemfields Holdings Zambia Limited
Mitondo North	Beryl and Tourmaline	Expired 27.02.2007 Applied for conversion to LSML	Gemfields Holdings Zambia Limited
NR South	Talc, Asbestos, Magnetite, Beryl, Tourmaline and Garnet	Expired 27.02.2007 Applied for conversion to LSML	Gemfields Holdings Zambia Limited
Mitondo West	Emerald and Beryl	Expired 25.02.2007 Applied for conversion to LSML	Gemfields Holdings Zambia Limited
Mitondo East (Luanshya area)	Quartz, Mica, Beryl, Talc and Asbestos	Expires on 10.07.2008 Applied for conversion to LSML	Gemfields Holdings Zambia Limited
Nkabashila East (Luanshya area)	Quartz, Mica, Beryl, Talc and Asbestos	Expired 22.07.2006 Applied for conversion to GL	Gemfields Holdings Zambia Limited
Nkabashila West (Luanshya area)	Emerald, Beryl and Tourmaline	Expired 22.02.2007 Applied for conversion to LSML	Gemfields Holdings Zambia Limited
Kafubu	Quartz, Mica, Beryl, Talc and Asbestos	Expires 21.03.2017 Conversion to gemstone licence approved, applied for conversion to LSML	Gemfields Holdings Zambia Limited

\* As indicated, certain of the prospecting licences have expired pending renewal. In each case, the holder of the licence is entitled to continue mining operations pending renewal and/or conversion to a LSML. The effect of conversion to a LSML is that the licence will be valid for 25 years (rather than 10 years which is applicable to a gemstone licence). The Group will also make applications for renewal of these licences under the new Mining Act 2006 (further details of which are set out in Part V of this document).

### ***Kariba Amethyst Mine***

The Group has a 50/50 joint venture with the Government of the Republic of Zambia in an operating amethyst mine located in southern Zambia near Lake Kariba under gemstone licence No GL086 which has recently been renewed and expires in June 2017. In the financial year ended 30 June 2007 the mine recorded a turnover of US\$1,066,544. A privatisation agreement to purchase a further 26 per cent. interest in the mine from the Zambian Government is under finalisation (although there can be no guarantee that this will proceed to completion).

A large scale amethyst prospecting licence PLLS-300 has also been approved by the Ministry of Mines in Zambia in favour of Gemfields Holdings Zambia Limited covering an area of 80 km<sup>2</sup>. This licence is adjacent to the area covered under the gemstone licence held by Kariba Mining Limited. Kariba's amethyst mineralisation is hosted in one of the several parallel shear zones in the area. The Group has acquired this prospecting licence to explore the potential of additional mineralisation in the other shear zones.

### 3. Summary Financial Information

The table below summarises the audited financial position of the Group as at 30 June 2007 (prepared under UK GAAP) and the unaudited financial position of the Group as at 31 December 2007, including the unaudited comparative information as at 30 June 2007, prepared under International Financial Reporting Standards as adopted by the EU (“IFRSs”). This information has been extracted from the Group’s audited consolidated financial statements for the year ended 30 June 2007 and its unaudited interim financial results for the six months ended 31 December 2007. The unaudited interim financial statements for the six months ended 31 December 2007 have been reviewed by the Group’s auditors. In order to make a proper assessment of the financial position of the Group, a prospective investor should not rely solely on the summary information set out below but should read the whole of this document together with the Group’s audited consolidated financial statements for year ended 30 June 2007 and its unaudited interim financial results for the six months ended 31 December 2007.

	As at 31 December 2007 (IFRS) (unaudited) US\$	As at 30 June 2007 (IFRS) (unaudited) US\$	As at 30 June 2007 (UK GAAP) (audited) US\$
<b>Non current assets</b>			
Intangible assets	12,422,101	12,461,205	12,461,205
Property, plant and equipment	9,520,526	9,712,608	9,712,608
Investment in equity accounted joint venture			
– share of gross assets	—	—	1,006,107
– share of gross liabilities	—	—	(1,013,384)
	<u>21,942,627</u>	<u>22,173,813</u>	<u>22,166,536</u>
<b>Current assets</b>			
Trade and other receivables	1,926,203	1,051,072	1,051,072
Inventory	3,096,931	2,190,472	2,190,472
Cash and cash equivalents	5,052,966	9,835,940	9,835,940
	<u>10,076,100</u>	<u>13,077,484</u>	<u>13,077,484</u>
<b>Total assets</b>	<u>32,018,727</u>	<u>35,251,297</u>	<u>35,244,020</u>
<b>Non current liabilities</b>			
Trade and other payables	(176,826)	(176,826)	(176,826)
<b>Current liabilities</b>			
Trade and other payables	(2,031,808)	(2,343,728)	(2,343,728)
<b>Total liabilities</b>	<u>(2,208,634)</u>	<u>(2,520,554)</u>	<u>(2,520,554)</u>
<b>Net assets</b>	<u>29,810,093</u>	<u>32,730,743</u>	<u>32,723,466</u>
<b>Capital and reserves</b>			
Share capital	1,871,166	1,871,166	1,871,166
Share premium account	33,775,898	33,775,898	33,775,898
Merger reserve	10,500,346	10,500,346	10,500,346
Option reserve	944,018	858,469	858,469
Cumulative translation reserve	(7,204)	(7,204)	—
Retained earnings	(17,274,131)	(14,267,932)	(14,282,413)
<b>Total equity</b>	<u>29,810,093</u>	<u>32,730,743</u>	<u>32,723,466</u>

### 4. Expert’s report

The attention of investors is drawn to the Competent Person’s Report carried out by SRK set out in Part VII of this document.

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## 5. Directors, senior management and employees

### *Directors*

Brief biographies of the proposed directors post-Admission are included in Part I of this document.

### *Senior Management*

#### *Alok Sood, Chief Operating Officer*

Alok Sood gained a post graduate degree in Mineral Exploration from M. S. University, Baroda in 1983, followed by completion of a M. Sc. (Tech) in Engineering Geology from the same university. He has over 24 years of professional experience and has been involved with pioneering work in gemstone exploration and mining in Zambia for the last 10 years. He has held various senior management positions in Gemfields and has been a director on the board of Kariba Minerals Limited and Gemfields Mining Limited.

#### *Arvind Mathur, Head — Feasibility and Engineering*

Arvind Mathur graduated in 1988 as a mining engineer from Jodhpur University and gained a post graduate degree in business management in 1995. He has over 20 years of professional experience of working with large mining companies in the areas of due diligence, feasibility studies, project development and financial modelling.

#### *Kartikeya Parikshya, Head — Planning and Exploration*

Kartikeya Parikshya gained a post graduate degree in Applied Geology from I.I.T., Mumbai in 1986. He has over 21 years of professional experience in mineral exploration. Specialising in ore body modelling and geostatistical analysis, he has been associated with exploration for various minerals including copper, gold, caesium, lithium, rubidium etc, development of projects, ore body modelling, resource estimation and feed back studies.

### *Employees*

As at 30 June 2007 (being the date of the Group's most recent audited financial information) and 7 May 2008 (being the latest practicable date prior to publication of this document), the Group employed the following employees (including directors):

	<b>As at 7 May 2008</b>	<b>As at year ended 30 June 2007</b>
Administration staff	32	31
Mining staff**	40	153
Total	72	184

\*\* Not including staff employed at Kariba

Of those employed by the Group as at 7 May 2008, 53 employees are in Zambia, 18 employees in India and 1 in England (London).

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**PART IV**

**THE GEMSTONE MARKET REPORT**  
**PREPARED BY GEMWORLD INTERNATIONAL, INC**  
**APRIL 16, 2008**

**INTRODUCTION**

Gemworld International, Inc. and its publication, the *GemGuide*, are dedicated to reporting accurate market information exclusively for the gem trade. The *GemGuide* is regarded as the industry's most comprehensive source for wholesale gemstone pricing. Extensive, specialized research is conducted to produce reliable price and production trend information. The information provided herein reflects our opinion of current wholesale price and production trends for the gem varieties discussed. Although drawn in part from data originating in major overseas markets and therefore to some extent indicating the global position, it is likely to be most relevant to conditions and trends in the North American wholesale market.

The prices depicted in this report were established by market research. All prices listed herein are for cut and polished gemstones and are per carat in U.S. dollars unless otherwise noted. The prices represent our opinion of approximate wholesale purchase prices paid by retail jewelers on a per stone or memorandum basis. (For purposes of this report, the definition of wholesale price is that which retailers pay in expectation of obtaining higher price by way of profit from resale to the ultimate consumer.) Many factors could affect the actual price paid, including but not limited to cash sales, quantity purchases, lot prices, geographic differences, regional market fluctuations, treatments, etc. The prices listed were averaged from a range of pricing data collected and recorded by Gemworld International, Inc. Price research is divided into two periods: January to June, and July through December for each calendar year referenced in the report. These two periods are referenced in the accompanying price charts as "spring" and "fall." The pricing data contained in this report reflects a single value from within that broader price range. As a result, the price of a specific gem may be higher or lower than the prices listed in the accompanying charts.

During more than a quarter century in business, Gemworld International has compiled an archive of pricing and production trend data for both colored stones and diamonds. In addition to the archival data, Gemworld International regularly interacts with a network of knowledgeable industry participants to identify changes in market trends at their developmental stages. These relationships, combined with our extensive database of reference material allow staff to address a broad range of information requests.

The primary focus of this report is to provide a comparative pricing analysis of the four dominant gemstones traded with consideration of the market size. The report also provides the author's opinion regarding current consumer trends and how future emerging trends may provide an opportunity for adding value to the Zambian emerald product through fair trade initiatives. Potential threats to the gemstone market as a whole are also discussed. These include synthetics, treatments, supply chain practices and political instability.

The report will discuss the market with an emphasis on the improving position of emeralds in the global gem trade. Particular attention will be directed at the Zambian production and its position in the market although other origins will also be addressed.

Concerning the price data included in this report, the report focuses on two stone size/quality relationships selected from the more heavily traded size/quality ranges in the market for each variety. This was done to manage costs and time necessary to provide the report in the timeframe requested. This approach should yield information representative of the broader trends present during the time period examined for the report. The gem materials discussed in the report are emerald, ruby, blue sapphire and tanzanite. Unlike diamond, colored stone prices are often highly subjective. To establish an accurate average price for the gem categories reported, it is necessary to narrow subjectivity. This is done through a series of controls that Gemworld International employs during our research. However, it must be understood that subjectivity can only be narrowed, it can not be eliminated.

One of the main considerations in that regard is the absence of a universally accepted grading system for colored gems, unlike the GIA diamond grading system, which is well defined. Colored stones throughout this report are priced according to quality. In the early 1980's Gemworld International developed a grading system for use in its publication the *GemGuide*. This system is described below in the section entitled "Quality."

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Another significant factor in price analysis of colored gemstones is the absence of a well defined system of distribution. As a result, prices for the same type (variety and quality) of colored stones can vary to a much greater extent than those of diamonds.

## **OBJECTIVE**

The objective of this report is to provide an understanding of our price analysis and methods of measuring market trends. The aim is to convey the structure of the global emerald market as we understand it. Zambia and Colombia are used to illustrate the flow of goods through the various stages of the distribution channels. The role of the market participants will be discussed to the extent necessary to illustrate the route from mine to market.

Where prices are listed they reflect per carat wholesale prices. The reported prices have been established by research. Staff advisors monitor and report market changes encountered during the day-to-day operations of their businesses. A research team of graduate gemologists is utilized at major trade shows to collect price and production data. Interpretation of that pricing data is done in the offices of Gemworld International, Inc. Information is compiled into a database from which pricing trends are then established and reported on in price grids such as those illustrated in this report.

The structure of this report is as follows. A brief overview of the emerald, ruby, sapphire and tanzanite markets are given to assist in explaining the price trends that are recorded in the data. Certain origins can have a significant impact on value in the colored stone market. However for the purposes of this report, it was decided that reporting price by origin would not have provided sufficiently different data to justify the added cost of the research. Instead, all origin categories were compiled together with the understanding that if broken out, some would sell above, and others below, the price listed.

The market structure of the colored stone industry is distinct from that of the diamond industry. There is no single cartel influencing supply and demand and as a result, the colored stone markets respond more genuinely to market conditions.

## **EMERALD**

Colombia, Zambia and Brazil are the primary producers of emerald in the international gem trade. Each produces emerald in all grades. Small quantities of fine material are also produced in Afghanistan. Numerous secondary sources exist but they are currently of no significant value to the gem trade.

Colombia has been the principal producer of fine quality emerald for centuries. Traditionally the three main mining districts were Muzo, Coscuez and Chivor, with Muzo emerald prized (and priced) above all other by the international gem trade. More recently the La Pita mine has been a major producer of Colombian emerald surpassing Muzo and Coscuez in total kilos of rough produced. In each location all qualities are produced though *fine and extra fine* quality stones are scarce.

Colombian Production totals (Source U.S. Geologic Survey (USGS)):

1996 — 2100 Kilos

1998 — 2500 Kilos

2000 — 2200 Kilos

2002 — 1600 Kilos

2004 — 2500 Kilos

Emerald mining in Colombia exists as a relationship between government and private enterprise whereby the government leases the land to the mining companies. Beyond that the government has little involvement in the gemstone mining areas and as a result, the region's development is dependent on allocation of revenues from mining companies to develop and improve infrastructure. In recent years, several newcomers have attempted to adopt practices that would allow much of the benefit associated with these resources to remain in the mining region for the betterment of local communities.

Rough is sold at auction at the mines on a monthly or quarterly basis depending in part on production levels. Typically the buyers are representatives of the major cutters in Bogotá. In addition, as miners are also allotted a percentage of their production, private sales can occur outside of the auction system. However, they are small in scale and the buyers of these stones tend to be the mine owners.

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In Bogotá, cutters and brokers are concentrated in the “emerald district” located in the Candelaria district. Brokers visit buyers from their list of known serious dealers to show goods. Their compensation is typically based on commissions. Brokers can represent the cutter, initial buyer or group of dealers that may be partners on the stone/parcel.

During the late 1990’s and through the early part of the current decade Colombia’s emerald industry had found it harder to bring product to the international gem trade.

However, since 2004, the Colombian emerald industry has witnessed an increase in foreign buyers that come to Bogotá. Free trade zones established near Colombia’s international airport facilitates safe, quick trips by buyers into and out of the country and foreign buyers have become more common in the emerald district during the past few years. Although violence against foreigners remains a concern, President Uribe’s government has dealt effectively with both the anti-government rebels and drug lords to make the country safer. Colombian dealers also participate in many of the international trade shows.

Emerald was one of the top selling gemstones in the international market during the mid to late 1980s through the early 1990s. Driven by demand, emerald prices hit record highs during this period. Increased demand by Japanese and European buyers helped trigger pricing volatility and with demand outpacing supply, prices remained volatile. However, during 1991 and 1992 the market received indications that future production in Colombia was slowing. This was a result of increasing violence in the three decade old war between rebels and government forces. Producers were able to maintain production levels by tightening security at the mines and smuggling gems to market.

In 1997, a lawsuit filed in the U.S. brought the issue of emerald enhancement to the attention of retail jewelers and consumers. This practice, benignly described for decades as “oiling,” took on international implications. As the market learned more about the process an increasing number of dealers and retailers grew uneasy about the quality, and more importantly value, of fine quality emeralds. The dealers learned that most emeralds were not treated with cedarwood oil as believed, but instead contained synthetic polymers that were rumored to have the ability to hide significant fractures in the stones more effectively than cedarwood oil. The perception that inexpensive commercial quality material could be treated with polymers such as Opticon™ to produce emeralds that appeared to be *fine* quality shocked the market. Many of these “fillers” proved unstable and as a result could change the appearance of the emerald when the filling medium dried out or turned color. This failure by producers to accurately disclose, or educate the industry about polymer treatments contributed to massive erosion in value. At that time, no gemstone had received greater scrutiny as a result of gem treatments than emerald. As a result of the knowledge gained from the controversy, today most producers enhance their emeralds with mediums that can be removed from the stone should it “dry out” or if the client requests it.

During this same period gemstone dealers turned to an alternative source located in Africa. This source, Zambia, hosts several important emerald deposits including the Ndola-Rural Restricted Area. Emerald deposits have been known for decades in Zambia, with some newer deposits less than a decade old. Colombia produces approximately 42% of the emeralds consumed by the gem trade, while Brazil, Zambia and the other secondary sources comprise the remainder. However, the market appreciation of Zambian emerald is not based on supply, but instead quality. Zambian emeralds tend to be higher clarity than that of the other two main sources Colombia and Brazil. Many dealers prize Zambian emeralds for their transparency, with many stones exhibiting a clear “crystal” transparency that gives them an attractive appearance. Zambian emeralds are also prized for their rich bluish green color, a color which is generally considered unique to this area.

As a result the need for treatment of this material is less than that of any other known active emerald source. This has proven increasingly important to consumers.

#### *Distribution Network for Zambian Emeralds*

Zambia is a geologically rich and diverse country and an important source for the international emerald trade.

Emeralds are produced at numerous locations along Zambia’s copper belt. However, production is reported to be most active at the Kagem mine. Until recently this mine was operated by the Zambian Government in partnership with an Indian firm. The mine is reported to be the primary producer of Zambia’s emerald production. Emerald rough mined at the Kagem location has been historically sold in bimonthly open auctions where the rough is priced and sold by the gram. The initial buyers may cut the stones or broker the rough to other cutters that do not travel to the location. Indian firms comprise the largest client base; however, there is also a significant Israeli presence in this market.

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The remaining production originates from several mines, some of which are owned by local firms, although foreign investment in the area has increased in recent years. Gemfield's interest is a significant one in this sector.

In December 2007, Pallinghurst Resources LLP completed the acquisition of controlling interests in each of the major Zambian emerald mining operations.

Access to rough is the key to profitably developing this market further. With the major emerald fields of Zambia now under the control of a single management group this enhances the potential for greater investment into the emerald sector. Further development as well as the transition to mechanized mining could enhance production. It could also serve to streamline the distribution channel from mine to retailer.

Currently, production from these mines is sold through local markets to predominantly Indian and Israeli gem buyers, both of which have established themselves as the niche cutters of Zambian emeralds. (See The Market Mechanism below). Presently few stones are actually cut and polished in Zambia. In the past, the government reportedly attempted to develop a cutting sector and constructed a cutting factory in Kitwe, but it has closed.

The USGS has compiled global emerald production statistics as part of the agency's ongoing research into geologic and mineral related industries. The following data applies to global production. (Colombian specific data was provided above.) The USGS was the source of the production data which is reported in this document. However, because it is likely that a percentage of transactions have occurred but are not reported, it is the opinion of the author that the production data reported in the USGS documents likely to be lower than the actual levels of production. It is generally reported in the gem industry that Zambia produces between 20% and 30% of the total annual global production of emeralds. However, the data attributed to Zambia may support a higher percentage than that.

2002 — 4200 kilos

2003 — 5200 kilos

2004 — 5600 kilos

2005 — 5900 kilos

Production is expected to continue to grow as current demand increases in the major gem markets. Investment in further exploration should result in the development of more diverse sources in the future and the transition from small scale labor intensive mining to more mechanized mining techniques should enhance efficiency. Colombia remains the largest producer but Brazil and Zambia are increasing their production every year.

Prices for finished (cut and polished) emeralds from all three major producing nations have increased since 2004. Higher prices have remained steady due to increased demand in India and China.

Zambian emerald production from this period is estimated at:

2002 — 1860 kilos

2003 — 2000 kilos

2004 — 2100 kilos

2005 — 2500 kilos

#### *The Market Mechanisms*

Once finished, Zambian emeralds are sold on the global wholesale market. Two distinct routes to market exist. One is through international gem trade shows such as the annual Tucson (USA) GemFair; others include the international Hong Kong and Bangkok gem shows. The second route is the more common method observed in the colored gemstone market. This involves the buyers of Zambian emeralds visiting the cutting centers in Jaipur, India and Ramat Gan and Tel Aviv, Israel to purchase rough directly from the cutters and private brokers and dealers.

Zambian emeralds service an important niche in today's global gem market because Zambian rough produces a certain quality and size of product at an attractive price.

#### *Quality*

As noted above, while a universal grading scale does not exist, our publication uses four grading categories: *Commercial*, *good*, *fine* and *extra fine*. All four grades are commonly sold. *Commercial* to *good* can be found in mass merchandise and television shopping networks. *Fine* to *extra fine* can be found in medium to upscale jewelry stores.

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### *Price Trend Analysis*

Since 2002, prices for emerald have been increasing. Although demand remains below that of the peak years, it has shown steady improvement during the past three years up to the date of this report. The emerald market has been well insulated from the high-tech treatments that created concern in the ruby, and to a lesser extent, sapphire markets. At the date of this report, the global gem trade has been experiencing an increase in production at the primary emerald sources in Colombia and Africa.

Private investment in the Zambian mineral sector has increased. Further development of the gemstone sector may create additional jobs both in the mining sector as well as in adjacent cutting and trading sectors. Although some large scale producers operate in this industry, the majority of mining remains small scale.

The vigorous development currently being observed in the emerald producing areas of Zambia is indicative of continued growth in this production market. Currently, the emerald market is seeing an upward movement in price. Conditions present in the market suggest that this trend is sustainable.

Unlike ruby and sapphire rough which has traditionally been exported to Thailand, and more recently China, for cutting and polishing before being exported further up the distribution channel to world markets, emerald rough is cut in major centers around the world including Colombia, Hong Kong, U.S., India and Israel. Other emerging centers such as South Africa and China are becoming increasingly relevant. However, as stated above the vast majority of commercial quality material is processed in India while finer quality and important stones are finished in Israel, Hong Kong or the U.S. There has been some movement away from this in last few years. As producing nations have become more aware of the value of their mineral resources, there has been a growing movement among many to secure a greater percentage of that wealth in their countries by development of the cutting and polishing industry. An emphasis has been placed not only on further exploration for mineral resources, but also on development of the sector with attention to creating jobs beyond mining. In that regard, some counties have begun restricting the amount of material that leaves the region prior to cutting and polishing.

Although generally applauded, such requirements have created some concern in the private sector. The concern rests in the fears that some countries could move to nationalize successful operations produced in part by private sector investment. However, in the case of Zambia which has a good record in this regard, such concerns presently appear unwarranted. However, this is not the case with other emerald producing countries such as Zimbabwe, where nationalized mines have become an issue.

### *Value*

Given a careful examination of current market conditions, in our opinion emeralds possess the strongest potential for increased value and market share of any of the top four trading gemstones in the global market. Today emeralds continue to trade below the peak price points of the 1980s. Although emerald prices have risen dramatically in the past three years, these increases in price have not experienced the same resistance from gem buyers that has been observed in the ruby market.

In addition to improved demand, prices for fine gemstones have also continued to rise. One factor is the value of the dollar, which has weakened since 2001. Accompanying this trend is the fact that top gem grade gemstones have become scarcer in the global market; as a result competition in the trading centers for them is fierce.

Examination of the data from 2004 to 2005 shows that of the big three (ruby, sapphire and emerald) if one looks in terms of individual gemstones, emeralds experienced the most significant increase in value. For the import data analyzed the import total only increased 12.4% from 2004 to 2005, but the per-carat price increase was nearly 50%.

Colored gemstones also offer the retail jeweler a much more attractive profit margin compared to the slim margins seen in diamonds. Emeralds already possess “luxury status” with consumers. Emeralds are one of the earliest gems used in jewelry and have been held in high regard dating back many centuries.

Emeralds, both in Colombia and Zambia, have been traditionally mined in small scale cooperatives. This structure is attractive to socially responsible fair trade practices. The concept of fair trade is new to the gem industry; however, fair trade principles have been steadily growing in importance to buyers according to the Jewelry Consumer Opinion Council. It has been suggested that the “beauty” of gem products can be further enhanced by providing workers a reasonable share of the value achieved by the trade. Globally third-world gem producing areas remain some of the poorest areas in spite of the wealth that other

individuals further up the distribution chain obtain through the sale of these products. Development of mining areas through construction of social necessities such as schools and medical clinics can further enhance these gem products.

Although emerald mining has traditionally been conducted following variants of small scale models, there is a potential upside to the emergence of a large scale model in the Zambian emerald industry. The obvious advantage would be the ability for vertical integration of product into the market. In our opinion, such a model would be ineffectual on a small scale; however, on the larger scale its potential is promising. Through proper development the Zambian emerald industry can expand its niche of supplying the world market with calibrated fine quality emeralds. In our opinion, the relationship between the Zambian government and private sector is favorable to further development of the mineral resources of the country.

The vertical integration marketing model is enhanced by current market conditions that find relative softness in the US gem market, while the European and Asian markets are reported to be stronger. Assuming the proper investment in product development and brand enhancement, emerald continues to offer strong upward potential. In that regard, the desirability of Zambian emeralds (traditionally recognized in the gemological community for their higher clarity) is significant. The control of the supply chain that vertical integration affords would also facilitate the beneficiation that consumers desire while protecting margins.

### 1.00 Carat Emerald Cut and Polished

Year	Commercial (1-4)		Good (4-6)		Fine (6-8)		Extra Fine (8-10)	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
1993	525	550	1475	1475	2750	2750	5500	5500
1994	550	450	1475	1350	2750	2600	5500	5400
1995	400	400	1250	1250	2400	2400	5200	5200
1996	375	375	1200	1200	2225	2225	4900	4700
1997	350	300	1125	900	2000	1900	4700	4500
1998	250	200	750	550	1600	1300	4400	4000
1999	180	160	550	500	1300	1200	4000	3600
2000	150	150	500	500	1200	1200	3600	3600
2001	150	150	500	500	1200	1300	3600	3750
2002	150	150	500	500	1450	1500	3750	3850
2003	175	200	600	650	1550	1650	3850	4000
2004	100	100	550	550	1425	1825	3125	4225
2005	100	100	565	565	2000	2000	4500	4500
2006	100	110	650	685	2400	2500	4750	5100
2007	110	110	650	650	2400	2600	4750	5500

The prices listed above are for emerald with a moderate level of enhancement (filler), from multiple origins. The numbers above are an average of data surveyed for the price and time range. Prices for unenhanced or slightly enhanced material would command a premium. Specific origins may have a positive or negative impact. The price decreases seen starting in 2000-2001 are the result of increased production at one source in Colombia. The price increases seen from 2004 forward result from improved demand, beginning the tapering off of production at the La Pita source and the stronger exchange rates seen in overseas markets.

### RUBY

The dominant position that ruby has held in the colored stone industry for much of the past century and even longer, has eased slightly during 2006 and first half of 2007, followed by a sharper decline in the latter half of 2007, which continues to the date of this report. Inconsistent production, controversies involving the effect of certain high temperature heat treatments and lead-glass fillers used to enhance rubies, as well as a shift in fashion trends of western consumers have resulted in fluctuations in the demand for ruby. During the past decade ruby has consistently ranked between second and fourth place on industry lists of the most popular colored stones.

Without disclosure to the general market, in 2006 a new treatment process was introduced that involved the lead glass fracture filling of low grade ruby from multiple origins. By the latter part of 2007, the global market began to realize the extent to which this material had infiltrated inventories. This revelation combined with the very high prices of gem quality material at the opposite end of the market and the talk

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of a strengthened U.S. trade embargo against Burma have contributed to confusion in the market that has seen many consumers opt out of the ruby market altogether. The author conducted additional research for this report at the Tucson GemFair February, 2008. Consensus among ruby and sapphire dealers interviewed was that sales of ruby were significantly off target. Ruby is not expected to maintain its position in the top three selling gemstones in western markets in 2008.

The primary producer of ruby continues to be Burma (Myanmar) which hosts the most significant deposits of gem ruby and accounts for approximately 80% of global production. Other significant producers are Tanzania, Kenya, Madagascar and Cambodia; combined these producers account for approximately 12% of global production. Secondary producers are Afghanistan, Malawi, Nepal, Pakistan, India, Sri Lanka (Ceylon), Thailand and Vietnam; combined these eight account for an estimated 8% of production. Deposits are also known in Greenland, Tajikistan and Canada; however, to date, none of these deposits are currently commercially viable although investment is being made in Greenland to develop that source.

In Burma, ruby deposits are associated with several distinct geological events. The main deposits are located in different parts of the country and are geologically unrelated. Burmese rubies range in color from pale to deep red; modifiers of purple and orange are not unusual. The red is generally more purple than that observed in Thai rubies. A major contributor to the appeal of Burmese ruby color is fluorescence, which gives the gems their appealing red glow. Due to the large quantities of ruby produced from this country, Burma ruby has become the benchmark by which rubies from other sources are judged. Today, the Mong Hsu deposits, located in Burma's Shan State, produce the bulk of those stones.

Burma's Mogok region hosts arguably the world's most important deposits of ruby and sapphire. For thousands of years, Mogok was the only real source for ruby in the world. Other locations such as Sri Lanka, and to a much lesser extent Afghanistan, did produce an occasional ruby but such stones were rarely of jewelry grade.

In nature, ruby is rare. Even at Mogok, fine stones are very few and far between and have been throughout the mining history of this location. Unlike rubies from the Mong Hsu deposits, the best of the Mogok rubies do not require heat treatment and as such, they represent better examples of gem quality ruby. Throughout the gem industry, "fine" quality Mogok rubies receive a significant price premium due to their rarity. The existence of this premium is the result of supply and demand.

As previously eluded to, Mogok ruby has distinct gemological properties that separate it from Mong Hsu. However, efforts to segregate Mong Hsu material from Mogok rubies by some laboratories and trade groups have failed to establish themselves. Today, most members of the colored stone trade deal simply with Burma as the origin and make no distinction between those locations when selling Mong Hsu material. It has been our observation that dealers emphasize this distinction when selling a fine Mogok stone however.

### *Complications in the Market*

During the late 1970s and well into the 1980s, political turmoil grew and the war along the Thai and Burma borders escalated, resulting in a significant number of mine closures. This contributed greatly to the rise in ruby prices. By 1989, gem smuggling and illicit mining and trading flourished in Mogok. The Mogok area has been closed to foreigners on and off for years as a result. Most Burma ruby was actually smuggled out of the country to Thailand where it was sold on the open market. Although this practice continues today, the government is seeing greater participation in its government run gem auctions. There are penalties for individuals caught selling gems not declared to government representatives.

Last year the sale of gemstones at the Burma government sponsored gem emporiums totaled \$370 million (US) according to an unofficial tally posted on Palagems.com. (Most sources agree that the actual numbers are likely much higher.) In 2006 that number was about \$225 million up from \$77 million in 2005 and \$40 million in 2003. According to Burmese government statistics published by the Xinhua News Service for the year 2006 and 2007, Burma produced 20,458 tons of jadeite most of which sold to China and 20.87 million carats of gemstones which sold into the international trade via Thailand. Gem mining is lucrative for the Burmese government which taxes sales and also has a partnership status in all *licensed* mines. Mining ventures are basically 50/50 partnerships between the government and private sector entities. These include jadeite and to a lesser extent ruby, sapphire, peridot, spinel, garnets, pearls, and topaz.

The U.S. embargo banning the importing of Burmese products into the U.S. had little impact on the supply in the American market. While some dealers have abided by the embargo, many other western

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dealers have by-passed the import restrictions by moving their goods to Thailand first and then importing them into the U.S. as products of Thailand. However, in 2007, the U.S. Congress proposed legislation that would effectively close that “loophole” and would ban all gemstones that originated (were mined) in Burma. This measure was reconciled between the two houses of Congress in early 2008 and is expected to be signed into law by the President of the United States of America during the first half of this year.

### *Treatments*

Throughout the ruby market, treatments have become a significant concern resulting in erosion in product confidence and price during the mid to late 1990s. The market is still struggling with how to resolve the treatment issue in ruby. The lead glass filling process mentioned above has adversely impacted the market by significantly increasing the population of low grade ruby on the market. This has resulted in ruby losing its popularity as the premier colored gemstone. More recently, another treatment involving the diffusion of the heavy elements into low grade rubies to improve color and clarity has been detected in the Thai market. This will only further contribute to the current confusion in the market.

Unheated rubies are rare in the *Fine* and *Extra Fine* categories. Demand for unheated rubies is strong and these stones draw a significant premium. However, they are also a small minority of the current ruby stock. The ruby prices in this report reflect the pricing structure of heat treated rubies only. Natural (untreated) ruby were excluded to avoid impacting the price averages.

Today, Mong Hsu production accounts for approximately 85 to 90% of Burmese ruby. As a result, Mong Hsu ruby is still the benchmark by which ruby is judged and priced. Only recently have certain market participants recognized the inherent problem which is that the main attribute of this product owes its existence to treatment. Given the lack of a viable alternative, some dealers have become more tolerant of the “flux healed” material. The product is now generally accepted, with the exception of those stones that show a significant amount of flux looking residue, as the norm for heated ruby, although other dealers have moved in a different direction by avoiding this product altogether.

However, the supply of *fine* and *extra fine* quality ruby, both in treated and natural form, are in short supply. Further compounding the supply shortages are rapidly growing consumer markets in Asia, China and India in particular, have traditionally been important labor markets for the international gem trades; however, economic prosperity has created a broader consuming class. This growing class of Asian buyers is competing with buyers from traditional markets for gem rough and as a result, prices have firmed across the board. For example, *Jewelry News Asia* recently reported that in 1996 only 19% of Taiwanese newlyweds exchanged diamond bridal jewelry compared to 74% in 2003. The effect is even more apparent in colored gemstone consumption. Asia, traditionally a significant labor and production source for the global gemstone trade is now also the trade’s strongest emerging consumer market.

### *Current Market Conditions*

Currently, fine quality rubies weighing more than 2 carats are difficult to obtain, while stones weighing 3 carats and more are extremely scarce in the *fine* and *extra fine* categories. Ruby prices in the finer categories increased dramatically during the past few years on growing demand in the global market. However, they have now reached a level where consumers are rejecting the current prices.

### *Quality*

While a universal grading scale does not exist, an easy to use and repeatable set of grading criteria has been instituted for use with the *GemGuide*. The system consists of four general categories that can be subdivided into 10 numerical grades. The lowest grade is 1 and the highest is 10. The categories are *commercial* (grades 1 through 4), *good* (grades 4 through 6), *fine* (grades 6 through 8) and *extra fine* (grades 8 through 10.) This system ranks factors related to clarity, color purity, cut quality and market appeal to assign the final grade. While defining our grading system it became apparent that one of the biggest challenges faced by the colored stone industry is a vehicle for accurate color communication. Several tools have been introduced though the years to assist users to describe color accurately. These systems, the GIA ColorMaster, GIA GemSet, GemEWizard, GemDialogue and ColorScan have value in assisting trade members describe color in a concise repeatable nomenclature. However, each has limitations.

All four grades of ruby are sold. *Commercial* to *good* can be found in a broad range of markets including mass merchandise and television shopping networks. *Fine* to *extra fine* is more selective and is typically found in medium to upscale jewelry stores as well as through gem brokers. Unheated ruby in the *fine* and *extra fine* grades is scarce and demand is high, therefore the market pays large premiums for these gems.

All quality ranges are found in the market. Since the early 1990s, stones over 2.5 carats are extremely scarce in *fine* and *extra fine* quality. The most popular sizes are 1 to 2 carats, but as with all gemstones, nature produces the greatest quantity of gems under 0.5 carat.

### Price Trend Analysis

An ongoing dilemma with Burma production is that the region is extremely volatile. Burma has been in a state of civil war for more than a decade, which has severely restricted the production of Burma ruby. Human rights violations received attention in the press during September and October 2007 when Burma forces acted against Buddhist monks protesting against the government. The government controlled media accounts were refuted by pro democracy students that released their accounts to the world via the internet. This resulted in a backlash, the full effect of which is not yet known.

In relation to the consumer market, the U.S. economy maybe characterized as sluggish. Consumer spending in the gem and jewelry sector has softened although one exception has been in the “collection” quality stones. In the *commercial* through *good* categories (the ‘bread-and-butter’ range of the market) sales are currently softer for ruby than in recent years.

### 1.0 Carat Ruby Cut and Polished

Year	Commercial (1-4)		Good (4-6)		Fine (6-8)		Extra Fine (8-10)	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
1993	550	475	1800	1700	4000	3900	6400	6400
1994	450	475	1800	1750	3600	3500	6000	5800
1995	500	550	1750	1700	3300	3000	5800	5500
1996	550	450	1600	1600	2900	2900	5200	5200
1997	375	300	1500	1350	2900	2700	5200	5000
1998	275	275	1150	1150	2300	2300	4900	4900
1999	275	250	1150	900	2300	2050	4700	4600
2000	225	225	900	900	2050	1750	4600	4600
2001	225	225	800	750	1750	1750	4100	4100
2002	225	200	800	850	1750	1300	4000	3000
2003	175	200	550	625	1125	1300	3000	3300
2004	150	150	650	625	1450	1225	3350	3250
2005	150	150	600	600	1225	1225	3050	3050
2006	150	175	600	775	1225	1650	3050	3750
2007	175	165	775	700	1650	1800	4000	4000

The prices listed above are for heat treated ruby, from multiple origins. The numbers above are an average of data surveyed for the price and time range. Prices for unheated material would command a premium. Contrary to the trend depicted in this chart, the price for unheated ruby has been on a gradual increase for much of this same period. The price deflation observed in this chart resulted from three factors: Detection of undisclosed treatments, discovery of new ruby deposits in Madagascar and elsewhere that increased supply and dealer and consumer investment in other products. Specific origins may have a positive or negative impact. The reasons are addressed in the narrative of this report.

### BLUE SAPPHIRE

Blue sapphire is the top selling colored gemstone in the global market. The color blue remains a favorite of fashion designers, reflecting the general attitudes of consumers that blue is a favorite color of most western buyers. As ruby supplies were dwindling, the sapphire market was enjoying a stable supply. Until 2007, production from Madagascar had been good, while at the same time production had improved in Sri Lanka. During the past decade the global gem market has relied on several countries for blue sapphire. The most important of these have been Australia accounting for approximately 50% production, Burma, Cambodia, Kenya, Madagascar, Tanzania and Sri Lanka accounting for 35% (combined Burma, Sri Lanka and Madagascar account for a disproportionate majority of gem grade material). Numerous other sources exist in Asia, Africa, North and South America and Europe. However, none of those deposits is currently significant to the gem trade.

The greatest demand is for Burmese material. However, the gap has narrowed slightly as Sri Lanka is also highly sought in the trade. Although experts agree that Kashmir is the most important origin in the sapphire market, there has been no significant production from this area for more than a century. Kashmir stones are very rare and prized for their velvety texture and intense coloration. The few Kashmir

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sapphires in circulation have been reintroduced from secondary markets such as estates sales and private collections and as such Kashmir sapphires were excluded from the price charts that accompany this report. However, it is worth noting that rare gems like *fine* Kashmir sapphire and Paraiba tourmaline have achieved and maintained value levels seen by very few colored stone varieties.

The sapphire price data contained in this report primarily reflects market activity for Burma, Sri Lanka and Madagascar sapphires as these origins account for the majority of gem quality sapphire of this carat size trading in the market today.

### *Burma*

The first formalized commercial mining of Burma sapphire was by the British during the late 1880s in the town of Mogok. However, the area does not lend well to large scale mechanized mining, and only small scale operations are supported by the rough terrain.

Burma sapphire experiences similar supply issues as do Burma ruby. The two products generally originate from the same deposits. However, the occurrence of sapphire is much less than that of ruby. Approximately 80% of output in Mogok is ruby and 20% is sapphire. Unlike ruby, sapphires have the tendency to crystallize in larger rough and sapphire stones reaching 100 carats have been recorded at the Mogok location.

Although the peak mining activities occurred during the first half of the twentieth century, mining is active today. The area has been closed off to foreigners by the government. The peak of production was achieved prior to 1950.

As discussed in the section on ruby, volatility of the region is an ongoing dilemma. Burma sapphire competes in the market with significant deposits of sapphire from other countries. Although demand is greater than supply for Burma sapphire, the fact that the market has additional sources such as Sri Lanka and Madagascar that produce fine quality sapphires has kept the market stable. In other words, when availability of Burmese stones is limited, dealers simply turn to other markets for similar quality sapphire. The existence of these other sources has kept prices for Burma blue sapphire from increasing significantly above that of the other similar quality sapphire on the market.

### *Quality*

As referenced in the ruby section of this report, no universal grading scale exists for colored stones. However, our publication ranks quality in four general categories that are further divided into ten grades. These categories are: *Commercial*, *good*, *fine* and *extra fine*. All four grades are sold. However, *extra fine* is not as available as it has been in the recent past. *Commercial* quality stones can be found in mass merchandise and television shopping networks. *Good* to *extra fine* grades are more typically found in medium to upscale jewelry stores.

Currently all sizes and qualities are in demand, especially the larger and finer stones, which are sought out by collectors. Although larger sizes are typically seen during research of individual stones, the actual average sapphire in the market is estimated at 3mm.

Burmese sapphire is usually not treated. This should not be inferred to mean a disproportionate amount of the mine run is high quality, but instead the absence of treatment is more directly related to the loss/damage rates suffered during attempts to treat Burma sapphire. Currently these rates are too high for producers to justify attempting to treat material from this origin. Sapphires from Madagascar and Sri Lanka have much higher success rates with heat treatment. As a result, in the *fine* and *extra fine* categories, the percentage of treated stones is much higher in Madagascar and Sri Lankan sapphire and therefore Burma sapphires can draw a premium in these two grades.

### *Sri Lanka and Madagascar*

The island nation of Sri Lanka was known as Ceylon until 1972. Sri Lanka's gem mining industry is amongst the oldest in the world, featuring some gem deposits which have been known for more than 1,500 years. The civil unrest that had plagued the country for nearly three decades significantly stifled the trade of Sri Lanka sapphire and other gems. Although the gem producing areas are far away from the fighting between the Tamil rebels and the Sri Lankan government forces, concerns scared away many of the foreign gem buyers who once frequented the gem markets. In 2003, a series of breakthroughs in the peace process were followed by a resurgence of activity in Sri Lankan gem markets.

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Sri Lanka sapphire is currently the second most significant origin in the sapphire market and production is improved. In an attempt to limit the exposure of Sri Lankan sapphire to any backlash levied at sapphire in the global market over the growing issue of undisclosed treatments (including lattice diffusion using beryllium) of blue and fancy sapphire, Sri Lanka enacted measures that prohibited the export of sapphire rough. The measure created the need for cutters and gemologists in Sri Lanka thus keeping more of the value derived from the nation's mineral resources within the country. This model of beneficiation is also growing in importance in other producing nations including Madagascar.

Ironically, Sri Lanka's importance as a sapphire producer was elevated during the 1970s after Thai "heat-treaters" discovered that the abundant pale colored Sri Lankan corundum known as geuda could be heat-treated to vibrant colors. This created a new market for Sri Lanka sapphires, which were treated to many colors, most important of which was blue, and then sold into the marketplace throughout the 1980s with no disclosure of the heat treatment. It is now apparent that the international gem community's failure to address treatments at that juncture meant that almost any treatment could be used until detected by the lab community. With no disclosure of the treatments, natural stones were pitted in the market against treated gemstones of apparently higher quality than natural stones rarely, if ever, could achieve. Consumers lacked the critical information to understand that the comparisons of sapphires at the retail level of the market were not of the same product.

By 1995 and 1996, the treatment controversy and an initial attempt by the Sri Lankan gem trade to limit exports of rough to Thailand for treating had reduced the supply of Sri Lankan sapphires to a fraction of the previous amount. Dealers held fine stones and were not shy about trying to set new price standards. Sri Lankan dealers were seen going directly overseas to the U.S., Japan and Thailand in an attempt to generate better prices. However, the market trend failed to materialize for any appreciable period of time. Until the widespread use of the internet, combined with the ability to ship globally overnight created the opportunity for dealers to go directly to the public with their products, producers were faced with limited marketing opportunities including the potential for collusion among buyers to suppress prices. Now many producers market directly to overseas consumers and this has proven to be a viable model for marketing production.

In 1998 a significant deposit of sapphire was discovered on the Island of Madagascar near Ilakaka which set off a nearly decade long mining rush. Madagascar has been a stalwart producer of blue sapphire in all qualities. Recently, Madagascar with financial assistance from the World Bank, instituted a series of programs aimed at the beneficiation of the populations living in the gem producing areas. Funds have been spent to build a gemological institute to expand employment opportunities for locals beyond physical mining. The institute teaches gem identification, cutting and jewelry fabrication courses to students from Madagascar and other African countries. The program has been largely successful and is a model for social responsibility for impoverished third world gem producing nations. Preliminary research has suggested that the international gem industry will be increasingly vulnerable to western consumer resistance toward gem products due to the perception that mineral wealth is largely robbed from underdeveloped nations. Efforts toward *Fair Trade* practices like those instituted in Madagascar, are important to countering the negative image from both an ethical and business perspective.

### *Quality*

While a universal grading scale does not exist, our publication uses four grading categories: *Commercial*, *good*, *fine* and *extra fine*. All four grades are commonly sold. Each of the three origins discussed here produces material of each grade. *Commercial* to *good* is typically found in mass merchandise and television shopping networks. *Fine* to *extra fine* can be found in medium to upscale jewelry stores or sold by gem brokers.

### *Price Trend Analysis*

Several key conditions contribute to sapphire's popularity. They include: current supply, which has kept sapphire affordable; the color blue is very popular with American and other western consumers; sapphire is one of the more durable gem materials and is quite versatile as a design element in traditional as well as modern jewelry design.

The following price grids suggest that the value of sapphire initially increased and dropped dramatically because of the undisclosed treatments. However another prominent factor contributing to the apparent price drop was the fact that the supply of sapphire simply increased. Madagascar and Sri Lankan sapphires are visually indistinguishable, and the increased supply of Madagascar stones brought down the price of

Sri Lanka sapphire. In response, Sri Lanka sapphire producers began buying and holding large amounts of Madagascar sapphire in an attempt to curb the downward price trend observed in 1999 and 2000. Ultimately trading in the global market has resulted in both products achieving price stability and there is now only a slight difference between the price of comparable quality stones from these two origins. However, now that production from the Madagascar deposits has slowed prices have begun to rise on this material. This trend is expected to continue.

### 1.0 Carat Blue Sapphire Cut and Polished

Year	Commercial (1-4)		Good (4-6)		Fine (6-8)		Extra Fine (8-10)	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
1993	175	175	550	550	1500	1400	2900	2900
1994	175	175	550	550	1400	1300	2750	2600
1995	150	150	500	500	1200	1250	2500	2500
1996	150	175	500	525	1200	1200	2500	2500
1997	175	175	525	525	1200	1200	2500	2500
1998	175	150	525	475	1200	1200	2500	2500
1999	150	125	475	425	1100	1000	2600	2400
2000	100	90	400	300	900	800	2000	2000
2001	90	90	300	300	800	800	1800	1800
2002	80	80	325	325	850	800	2000	2100
2003	90	95	350	350	800	900	2200	2200
2004	60	60	275	275	675	750	1500	1600
2005	60	60	275	250	750	725	1500	1500
2006	60	60	250	285	725	800	1500	1900
2007	80	80	300	300	800	860	1900	2000

The prices listed above are for heat treated blue sapphire, from multiple origins. The numbers above are an average of data surveyed for the price and time range. Prices for unheated material would command a premium. The price deflation observed in this chart resulted primarily from the discovery of large deposits in Madagascar that increased supply. In 2008, the price trend has been upward. Specific origins may have a positive or negative impact. The reasons are addressed in the narrative of this report.

#### TANZANITE

Tanzanite was first discovered in 1967 in Tanzania, Africa with the initial pocket of material being quite small. The only known gem deposits are in the foothills of Mount Kilimanjaro in Merelani, Tanzania.

Shortly after its discovery and throughout the 1970s, the gemstone was exclusively marketed by Tiffany and Co. however as it was not popular or profitable for the company, Tiffany eventually relinquished its rights to the exclusivity arrangement.

Throughout the 1980s tanzanite gained rapidly in popularity as the supply grew, making the stone more mainstream. Tanzanite gained in recognition with manufacturers and custom jewelers alike. Dealers bought heavily, resulting in greater exposure to the consumer public. A cottage industry thrived in the Caribbean tourist markets anchored by Tanzanite sales.

As demand increased so did the supply. Eventually, supply approached demand and prices leveled. However, supply continued to grow. Many Tanzanian gemstone miners, relatively unsuccessful with mining gems such as tsavorite and chrome tourmaline, began migrating to the tanzanite mining areas in search of work. This resulted in an excess of product arriving on the market.

By 1984 prices had peaked and the continued over-supply started pushing prices lower and lower. In 1989, much material was seen going from East Africa to Germany for cutting prior to arriving in U.S. Thus, prices were mostly dependent on asking prices in the German market.

Tanzanite finally reached its popularity peak in the 1990s when new deposits were discovered in mining blocks B and C (Tanzania's tanzanite mining area is located in Merelani. The deposits are divided into four blocks labeled A, B C and D, each of which is administered and controlled by a different group), resulting in a significantly higher availability of better quality material.

By 1992 prices were on average about half of the prices of the 1988 levels. The government of Tanzania acted to put a stop to the rampant mining by closing off the entire area and made all active miners cease production. After that, only four mining permits were issued in the hopes of stabilizing the tanzanite mines and permit holders continuously attempted to regulate the price of rough.

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Even after the mine closures, prices continued to fall and by 1993 prices were one third of what they were in 1988 due to the oversupply although subsequently the new mining situation resulted in rough prices increasing by about 10%. Most dealers absorbed the increase to remain competitive with the prices of existing stones.

By 1995, reports arrived from Arusha, Tanzania that buyers had been flocking there to buy everything possible in tanzanite, and prices began to rise. The price increases were partly due to a higher cost of living in Tanzania and more legitimate business practices with taxes being collected by the government.

Activity throughout the tanzanite market continued to pick up during the late 1990s. Tanzanite was reported to be the most volatile (price-wise) stone coming from East Africa. It was reported that tanzanite was perhaps the single hottest selling colored gemstone, outselling all colored stones with the exception of ruby, emerald and sapphire. In 1997 the Tanzanian government officially closed all mining regions in order to reorganize and bring mining activity under control. The vast majority of tanzanite rough was being smuggled out of the country. Tanzania's mineral resources were being depleted and the environment destroyed with little economic benefit to the country.

In 1998, a series of floods claimed hundreds of lives as heavy rain waters flooded mines faster than miners could climb out. The tragedy shut down all active production in Merelani. The market itself has never recovered or returned to the production level seen prior to this flooding catastrophe. It is theorized that much of the high quality rough that has entered the supply line after 1998 has actually come from stock piled reserves produced before the flooding. It took several years before mining activities were sufficient to produce a steady, new production.

Currently the lease to the most productive pocket of tanzanite is controlled by TanzaniteOne Ltd., an apparent offshoot of the South African based mining company — AFGEM (African Gem Resources Company). Although AFGEM had initiated mining activity in Merelani, a series of conflicts with both the government and opposition small scale mining groups had served as continual distractions and prevented AFGEM from any significant production up through this point. Increasing conflicts between AFGEM and members of the U.S. wholesale market have limited AFGEM's ability to introduce tanzanite into the U.S. market. Their proposed "sightholder" distribution structure was met with criticism by many established tanzanite wholesalers. In our opinion, their stated branding hopes have failed to get support in the U.S. TanzaniteOne Ltd's marketing arm, The Tanzanite Foundation, exhibits at major gem fairs. The purpose of the foundation is to promote tanzanite.

In the late 1990s the U.S. accounted for 70% of the global tanzanite market. During this same period tanzanite consistently placed in the top three most popular gemstones in the US market. After sliding down the chart in subsequent years, by 2006, tanzanite was no longer in the top ten. However, TanzaniteOne Ltd., has aggressively countered this trend by refocusing attention to the rough and polished ends of their business, while discontinuing investment in the finished jewelry line. The price declines experienced by this product are the result of a number of factors, including market saturation, economic fluctuations and issues of controversy.

At the height of the market, estimates put global sales of Tanzanite at about \$380 million annually. In recent years, the number is more consistently \$200-\$300 million. In the most recent year (2006) in which data is available, TanzaniteOne Ltd., reports 1.2 million carats of Tanzanite were recovered. The financials are published on the TanzaniteOne Ltd., website and therefore are not listed here. The percentage of gem grade material was slightly lower than in previous years.

### *Quality*

While a universal grading scale does not exist, our publication uses four grading categories: *Commercial*, *good*, *fine* and *extra fine*. All four grades are commonly sold. *Commercial* to *good* can be found in mass merchandise and television shopping networks. *Fine* to *extra fine* can be found in medium to upscale jewelry stores.

Because prices are relatively affordable, popular sizes range from 3 to 5 carats and are not significantly higher than the price equal quality 1 to 2 carat sizes.

## 1.0 Carat Tanzanite Cut and Polished

Year	Commercial (1-4)		Good (4-6)		Fine (6-8)		Extra Fine (8-10)	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
1993	50	50	80	80	130	130	200	200
1994	50	50	80	85	130	150	200	225
1995	50	50	85	90	150	165	240	255
1996	50	55	90	95	165	175	255	270
1997	45	35	85	75	150	150	230	230
1998	35	40	80	100	165	240	250	350
1999	40	75	110	180	240	300	350	375
2000	75	150	180	250	300	365	375	435
2001	150	110	250	200	365	300	435	400
2002	50	65	120	150	220	250	310	350
2003	50	65	135	135	225	225	335	335
2004	65	80	165	190	265	375	350	425
2005	85	90	190	190	315	375	425	435
2006	80	110	200	225	350	375	465	490
2007	110	110	225	225	375	400	450	500

### SUMMARY OF FINDINGS

Historically over the longer term, gemstone prices remain fairly stable. Gemstone products experience periods of volatility as issues of supply and demand and treatment develop. As with nearly every other industry, prices within gemstone and jewelry markets are influenced by market economics.

There are many market variables to consider when evaluating price data. External pressures such as the economic, environmental, political conditions in both producing and consuming countries and treatment issues influence the markets. In the case of treatments, eventually the market either accepts the treatment or definitively rejects the treatment. Gem treatments have traditionally posed a greater threat to market confidence than synthetic gems, which tend to be easier to detect. Synthetic emeralds have existed for decades. Today numerous brands of synthetic emerald exist in the market and have achieved their own market share. They are not viewed as a serious risk to the natural product as typically all can be detected and separated from natural emeralds with relative ease.

The market trends illustrated throughout this report provide the information necessary to assist in formulating an analysis of gemstone pricing within the industry. Of the four gem materials discussed in this report, sapphire and tanzanite can be described as stable, ruby can be described as entering a downward trend resulting from product confusion evident in the current market, while emerald shows solid growth potential.

### *Conclusion*

The worldwide gemstone industry is comprised of two distinct segments: the diamond market and the colored gemstone market. Both are directed by many variables, including aesthetic characteristics, stone rarity, external pressures (i.e., economic environment and political conditions) and consumer sentiment/appreciation. The primary contrasts between the two markets lay in the marketing models and market economics.

Colored gemstone prices are predominantly influenced by free market conditions. Colored gemstones are primarily produced at relatively small operations with minimal production costs associated. It is plausible that certain producing nations are increasingly aware of the value of their mineral wealth and this may become more influential in the mining sector. One example would be Zimbabwe where the government has begun the takeover of foreign owned mining operations in that country. Other nations, such as Botswana have formed partnerships with producers thus guaranteeing that experienced producers work and manage the operations, while the government is able to extend the benefit of the resources more widely.

With the value of the colored gemstone industry at about 10% of the dominant market share for diamond, a disparity in marketing and mining approaches and revenue is understood. The growth potential for the colored stone sector is tremendous. The success of the DeBeers model in managing the production and distribution of diamonds is self evident in the dominant position that diamond enjoys in the market today, although competition at the retail level of the market and the alteration of once clearly defined

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boundaries between wholesale and retail have resulted in a sharp decline in the profit margins for diamonds sold to consumers. This is one reason that the traditional retail jewelry store model is evolving by dedicating greater retail space and resources to the promotion of colored gemstone related products.

In addition to strong demand, prices for these fine gemstones have continued to rise. One factor is the value of the dollar, which remains weak compared to its pre-2001 levels. Another factor is that top-end gemstones are more difficult to find, and the competition for them is fierce. Some gemstone varieties have clearly benefited more than others from the current trends. A 2006 study showed that in terms of individual gemstones, emerald saw the biggest jump in value while the import total only increased 12.4%, from 2004 to 2005 the price per carat was up nearly 70% over this same period.

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## PART V

### ZAMBIA

#### 1. Introduction

The Republic of Zambia is a landlocked country, with a land area of 740,724 km<sup>2</sup><sup>(3)</sup> located in Southern Africa. The neighbouring countries are the Democratic Republic of the Congo to the north, Tanzania to the north-east, Malawi to the east, Mozambique, Zimbabwe, Botswana, and Namibia to the south, and Angola to the west. The capital city is Lusaka, located in the southeast of the country. The population of 11.5 million,<sup>(3)</sup> is concentrated mainly around the capital and the Copperbelt to the northwest.



#### 2. Political and economic environment

Zambia is a member of the Southern African Development Community (SADC) and has maintained amicable relations with the neighbouring countries. The country's political history has been relatively stable compared with many other states in Sub-Saharan Africa. It has had four different consecutive democratically elected governments over the past 16 years. No government has been overthrown by a coup d'état and the risk of armed conflict is low as in-fighting has been generally played out without recourse to arms often ending up in the courts, where verdicts are in most cases accepted. The country's legal system is derived from English common law and is mostly independent from the executive and legislature.

The economy of Zambia continues to perform relatively well on the back of high metal prices and a growing contribution from agriculture and tourism. Zambia's GDP grew by over 5 per cent. in 2006<sup>(3)</sup> reflecting the impact of high global copper prices and privatization in the mining sector. The Economist Intelligence Unit forecasted a 6 per cent. growth for 2007 mainly supported by the continued strong investment in copper production and the impact of it on the other sectors of the economy.

The currency of Zambia is the Kwacha and is freely convertible. Increased aid assistance due to successful implementation by Zambia of IMF reforms, the investment of around US\$3.6bn by the World Bank and foreign exchange generated by the copper export has helped stabilize the Kwacha depreciation trends since its free float started in October 1992.

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### **3. Zambian Infrastructure**

Zambia's exports are sent to ports in neighbouring countries Mozambique, Tanzania and further away to South Africa via railroad. The Zambia Rail (ZR) is one of the few successful railway networks on the continent of Africa<sup>(2)</sup>. It is the main rail connection between Livingstone (south border), Lusaka (the capital) and the Copperbelt towns (north border) with connections to Zimbabwe, Tanzania and DR Congo and several branches, mostly to copper mines. Under the Zambian government's privatisation policy, operation and management of the ZR network is contracted to Rail Services Zambia (RSZ), a company with South African shareholding. A rail link to Angola is planned with a 685 km railway line running north-west from Zambia's mining hub in the Copperbelt province to join Angola's Benguela railway.

The Zambia road network (estimated 37,000 km of roads) was in a dire state in the 90's but road investment has been scaled up since the launch of a 10 year US\$1 billion investment program in 1998. The first phase of the program ended in 2002 and since then the government continued constructing, rehabilitating and maintaining the road infrastructure. In addition, the government is working on a new partnership policy, similar to the railroad privatization scheme that will allow private sector to be involved in construction, rehabilitation and maintenance of infrastructure in collaboration with the public sector.

Hydroelectricity is the main source of power in Zambia. Zambia Electricity Supply Corporation's (Zesco) is addressing the rapidly increasing demand of power from the mining industry (it is estimated that the demand of power will rise to 1900 MW by 2010<sup>(1)</sup>) by upgrading the existing infrastructure and through construction of new hydroelectric projects.

A significant proportion of the country is covered by mobile phone network. From 2005 to 2006, the subscriber base registered a 78.8 per cent. growth to a level of 1,734,276 users.

### **4. Mining in Zambia**

In 1995, Zambia enacted investor friendly mineral and mining legislation (which has recently been revised) and dozens of international mining companies have since established mining and/or exploration activities in the country. As at 1 April 2008, Zambia has promulgated new mining legislation, further details of which are set out in paragraph 6 below. Zambia has a significantly improved economic outlook. The copper and cobalt mining industries in Zambia have been revitalised through privatisation and the recent rise in copper prices. In addition, over US\$750 million has been earmarked by mining companies for investment in the Zambian copper mining industry in the foreseeable future. For many years, Zambia has been an important source of gemstones for the world's jewellery market. The Government of Zambia expects new mines and processing facilities will be established to help double foreign direct investment to US\$3 billion in 2008.

Zambia won Mining Journal's Country Award last November for its expanding mineral production, transparent mining law, excellent infrastructure and improved corporate governance.<sup>(3)</sup>

A number of financial incentives have been created specifically to encourage investment in the Zambian mining industry. Zambian mining legislation contains incentives which include an exemption, on application by mining rights holders, from paying duty and VAT on importation and purchase of eligible machinery, equipment and supplies, a 100 per cent. deduction of pre-production exploration costs within the first year of production and a five-year carry forward period for losses.

### **5. Gemstone Mining in Zambia**

The Zambian gemstone industry remains a fragmented industry generally run by small companies, syndicates, cooperatives and individuals.

The quality of Zambian emerald is on a par with the Colombian emerald. Zambian emerald tends to be higher of a clarity than that of the other two main sources Colombia and Brazil, and many dealers prize Zambian emeralds for their transparency, with many stones exhibiting a clear "crystal" transparency and rich bluish green colour, a colour which is generally considered unique to this area<sup>(4)</sup>. In Zambia, deep green and valuable emeralds are currently sourced only from the NRERA. The NRERA is a part of the famed copper belt where many mines are located. Emerald mines therefore benefit from the existing infrastructure.

The fields at NRERA are believed to potentially represent the single largest source of easily mined, high quality emeralds in the world and have been known to produce approximately US\$100 million worth of emeralds annually.

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The Group holds, prior to Completion, an interest in two major areas in Zambia with pegmatitic/intrusive activity in which gemstones are known to occur. These are as follows:

- (a) Emeralds in the Miku-Kafubu area (Mbuva-Chibolele and Kamakanga);
- (b) Amethyst mineralisation in the Mapatizya area (Kariba).

In recent years, Zambia has become an important producer of emeralds mainly through the activity of medium and small scale operators. The emerald fields of Zambia are located in the north-central region of the country, largely in the basins of the Kafubu and Mitondo rivers southwest of Kitwe. Beryl was originally discovered at Miku in 1928 and the existence of emeralds was confirmed in 1931. It was not until 1967 however, that limited mining for emeralds and Beryl began in the region. Subsequent mapping by geological surveys led to a takeover of the industry by the Zambian state owned Mining and Development Corporation Ltd ('Mindeco') in 1971. Several new locations were discovered and exploited by local miners which led to additional prospecting and disorganised surface mining both by Mindeco and private operators. In 1977, the Mining Development and Exploration Corporation Ltd, the exploration arm of Mindeco, commenced systematic exploration of the area utilising modern techniques. However, during the same period the activities of the small-scale miners expanded to uncontrollable proportions which led to the Zambian Government closing the whole area to prospecting and mining in 1978.

After 1980 the NRERA, which extends to hundreds of square kilometres, was established over the major mining areas in an attempt to control the industry. This area is currently policed by the Zambian Government and is surrounded by paramilitary checkpoints with restricted access for licenses and their employees. The NRERA is a potentially world class emerald field in a politically stable environment which has been a prolific source of emeralds since the late 1970's currently yielding 100 per cent. of Zambia's emeralds. The Fwaya — Fwaya Perala Belt of the NRERA yields over 80 per cent. of this emerald production. Total Zambian emerald production contributes to about 20 per cent. of world production. Currently, open pit mining is the preferred method of mining emeralds in the region.

## **6. Mining and environmental regulation**

The mining industry in Zambia has been identified as a priority sector because of its strategic role in the economy — specially as a source of foreign exchange earnings, employment creation and economic growth.

Zambia's investor friendly mineral policy is now enshrined in the Mines and Minerals Development Act, 2008 (the "Mining Act 2008") which, as of 1 April 2008, replaced the Mines and Minerals Act 1995.

The Mining Act 2008 introduces various new provisions including requiring the holder of a mining right in Zambia to apply, by 1 April 2009, for a new mining licence in accordance with the provisions of the Mining Act 2008 and all mining rights granted under the previous act shall cease to be valid as of 1 April 2009. The Mining Act 2008 looks to improve on, and clarify some of the ambiguous elements of the previous act. The Mining Act 2008 continues in the same vein as the previous act with its simplified licensing procedures, minimum reasonable constraints on prospecting and mining activities, and furthering of a favourable investment environment. The responsibility for issuing mining licences, depending on the type of licence being issued, falls to both the Director of Mines and the Director of Geological Survey in Zambia.

The Mining Act 2008 specifies how the rights to prospect, mine and dispose of minerals can be acquired and held. A mining licence confers on the holder exclusive rights to carry on mining and prospecting operations in the mining licence area. This includes erecting the equipment needed to mine, process and transport the minerals, disposal of mining wastes, stockpiling of minerals or waste products and prospecting within the licence area. An application for a licence must include a mine plan, an environmental plan and a proposal for the employment and training of citizens of Zambia.

The Environment Council of Zambia (ECZ) is the agency responsible for monitoring environmental issues and works with the Mine Safety Department for the mining sector. In addition to the provisions set out in the Mining Act 2008, the Mines and Minerals (Environmental) Regulations, 1997 state that an environmental authorisation to develop a mine must be obtained from the Director of Mine Safety which grants authorisation in consultation with the ECZ and subject to an environmental impact statement being submitted. The regulations also include requirements relating to the management of:

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mine residue deposits; air quality; water pollution; storage and handling of hazardous wastes; and contribution to an Environmental Protection Fund (some of which are cross referenced to other applicable environmental legislation).

Further information on mining and exploration licensing and environmental regulations in Zambia is set out in paragraph 2.5 of the Competent Persons Report at Part VII of this document.

A holder of a mining licence for gemstones will pay royalties tax on the *gross value* of the gemstones produced at the rate of 5 per cent.. For the purposes of the calculation of mineral royalty, “gross value” is defined to mean the realisable value for a sale free on board, at the point of export from Zambia or point of delivery within Zambia.

Sources:

- (1) Country Profile 2007, The Economist Intelligence Unit
- (2) Forbes.com: Africa’s Rail Revival 12-11-07
- (3) Mining Journal — Canadian Focus — January 2008 edition
- (4) Report of Gemworld International, Inc, set out in Part IV of this document

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## PART VI

### RISK FACTORS

**In addition to the other relevant information set out in this document, the following specific risk factors should be considered carefully in evaluating whether to make an investment in the Company. The investment offered in this document might not be suitable for all of its recipients. If you are in any doubt about the action you should take, you should consult a person authorised under the Financial Services and Markets Act 2000 who specialises in advising on the acquisition of shares and other securities.**

**Investing in the Company involves a degree of risk. The price of Ordinary Shares could decline due to any of these risks and investors could lose all or part of their investment. An investment in the Company is only suitable for investors who are capable of evaluating the risks and merits of the investment and who have sufficient resources to bear any loss which might result from such investment.**

**The Directors have identified the risks below, and, if they were to materialise the Enlarged Group's business, financial conditions and results of operations could be materially and adversely affected.**

The exploration and development of natural resources are speculative activities that involve a high degree of financial risk. The risk factors which should be taken into account in assessing the Company's and the Target Group's activities and an investment in the Company include, but are not necessarily limited to, those set out below. Any one or more of these risks could have a material adverse effect on the value of any investment in the Company and the business, financial position or operating results of the Enlarged Group and should be taken into account in assessing the Company's activities.

The risks noted below are not presented in any order of priority.

#### **RISKS RELATING TO THE BUSINESS OF THE ENLARGED GROUP**

##### **Exploration, Mining and Processing Licences**

The Enlarged Group's exploration, mining and processing activities will be dependent upon the grant of appropriate licences, concessions, leases, permits and regulatory consents, which may be withdrawn or made subject to limitations. There is no guarantee that, upon completion of any exploration, a mining licence will be granted with respect to exploration territory. There can also be no assurance that any exploration licence will be renewed or if so, on what terms. Non-renewal of a licence may cause the Enlarged Group to discontinue the operations requiring the licence, and the imposition of additional conditions on a licence may cause the Enlarged Group to incur additional compliance costs, either of which could have a material adverse affect on the Enlarged Group's financial condition and results of operations.

These licences will place a range of past, current and future obligations on the Enlarged Group. In some cases there could be adverse consequences for breach of these obligations, ranging from penalties to, in extreme cases, suspension or termination of the relevant licence or related contract.

In addition, the Mining Act 2008 introduces various new provisions including requiring the holder of a mining right in Zambia to apply, by 1 April 2009, for a new mining licence in accordance with the provisions of the Mining Act 2008 and all mining rights granted under the previous act shall cease to be valid as of 1 April 2009. Further, to operate in Zambia, a holder of a mining right now needs to hold an annual operating permits which permits the holder to conduct mining operations in Zambia, and an export permit in respect of any mineral to be imported or exported. Whilst the Enlarged Group intends to apply for renewal of its mining licences in accordance with the new Mining Act 2008, there can be no assurance that any licence will be renewed or if so, on what terms. Additionally, the Enlarged Group may not be able to, or may voluntarily decide not to, comply, or may not have complied in all respects, with the licence requirements for some or all of its licences. If the Enlarged Group fails to fulfil the specific terms of any of its licences or if the Enlarged Group operates in the licence areas in a manner that violates Zambian law, regulators may impose fines on the Enlarged Group or suspend or revoke its licences, any of which could have a material adverse effect on its operations.

##### **Development Projects**

Development projects have no operating history upon which to base estimates of future cash operating costs. For development projects, estimates of probable reserves are, to a large extent, based upon the interpretation of geological data obtained from drill holes and other sampling techniques and feasibility

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studies. This information is used to calculate estimates of cash operating costs based upon anticipated tonnage and grades of gemstones to be mined and processed, the configuration of the gem deposit, expected recovery rates, comparable facility and equipment operating costs, anticipated climatic conditions and other factors. As a result, it is possible that actual cash operating costs and economic returns may differ from those currently estimated.

### **Expansion Targets and Operational Delays**

The Enlarged Group plans to develop its properties. However, there can be no assurance that it will be able to complete the planned development on time or to budget, or that the current personnel, systems, procedures and controls will be adequate to support the Enlarged Group's operations. Any failure of management to identify problems at an early stage could have an adverse impact on the Enlarged Group's financial performance.

### **Resources Production**

The figures for resources presented in this document are estimates and no assurance can be given that the anticipated tonnages of TMS and reaction zone and grades will be achieved or that the indicated level of recovery will be realised. The current strategic plan of the Enlarged Group assumes the achievability of significant production expansion at the Kagem Emerald Mine. The principal risk in this regard is directly related to the assumptions regarding the prevalence of reaction zones and the rate at which they can be practically mined without impairing the quality and quantity of marketable gemstones. In addition, market fluctuations in the price of gemstones may render gem reserves and resources uneconomical. Moreover, short-term operating factors relating to gem reserves and resources, such as the need for orderly development of a gem body or the processing of new or different gem grades, may cause a mining operation to be unprofitable in any particular accounting period.

### **Geology and resources**

To maintain gemstone production into the future beyond the life of the current resources or to increase production materially above projected levels, the Enlarged Group will be required to delineate further resources. Any gemstone exploration programme entails risks relating to the location of economic gem bodies, the development of appropriate processes, the receipt of necessary governmental permits and the construction of mining and processing facilities at any site chosen for mining. No assurance can be given that any exploration programme will result in any new commercial mining operation or in the discovery of new resources.

A decline in the market price of gemstones may render gem resources and/or reserves containing relatively lower grades of gemstones uneconomic.

### **Dependence on diesel and volatility of oil prices**

Expenditure on diesel fuel accounts for approximately half of total mining expenses at the Kagem Emerald Mine and is the second highest expense category in the business after employee wages. There are many alternative suppliers of diesel and Kagem has recently negotiated an agreement across all of these suppliers (apart from BP) to supply diesel at a fixed price which is lower than the local market price. However, the price is still linked to movements in world oil prices so volatility in oil prices may have a significant effect on the Enlarged Group. In addition, the Kagem Emerald Mine has limited storage capacity for supply of diesel therefore unavailability of diesel for an extended period of time could have a significant effect on operations.

### **Reliance on Strategic Relationships**

In conducting its business, the Enlarged Group will rely on continuing existing strategic relationships and forming new ones with other entities in the gemstone industry, such as joint venture parties and mining partners, and also certain regulatory and governmental departments. While the Directors have no reason to believe otherwise, there can be no assurance that its existing relationships will continue to be maintained or that new ones will be successfully formed and the Enlarged Group could be materially adversely affected by changes to such relationships or difficulties in forming new ones.

### **Control by certain Shareholders**

Following Admission, Rox will beneficially own, approximately 56.35 per cent. of the Enlarged Share Capital (and following the sale on behalf of Rajiv Gupta, 59.22 per cent). As a result, Rox could be able

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to exercise significant control over all matters requiring Shareholder approval, which could delay or prevent an outside party from acquiring or merging with the Company. The ability of this Shareholder to prevent or delay these transactions could cause the price of the Ordinary Shares to decline.

### **Additional Financing**

The Enlarged Group will be required to fund approved exploration expenditure on properties the subject of the Enlarged Group's exploration licences, failing which the Enlarged Group's exploration rights in the relevant property may be either reduced or forfeited. The Enlarged Group may acquire exploration rights in other exploration properties in Zambia and elsewhere which may require acquisition payments to be made and exploration expenditures to be incurred. The only sources of funding currently available to the Enlarged Group are through the issue of additional equity capital, project finance or borrowing. There is no assurance that the Enlarged Group will be successful in raising sufficient funds to commence mining operations or to meet its obligations with respect to the exploration properties in which it has or may acquire exploration rights. There can be no guarantee that the necessary funds will be available on a timely basis, on favourable terms, or at all, or that such funds if raised, would be sufficient. The level and timing of future expenditure will depend on a number of factors, many of which are outside the Enlarged Group's control. If the Enlarged Group is not able to obtain additional capital on acceptable terms, or at all, it may be forced to curtail or abandon such planned expansion, activity and/or business development. If additional funds are obtained from the issue of equity capital this may have a dilution effect on the shareholdings of existing investors.

### **Key Personnel**

The Group and the Target Group rely on a limited number of key employees. However, there is no assurance that the Enlarged Group will be able to retain such key executives or other senior management. If such personnel do not remain active in the Enlarged Group's business, its operations could be adversely affected.

### **Unions and employment disputes**

All mine workers at the Kagem Emerald Mine (and the majority of workers at the Kariba mine) are members of the Mineworkers Union of Zambia (MUZ). The MUZ negotiates annual salary increases, and these have in the past applied retrospectively. There is a risk that such wage increases will occur again in the future and could have an impact on operating costs at the Kagem Emerald Mine. In addition, while there have been no strikes since Gemfields took over management of the Kagem Emerald Mine in November 2007, there have been instances of ad hoc strikes before this date and the risk of future strikes could effect the Enlarged Group's operations. For example, a key priority of Gemfields is to tighten security at the Kagem Emerald Mine and there is a risk that tighter measures will alienate workers and prompt industrial action.

### **Occupational health and safety**

The Enlarged Group's operations are subject to all of the health and safety hazards and risks normally incidental to hard rock mining operations including silica dust exposure and silicosis, occupational lung diseases and noise induced hearing losses any of which could result in damage to life or property and possible legal liability for any or all such damage caused and consequential disruption to the Enlarged Group's operations.

### **Security**

Historically, security at the Kagem Emerald Mine has been weak. Improvements to security have been put in place since Gemfields took over management of the Kagem Emerald Mine in November 2007 and it will remain a key priority of the Enlarged Group. However, theft of emeralds can mean fewer top quality stones being available for sale having a significant impact on revenues generated by auctions.

### **Currency Risk**

Currency fluctuations may affect the cash flow that the Enlarged Group hopes to realise from its operations as gemstones are sold and traded on the world markets in United States dollars. The Enlarged Group is exposed to foreign exchange risk since much of its revenue and its exploration and development

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costs are expected to be received/paid in or by reference to United States dollars whilst the majority of its administrative and operational costs will be in local currencies. Exchange rates have varied considerably at times. The Enlarged Group will not engage in active hedging to minimise exchange rate risk. Various countries have from time to time imposed restrictions on the convertibility of local currency and there is no guarantee that such restrictions will not be imposed in future.

### **Uninsured Risks**

The Enlarged Group, as a participant in exploration and mining programmes, may obtain insurance against certain risks in such amounts as it considers adequate. However, the nature of these risks is such that liabilities could exceed policy limits or that certain risks could be excluded from coverage. There are also risks against which the Enlarged Group will not be able to insure or against which it may elect not to insure. The potential costs that could be associated with any liabilities not covered by insurance which may be, but is not, taken out or which is in excess of insurance coverage actually taken out may cause substantial delays and require significant capital outlays adversely affecting the Enlarged Group's earning and competitive position in the future and, potentially, its financial position.

### **Market Perception**

Market perception of small mining exploration companies may change which could impact on the value of investors' holdings and on the ability of the Enlarged Group to raise further funds by the issue of shares in the Company.

### **Oriental Mining**

The rights in the 15 exploration mining licences to be held by Oriental Mining were transferred to Oriental Mining pursuant to a sale and purchase agreement in October 2007. As at the date of this document, applications have been filed for the transfer of these licences to Oriental Mining with the Bureau de Cadastres Miniers de Madagascar ("BCCM"), the Madagascar Ministry of Mines but, until new mining titles are issued by the BCCM in the name of Oriental Mining, the transfer is not complete and full title to the mining licences is not held by Oriental Mining.

## **RISKS RELATING TO CUTTING AND POLISHING**

One of the key components in the Enlarged Group's strategic development plan is the establishment of permanent cutting and polishing facilities. However, as with all development projects, there is a risk that the establishment of these facilities may take longer than expected or cost more than budgeted. Furthermore, the success of the Enlarged Group's cutting and polishing activities will depend on the availability of skilled and experienced cutters and polishers and on the Enlarged Group's ability to recruit and retain them. Once established, the cutting and polishing activities and the sale, exportation or importation of the cut and polished stones may be subject to control or require appropriate licences, concessions, permits or regulatory consents which may or may not be granted, and, if granted, may be subject to limitations of which the Enlarged Group is currently unaware.

## **RISKS RELATING TO GEMSTONE MINING AND EXPLORATION**

### **Nature of Gems, Exploration and Mining**

The exploration and development of gemstone deposits involves significant financial risks over a prolonged period of time, which even a combination of careful evaluation, experience and knowledge may not eliminate. While discovery of a gemstone structure may result in substantial rewards, few properties that are explored are ultimately developed into economically viable operating mines. Major expenditure may be required to establish reserves by drilling and for constructing mining and processing facilities at a site, and it is possible that even preliminary due diligence will show adverse results, leading to the abandonment of projects. It is impossible to ensure that preliminary feasibility studies or full feasibility studies on the Enlarged Group's exploration projects or the current or proposed exploration programmes on any of the properties in which the Group or the Target Group has exploration rights will result in a profitable commercial mining operation.

The Enlarged Group's operations will be subject to all of the hazards and risks normally incidental to the exploration, development and production of gemstones, any of which could result in damage to life or

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property, environmental damage and possible legal liability for any or all such damage caused. The Enlarged Group's activities may be subject to prolonged disruptions due to weather conditions depending on the location of operations in which the Enlarged Group has interests. Hazards, such as unusual or unexpected formations, rock bursts, pressures, cave-ins, flooding or other conditions may be encountered in the drilling and removal of material.

Whether a gemstone deposit will be commercially viable depends on a number of factors, some of which are the particular attributes of the deposit (such as its size and quality), proximity to infrastructure, financing costs and governmental regulations (including regulations relating to prices, taxes, royalties, infrastructure, land use, importing and exporting of gemstones and environmental protection) and other factors including the availability of equipment. The effect of these factors cannot be accurately predicted, but the combination of these factors may result in the Enlarged Group not receiving an adequate return on invested capital.

### **Consumer demand for and perception of coloured gemstones**

The coloured gemstone industry is subject to changes in customer preferences, perceptions and spending habits. The Group's performance depends on factors which may affect the worldwide desirability of coloured gemstones. Such factors include adverse media coverage, consumer incomes and consumer preferences. For example, treatments used to enhance the appearance of coloured gemstones became a significant concern, resulting in erosion in product confidence and price during the mid to late 1990s (although as Zambian emerald is prized for their unique rich bluish green colour, the need for treatment of this material is less than that of any other known active emerald source which has proven increasingly important to treatment weary consumers). Furthermore, by their nature, coloured gemstones are luxury consumer goods and a change in consumer spending habits may result in reduced demand and lower prices for the coloured gemstones produced by the Group. Any changes in consumer preferences or levels of consumer spending may have a material adverse effect on the Group's results of operations or financial condition.

### **Competition**

The gemstone exploration and mining business is competitive in all of its phases. The Enlarged Group will compete with numerous other companies and individuals, including competitors with greater financial, technical and other resources than the Enlarged Group, in the search for and acquisition of exploration and development rights on attractive gemstone properties. The Enlarged Group's ability to acquire exploration and development rights on properties in the future will depend not only on its ability to develop the properties on which it currently has exploration and development rights, but also on its ability to select and acquire exploration and development rights on suitable properties for exploration and development. There is no assurance that the Enlarged Group will be able to compete successfully with its competitors in acquiring exploration and development rights on such properties.

## **RISKS RELATING TO ZAMBIA AND OTHER RELEVANT LOCATIONS**

### **Political Risk**

The Group and Target Group conduct exploration and development activities primarily in Zambia. The Directors and Proposed Directors are hopeful that the government of Zambia will continue to support the development of natural resources by foreign operators, but there have been cases of mining licences being revoked in the past. There can be no assurance that future political and economic conditions in Zambia will not result in the government adopting different policies in relation to foreign development and ownership of gemstone resources. Any such changes in policy may result in changes in laws affecting ownership of assets, taxation, rates of exchange, environmental protection, labour relations, repatriation of income, return of capital, nationalisation, expropriation and other areas, each of which may affect both the Enlarged Group's ability to undertake exploration and development activities in respect of future properties in the manner currently contemplated as well as its ability to continue to explore and develop those properties in respect of which it has obtained exploration and development rights to date. Further Kagem is owned as to 25 per cent. by the Zambian Government and any change to Zambian Government policy may result in a change in its treatment of such interest.

As producing nations have become more aware of the value of their mineral resources, there may be a movement to secure a greater percentage of that wealth in their countries by development of the national

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industry with an emphasis being placed not only on further exploration for mineral resources but also on development of the sector with attention to creating jobs beyond mining. In that regard, there is a risk that government policy may change to restrict the amount of material that leaves the region prior to cutting and polishing which will impact the strategic plans of the Enlarged Group. In addition, a change in government or government policy could lead to the nationalisation of successful operations produced in part by private sector investment although, in the case of Zambia which has a good record in this regard, such concerns presently appear unwarranted.

### **Legal Systems**

The Republic of Zambia, India, the Republic of Panama and Madagascar may have a less developed legal system than jurisdictions with more established economies which may result in risks such as (i) effective legal redress in the courts of such jurisdictions, whether in respect of a breach of law or regulation or in an ownership dispute, being more difficult to obtain; (ii) a higher degree of discretion on the part of governmental authorities; (iii) the lack of judicial or administrative guidance on interpreting applicable rules and regulations; (iv) inconsistencies or conflicts between and within various laws, regulations, decrees, orders and resolutions; or (v) relative inexperience of the judiciary and courts in such matters. There can be no assurance that joint ventures, licences, licence applications or other legal arrangements will not be adversely affected by the actions of government authorities or others and the effectiveness of and enforcement of such arrangements in the Republic of Zambia, India, the Republic of Panama and Madagascar cannot be assured.

### **Regulatory Approvals**

The operations of the Enlarged Group and the exploration agreements which it will enter into require approvals, licences and permits from various regulatory authorities, governmental and otherwise (including project specific governmental decrees). Subject to the fulfillment of the requirements of the new Mining Act 2008, the Directors believe that the Group holds all necessary approvals, licences and permits under applicable laws and, regulations in respect of its main projects and believe it is presently complying in all material respects with the terms of such approvals, licences and permits. Subject to the fulfillment of the requirements of the new Mining Act 2008 the directors of the Target Group believe that each member in the Target Group hold all necessary approvals, licences and permits under applicable laws and, regulations in respect of its main projects and believe it is presently complying in all material respects with the terms of such approvals, licences and permits. However, such approvals, licences and permits are subject to change in various circumstances and further project-specific governmental decrees and/or legislative enactments may be required (for example, the new Mining Act 2008). There can be no guarantee that the Enlarged Group will be able to obtain or maintain all necessary approvals, licences and permits that may be required and/or that all project specific governmental decrees and/or required legislative enactments will be forthcoming to explore and develop the properties on which it has exploration rights, to commence construction or operation of mining facilities, to export and sell gemstones or to maintain continued operations that economically justify the costs involved.

In addition, the potential costs that could be associated with compliance with applicable laws and regulations may also cause substantial delays and require significant capital outlays, adversely affecting the Enlarged Group's earning and competitive position in the future and, potentially, its financial position.

### **Environmental Factors**

The gemstone deposits and the Enlarged Group's operations generally will be subject to environmental regulation in all the jurisdictions in which the Enlarged Group will operate. Such regulation covers a wide variety of matters, including, without limitation, prevention of waste, pollution and protection of the environment, labour regulations and health and safety. The Enlarged Group may also be subject under such regulations to clean-up costs and liability for toxic or hazardous substances which may exist on or under any of its properties or which may be produced as a result of its operations. Environmental legislation and permit requirements are likely to evolve in a manner which will require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their directors and employees. In addition to environmental regulation, various discretionary government approvals will be required in order to place a gemstone project into production.

Operations at the Kagem Emerald Mine have also recently fallen under the Government of Zambia's new 'Environmental Fund' legislation. An audit by an environmental scientist recognised by the Government

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of Zambia's recognised environmental scientist has classed Kagem's operations as 'Category C' for the purposes of deciding Kagem's contribution into the fund. Category C companies contribute the highest proportion of their estimated environmental closure liabilities to the environmental fund.

### **Limitations on Foreign Control of Mining Companies**

There are no restrictions on the foreign ownership of mining companies in any of the jurisdictions in which the Group, Target Group or Oriental Mining is currently operating. However, there can be no assurance that legal requirements as to the foreign ownership and control of mining companies in these jurisdictions will not change.

### **Local health conditions**

HIV/AIDS, malaria and other diseases are prevalent in the areas in which the Enlarged Group operates. Current and future employees of the Enlarged Group may have contracted, or could contract, these potentially deadly viruses and diseases. Increased mortality rates due to these diseases and viruses could result in lost employee man-hours, loss of trained and experienced employees, increased absenteeism, depressed morale and reduced productivity, in addition to increased recruitment and replacement costs, insurance premiums, benefits payments and other costs of providing treatment, and could have an adverse effect on the Enlarged Group's business, financial condition or results of operations.

## **RISKS RELATING TO THE ORDINARY SHARES**

### **Investment risk**

Although the Ordinary Shares are to be admitted to trading on AIM, they will not be listed on the Official List. An investment in shares quoted on AIM may carry a higher risk than an investment in shares quoted on the Official List. AIM has been in existence since June 1995 but its future success and liquidity in the market for the Company's securities cannot be guaranteed.

Investors should be aware that, following Admission, the market price of the Ordinary Shares may be volatile and may go down as well as up and investors may therefore be unable to recover their original investment. This volatility could be attributable to various facts and events, including any regulatory or economic changes affecting the Enlarged Group's operations, variations in the Enlarged Group's operating results, developments in the Enlarged Group's business or its competitors, or changes in market sentiment towards the Ordinary Shares. In addition, the Enlarged Group's operating results and prospects from time to time may be below the expectations of market analysts and investors.

At the same time, market conditions may affect the Ordinary Shares regardless of the Enlarged Group's operating performance or the overall performance of the mining sector. Share market conditions are affected by many factors such as general economic outlook, movements in or outlook on interest rates and inflation rates, currency fluctuations, commodity prices, changes in investor sentiment towards particular market sectors and the demand and supply for capital.

Accordingly, the market price of the Ordinary Shares may not reflect the underlying value of the Company's net assets, and the price at which investors may dispose of their Ordinary Shares at any point in time may be influenced by a number of factors, only some of which may pertain to the Enlarged Group while others of which may be outside the Enlarged Group's control.

**Investors should therefore consider carefully whether investment in the Company is suitable for them, in light of the risk factors outlined above, their personal circumstances and the financial resources available to them.**

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**PART VII**  
**COMPETENT PERSON'S REPORT ON THE ENLARGED GROUP**  
**AN INDEPENDENT COMPETENT PERSONS' REPORT**  
**ON THE GEMSTONE ASSETS**  
**OF GEMFIELDS RESOURCES PLC**

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13 May 2008



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**AN INDEPENDENT COMPETENT PERSONS' REPORT  
ON THE GEMSTONE ASSETS OF GEMFIELDS RESOURCES PLC  
— EXECUTIVE SUMMARY**

**1.0E INTRODUCTION**

**1.1E Background**

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Global Limited (the “SRK Group”) SRK has been commissioned by the board of Gemfields Resources Plc (hereinafter referred to as the “Company” or Gemfields) to prepare an independent Competent Persons’ Report (“CPR”) on the coloured gemstone assets (the “Gemstone Assets”) of Gemfields pursuant to the proposed acquisition (the “Acquisition”) from Rox Limited (“Rox” — a company registered in the Cayman Islands) of:

- a 75% beneficial interest in the Kagem emerald mine (“Kagem”) situated in the Republic of Zambia (“Zambia”) operated by Kagem Mining Limited (“Kagem ML”) through the acquisition of the entire issued share capital of:
  - Greentop International Inc. (“Greentop”) a company registered in the British Virgin Islands (“BVI”), and
  - Krinera Group S.A. (“Krinera”) a company registered in the Republic of Panama (“Panama”);
- a 100% beneficial interest in 15 exploration licences for gemstones in the Republic of Madagascar (“Madagascar”) via a put and call option to acquire a 100% interest in Oriental Mining SARL (“Oriental Mining”) a private company registered in Madagascar; and
- a put and call option to acquire a worldwide exclusive 15 year licence to use the Fabergé Limited’s (“Fabergé”) brand name in respect of coloured gemstones (excluding diamonds).

This CPR presents SRK’s opinion on the Company’s Mineral Resource statement dated 1 January 2008 and the projected expenditures necessary to execute the Company’s proposed strategic development plan (the “Strategic Plan”). In its Strategic Plan the Company has outlined an expenditure programme (the “Expenditure Programme”) with expenditures totalling US\$33.04m to be expended from 1 April 2008 through 31 March 2010 over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$0.21m for care and maintenance costs at Mbuva-Chibolele; US\$1.00m for funding of loss position at Kariba; US\$7.55m for corporate operating expenses; and US\$19.84m for capital expenditures (including the expansion at Kagem mine, Indian polishing and cutting facilities and transaction costs).

As at 1 January 2008, JORC Code compliant Mineral Resources at the Gemstone Assets are:

- an Inferred Mineral Resource of 1,462kt grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl); and
- an Inferred Mineral Resource of 325kt grading 37.1kg/t of amethyst.



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Asia,  
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The CPR has been prepared by SRK and will be included in the “Admission Document”. The Admission Document is published in connection with the Company’s application to the London Stock Exchange (“LSE”) for the whole of the issued and to be issued ordinary share capital of the Company to be admitted (the “Admission”) to the Alternative Investment Market (“AIM”), a market operated and regulated by the London Stock Exchange plc.

The CPR has been prepared in accordance with the following rules and recommendations (hereinafter referred to as the “Rules”): the rules for AIM companies, February 2007 (the “AIM Rules”): specifically Rule 3 relating to Admission Documents; the “Guidance note for Mining, Oil and Gas Companies, March 2006” (the “Guidance Note”): specifically and without limitation the CPR complies with the content requirements of Appendix 2 and includes the relevant summaries set out in Appendices 1 and 3, and SRK accepts responsibility for the CPR in accordance with Schedule 2(a) and paragraphs 1.1 and 1.2 of Annex 1 and paragraphs 1.1 and 1.2 of Annex III of the AIM Rules and consent to its inclusion in the Admission Document; the rules for trading AIM securities as set out in the “Rules of the London Stock Exchange”; and the AIM Rules Annex of the relevant part of the “Prospectus Rules” published by the Financial Services Authority (“FSA”) from time to time and governed by the United Kingdom Listing Authority (“UKLA”).

In accordance with the Rules, the standard adopted for the reporting of the Mineral Resource statements for the Gemstone Assets is that defined by the terms and definitions given in “*The 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”)* as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia”.

The effective date (the “Effective Date”) of this CPR is deemed to be 1 January 2008, and is some three months prior to the future cashflow projections (commencing 1 April 2008) as they relate to the Expenditure Programme as incorporated in the Strategic Plan and reported herein. Accordingly neither budgeted nor historical technical information is presented for the periods from 1 January 2008 through 31 March 2008 inclusive. To the knowledge of SRK, as informed by the Company and Rox, there has been no material change in respect of the Gemstone Assets since 1 January 2008 or of any matter which would affect the content of the CPR as published in the Admission Document on 13 May 2008.

## **2.0E THE GEMSTONE ASSETS**

The Company’s principal activities include exploration, development, and operation of coloured gemstone mines and processing facilities which currently produce emerald, beryl and amethyst for sale as rough coloured gemstones to third parties. In its Strategic Plan the Company intends to limit sales of rough emerald and establish a cutting and polishing (lapidary) subsidiary in India and also carry out some cutting and polishing in Zambia.

Gemfields is a holding company which manages the Gemstone Assets through various subsidiaries and currently derives its revenues entirely from the Gemstone Assets. The subsidiaries comprise: holding companies, intermediate holding companies, coloured gemstone exploration and mining companies, coloured gemstone cutting and polishing companies, and various dormant companies. The principal operating companies are all based in Zambia and comprise:

- Kagem Mining Limited, in which Gemfields has a 75% beneficial interest, manages Kagem, comprising an open-pit emerald and beryl mine and associated processing facilities;
- Kariba Minerals Limited, in which Gemfields has a 50% beneficial interest, manages Kariba mine comprising an open-pit amethyst mine and an associated processing facility; and
- Gemfields Holdings Zambia Limited, in which Gemfields has a 100% beneficial interest, manages Mbuva-Chibolele mine comprising an open-pit emerald and beryl mine and an associated processing facility (currently on care and maintenance).

The Gemstone Assets as reviewed by SRK are subdivided (Table 2.1E) into: assets upon which Mineral Resources reported in accordance with the JORC Code, hereinafter termed Advanced Gemstone Assets; assets upon which either historical mining or recent exploration activities have occurred, hereinafter termed Exploration Properties; and assets upon which limited or no exploration activity has been undertaken to date, hereinafter termed Exploration Prospects.

The Company's Gemstone Assets comprise 17 licences which cover an area of 1,344.17km<sup>2</sup> in Zambia, Southern Africa and include: two Advanced Gemstone Assets, six Exploration Properties and 9 Exploration Prospects. In addition, the Company has options for 15 coloured gemstone licenses in Madagascar.

**Table 2.1E Gemstone Assets<sup>(1), (2), (3)</sup>**

Gemstone Assets	Licence No	Country	Subsidiary	Ownership	Expiry	Area (km <sup>2</sup> )
<b>Advanced Gemstone Assets</b>						
Kagem <sup>(4), (5)</sup>	GL-713	Zambia	Kagem ML	75.0%	Mar-2015	43.00
Kariba <sup>(4), (6)</sup>	GL-86	Zambia	Kariba ML	50.0%	Jun-2017	2.50
<b>Subtotal</b>						<b>45.50</b>
<b>Exploration Properties</b>						
Mbuva	GL-145	Zambia	GHZL	100.0%	Sep-2007	0.40
Chibolele	GL-288	Zambia	GHZL	100.0%	Sep-2007	0.40
Arinus	GL-081/744	Zambia	GHZL	100.0%	Feb-2016	0.35
Kamakanga	GL-002	Zambia	GHZL	100.0%	Nov-2006	2.35
Pamodzi	GL-078	Zambia	GHZL	100.0%	Apr-2007	0.85
Kafubu	GL-757	Zambia	GHZL	100.0%	Mar-2017	2.90
<b>Subtotal</b>						<b>7.25</b>
<b>Exploration Prospects</b>						
Miputu	PLLS-14	Zambia	GHZL	100.0%	Mar-2008	290.00
Mitondo North	PLLS-29	Zambia	GHZL	100.0%	Feb-2007	31.07
NR South	PLLS-34	Zambia	GHZL	100.0%	Feb-2007	51.20
Mitondo West	PLLS-124	Zambia	GHZL	100.0%	Feb-2007	5.50
Mitondo East	PLLS-126	Zambia	GHZL	100.0%	Jul-2008	4.60
Nkabashila East	PLLS-136	Zambia	GHZL	100.0%	Jul-2006	9.10
Nkabashila West	PLLS-137	Zambia	GHZL	100.0%	Feb-2007	9.95
Mkushi pink tourmaline	PLLS 262	Zambia	GHZL	100.0%	Mar-2010	810.00
Kariba amethyst	PLLS-300	Zambia	GHZL	100.0%	Oct-2008	80.00
<b>Subtotal</b>						<b>1,291.42</b>
<b>Total</b>						<b>1,344.17</b>

- (1) For all licences which have expired as of 31 December 2007 or are due to expire in calendar 2008, SRK has been informed that the necessary applications for renewal have been lodged with the regulatory authorities. For Miputu, Mitondo North, NR South, Mitondo West, Mitondo East, Nkabashila West applications have been made for conversion to Large Scale Mining Licences. For Nkabashila East application has been made for conversion to a Gemstone Licence.
- (2) Abbreviations: Gemfields Holdings Zambia Limited ("GHZL"); Kariba Minerals Limited ("Kariba ML"); Gemstone Licences ("GL"); and Prospecting Licence Large Scale ("PLLS").
- (3) Excludes the option to acquire a 100% interest in Oriental Mining and the 15 associated licences with total area of 125.00km<sup>2</sup>.
- (4) Gemstone Assets for which Mineral Resources have been stated in this CPR.
- (5) Remaining 25% held by the Government of Zambia ("GoZ").
- (6) Remaining 50% held by the GoZ.

Table 2.2E and Table 2.3E presents the JORC Code compliant Mineral Resource statements for the Gemstone Assets.

**Table 2.2E Gemstone Assets: emerald and beryl Mineral Resource statement (1 January 2008)<sup>(1)</sup>**

Mineral Resources	Tonnage		Grade		Content		
	(kt)	(g/t emerald)	(g/t beryl)	(g/t Total)	(Mct emerald)	(Mct beryl)	(Mct Total)
<b>Total Measured and Indicated</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Inferred</b>	<b>1,462</b>	<b>22.6</b>	<b>57.4</b>	<b>80.0</b>	<b>164.9</b>	<b>419.9</b>	<b>584.8</b>
<b>Mineral Resources</b>							
<b>Total Mineral Resources</b>	<b>1,462</b>	<b>22.6</b>	<b>57.4</b>	<b>80.0</b>	<b>164.9</b>	<b>419.9</b>	<b>584.8</b>

- (1) No Measured or Indicated Mineral Resources are defined at Kagem and no Mineral Resources are defined at Mbuva-Chibolele.

**Table 2.3E Gemstone Assets: amethyst Mineral Resource statement (1 January 2008)<sup>(1)</sup>**

Mineral Resources	Tonnage (kt)	Grade (kg/t amethyst)	Content (kt amethyst)
Total Measured and Indicated	0	0.0	0.0
Inferred	325	37.1	12.1
Mineral Resources	—	—	—
Total Mineral Resources	<u>325</u>	<u>37.1</u>	<u>12.1</u>

(1) No Measured or Indicated Mineral Resources are defined at Kariba.

During the financial period ending 30 June 2007 the Gemstone Assets (Table 2.4E) produced 11.6Mct of emerald and beryl at a combined cash operating cost of US\$1.94/ct of emerald and beryl with amethyst sales reported as by-products. During the interim 6-month period ending 31 December 2007 the Gemstone Assets produced 4.9Mct of emerald and beryl at a cash operating cost of US\$2.22/ct of emerald and beryl with amethyst sales reported as a by-product. Total capital expenditure incurred in respect of the Gemstone Assets in the financial period ending 30 June 2007 and interim 6-month period ending 31 December 2007 was reported at US\$2.96m and US\$0.04m respectively. As at 31 December 2007 the Gemstone Assets had Plant Property and Equipment (“PP&E”) valued at US\$9.34m. The reduction in processed grade is largely attributable to the influence of lower grades at Mbuva-Chibolele as well as the increasing proportion of lower grade stockpile material processed at Kagem due to the limited availability of in pit ore resulting from a backlog of waste stripping.

**Table 2.4E Gemstone Assets: historical operating statistics<sup>(1)</sup>**

Statistics	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
<b>Processing</b>					
Tonnage	(kt)	17	29	62	42
Grade	(g/t emerald + beryl)	152.5	99.4	37.6	23.1
<b>Production</b>					
emerald and beryl	(Mct)	12.6	14.3	11.6	4.9
amethyst	(t)	1,140	1,081	1,480	688
<b>Sales</b>					
Sales (emerald and beryl)	(Mct)	11.3	15.0	16.4	4.6
Sales Price (emerald and beryl)	(US\$/ct)	0.57	0.70	0.94	1.04
Sales (amethyst)	(t)	1,573	1,117	1,254	224
Sales Price (amethyst)	(US\$/kg)	1.25	2.08	1.80	2.69
<b>Expenditure</b>					
Cash Costs <sup>(2)</sup>	(US\$m)	11.82	12.25	22.49	10.76
Cash Costs (emerald and beryl) <sup>(2)</sup>	(US\$/ct)	0.94	0.86	1.94	2.22
Capital	(US\$m)	1.13	3.65	2.96	0.04

(1) Compiled from monthly management data to present 12-month periods ending 30 June for 2005, 2006, 2007 and six-month periods ending 31 December 2007.

(2) Cash costs include sales revenue from amethyst sales reported on a by-product basis.

SRK estimates that the Company’s current environmental liabilities comprising both bio-physical closure costs (US\$10.40m) and social (US\$5.21m terminal benefits liabilities) costs are US\$15.61m (Table 2.5E).

**Table 2.5E Gemstone Assets: environmental liability (1 January 2008)**

Gemstone Asset	Bio-physical Liability (US\$m)	Terminal Benefits Liability (US\$m)	Total (US\$m)
Kagem	6.57	2.86	9.43
Kariba	1.41	2.35	3.75
Mbuva-Chibolele	1.46	0.00	1.46
Kamakanga	<u>0.96</u>	<u>0.00</u>	<u>0.96</u>
<b>Total</b>	<b><u>10.40</u></b>	<b><u>5.21</u></b>	<b><u>15.61</u></b>

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### **3.0E STRATEGY AND EXPENDITURE PROGRAMME**

#### **3.1E Strategy**

The Company's overall strategy including its rationale for the Acquisition is stated in Part 1 of the Admission Document. The Company's Strategic Plan assumes the expenditure of some US\$33.04m to be expended from 1 April 2008 through 31 March 2010 over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$7.55m for head office operating expenditures; US\$1.21m for the care and maintenance costs at Mbuva Chibolele and the funding of the loss position (1 year) at Kariba; and US\$19.84m of capital expenditure (Kagem Expansion, Indian lapidary and transaction costs). Some 73.2% of this total expenditure is directly allocated to the Kagem Expansion and funding of two years of corporate operating expenditures.

In this respect SRK notes the following key components:

- The Kagem Expansion requires an overall capital investment of US\$15.26m (exploration — US\$1.39m; capital equipment — US\$13.86m) to attain the peak monthly production rates for Reaction Zone mining and processing of 12ktpm, and a 470% (compared with financial year ending 31 March 2007) increase in coloured gemstone production to an annualised 57.6Mct (11.5t) of combined emerald and beryl by July 2009 at a unit cash cost of US\$0.59/ct;
- The establishment of the Company as a vertically integrated coloured gemstone producer through establishment of a lapidary in India at a capital cost of US\$2.29m. The cutting and polishing facilities are to be established in Jaipur and supported by an administrative office in Mumbai for securing suitable sales and marketing contracts;
- The branding of coloured gemstones through the exclusive Fabergé licence which will entitle the Company to brand coloured gemstones with the Fabergé name. Fabergé will be used as the Company's premium brand. Furthermore, the ownership of the producing assets along with an integrated supply chain will enable the Company to guarantee the exact provenance of its gemstones and assure customers of their ethical legacy;
- An exploration programme comprising expenditures of US\$4.04m for Kagem, Kamakanga, Ndola Rural Emerald Restricted Area ("NRERA") licences and unspecified acquisition targets; and
- Further technical assessments including completion of multi-disciplinary pre-feasibility studies ("PFS") to demonstrate the technical feasibility and economic viability of:
  - The current conceptual study in support of the proposed expansion at Kagem,
  - The conceptual expansion of production at Kariba which is critically dependent upon a significant increase in the sales price for rough amethyst, reduced unit costs as a function of significant expansion, and the effective doubling of the currently identified Mineral Resource base. In the interim, the Company has assumed continued funding of the current cash negative position, estimated at US\$1.00m per annum for one year only. Furthermore, the Company has stated that such expansion is conditional on successful negotiation with the GoZ to increase the Company's equity participation in Kariba ML to 76%, and
- Establishing profitable operations at Mbuva-Chibolele following further bulk sampling down-dip to determine whether gemstone qualities improve and incorporating any price uplift due to downstream cutting and polishing initiatives. In the interim the Company has assumed continued funding of care and maintenance operating expenditures amounting to US\$0.08m per annum.

#### **3.2E Expenditure Programme**

In its Strategic Plan the Company has outlined an Expenditure Programme with expenditures totalling US\$33.04m to be expended from 1 April 2008 through 31 March 2010 over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$0.21m for care and maintenance costs at Mbuva-Chibolele; US\$1.00m for funding of loss position at Kariba; US\$7.55m for head office corporate operating expenses; and US\$19.84m for capital expenditures (Kagem Expansion, Indian polishing and cutting facilities and transaction costs).

Some US\$15.26m representing 46.2% of the total is allocated to the expansion programme at Kagem, of which US\$13.86m is classified as capital expenditure and US\$1.39m as exploration expenditure. The remaining capital items are largely related to the establishment of the cutting and polishing centres in India at US\$2.29m and the transaction costs of US\$3.70m to be incurred in the three-month period ending 30 June 2008.

Excluding that budgeted for Kagem, the principal components of the planned operating expenditures include:

- US\$4.43m of direct exploration expenditures associated with Kagem (US\$1.39m), Kamakanga (US\$0.10m), NRERA licences (US\$0.84), and unspecified targets (US\$2.10m);
- US\$0.21m for care and maintenance costs at Mbuva-Chibolele;
- US\$1.00m for funding of the loss position at Kariba for one year; and
- US\$7.55m of head office corporate operating costs.

In contrast to the detail provided for Kagem, the supporting detail for the above exploration expenditures are limited and are only developed to a conceptual level.

**Table 3.1E Gemfields: Expenditure Programme<sup>(1), (2)</sup>**

Item	Type	Asset	Total (US\$m)	Jun-2008 <sup>(3)</sup> (US\$m)	Jun-2009 (US\$m)	Mar-2010 <sup>(4)</sup> (US\$m)
<b>Operating Expenditure</b>	Exploration	Kagem	1.39	0.66	0.73	0.00
		Kamakanga	0.10	0.00	0.10	0.00
		NRERA Licences	0.84	0.11	0.42	0.32
		Unspecified	2.10	0.45	1.65	0.00
	<b>Subtotal</b>		<b>4.43</b>	<b>1.21</b>	<b>2.90</b>	<b>0.32</b>
	GZHL	Mbuva-Chibolele	0.21	0.07	0.08	0.06
	Kariba ML	Kariba Amethyst Mine	1.00	0.30	0.70	0.00
Corporate	Head Office	7.55	0.85	3.77	2.92	
<b>Total</b>			<b>13.19</b>	<b>2.44</b>	<b>7.45</b>	<b>3.30</b>
Capital Expenditure	Kagem ML	Kagem	13.86	3.17	7.91	2.79
		India	2.29	0.19	2.10	0.00
		Corporate	3.70	3.66	0.04	0.00
<b>Total</b>			<b>19.84</b>	<b>7.01</b>	<b>10.05</b>	<b>2.79</b>
<b>Total Expenditure</b>			<b>33.04</b>	<b>9.45</b>	<b>17.50</b>	<b>6.09</b>

(1) Financial years ending 30 June.

(2) Planned operating expenditures associated with revenue generating activities at Kagem, Kariba and the Indian polishing and cutting are not included.

(3) Three-month period ending 30 June 2008.

(4) 9-month period ending 31 March 2010.

#### 4.0E RISKS AND OPPORTUNITIES

The principal **risks** and **opportunities** at the Gemstone Assets are:

- **Technical and Economic Risk** associated with conceptual level studies which in conjunction with certain high level assumptions are relied upon for the establishment of significant expansions as in the case of Kagem and Kariba. In respect of the former, the key issues relate to:
  - the geological risk associated with assumed prevalence and concentration of Reaction Zones across the entire 920m strike length of talc-chlorite-tremolite-magnetite schist (“TMS”) at Kagem, and
  - the increased production risk should the mining of advanced waste stripping to expose the necessary strike length not occur timeously.

Whilst the Company has accepted certain of the high level modifications as proposed by SRK, the current Strategic Plan assumes:

- the establishment of the full strike length of TMS exposed by 1 July 2009,

- the establishment of maximum Reaction Zone mining and processing rates of 12ktpm by July 2009, and
- a 400% (compared with 2007) increase in production to an annualised 11.5tpa of combined emerald and beryl by October 2009.

SRK considers the above to be challenging and whilst appropriate equipment and contractor mining services are being procured a more prudent approach would be to more gradually increase the mining production rates, specifically that of ore to enable full production to be achieved some 12 months latter than planned. This statement also assumes that the completion of an appropriately detailed PFS (due to commence in June 2008) does not identify any potential limitations in attaining such a target.

Similar comments apply to the proposed expansion at Kariba in respect of the adequacy of the current technical work undertaken by the Company to support the proposed expansion plans;

- **Environmental Liability Risk (Bio-physical closure cost):** The inability of the Gemstone Assets to fund the bio-physical closure cost from estimated operating cashflows, should operations cease prior to the period assumed by the Company. This would result in an unfunded liability since the estimated rehabilitation expenditure is not currently funded. As at 1 January 2008, the Company's bio-physical closure cost is estimated at US\$10.40m. SRK notes that certain components of this risk may be mitigated as no assumptions have been made regarding the ability to generate revenue through sale of assets when reporting this environmental liability. Furthermore SRK has assumed that the backfilling of pits will not be required. Specific environmental risks at each of the Gemstone Assets include:
  - Inadequate settling facilities at Kagem and Mbuva-Chibolele to capture and treat water discharge which is very high in suspended solids which is currently being addressed at Kagem through construction and commissioning of the third settling dam (expected May 2008), and
  - The presence of artisanal miners and the potential significant impact of post decommissioning operations as witnessed at the nearby Kamakanga mine;
- **Terminal Benefits Liability Risk:** The inability of the Gemstone Assets to fund the terminal benefits liabilities from estimated operating cashflows, should operations cease prior to the period projected by the Company. This would result in an unfunded liability since the estimated terminal benefits expenditure is not currently funded. As at 1 January 2008, the Company's terminal benefits liability is estimated at US\$5.21m. SRK notes however that potential exists to relocate certain employees to Kagem in line with the proposed expansion. This opportunity is however limited and unless profitable operations are re-established at Mbuva-Chibolele and Kariba the necessity for funding this liability will be immediate;
- **Kariba economic operations opportunity** through completion of a multi-disciplinary PFS which demonstrates the technical feasibility and economic viability of an expanded production scenario. SRK notes however that this opportunity is critically dependent upon a significant increase in the sales price for rough amethyst, reduced unit costs as a function of significant expansion, and the effective doubling of the currently identified Mineral Resource base;
- **Mineral Resources increase opportunities,** through:
  - further definition drilling down-dip of the currently defined Inferred Mineral Resources at Kagem specifically below the 1,075m RL (125m below surface),
  - completion of further exploration including: drilling at the Libwente and Dabwisa prospects at Kagem; and airborne geophysical surveys over the Company's combined properties in the vicinity of Kagem,
  - testing of down-dip and strike extensions to the currently identified Inferred Mineral Resource at Kariba, specifically below the 50m depth horizon;
  - completion of preliminary exploration activities in the wider prospecting licence of PLLS-300 specifically targeting the presence of parallel shears to the shear zone currently exploited at Kariba. SRK notes however that the prospecting licence expires in October 2008 and half of the currently held area will need to be relinquished prior to re-applying, and

- 
- demonstrating economic viability at Mbuva-Chibolele through a combination of further bulk sampling down-dip to determine whether gemstone qualities improve and incorporating any price uplift due to downstream cutting and polishing initiatives; and
  - **Exploration opportunities** at the Madagascar licences following completion of preliminary exploration and finalisation of the acquisition process.

## **5.0E CONCLUDING REMARKS**

### **5.1E Mineral Resources and Mineral Resource Management**

As at 1 January 2008 the Gemstone Assets has the following JORC Code compliant Mineral Resources:

- **At Kagem:** An Inferred Mineral Resource of 1,462kt of Reaction Zone material grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl); and
- **At Kariba:** An Inferred Mineral Resource of 325kt grading 37.1kg/t of amethyst.

Potential exists to expand the Mineral Resource base at both operations following the completion of the currently scheduled exploration activities. At Kariba however, the Company is currently awaiting completion of its negotiation with the GoZ to increase its equity participation from its current 50% to 76%. Should this not be successful then the proposed expansion will not be implemented and given the current unprofitable operations the currently stated Mineral Resource may not continue to be classified as compliant with the JORC Code as potentially economically mineable.

It should however be noted that depending on the results of the market analysis for emerald, beryl and amethyst the addition of significant Mineral Resources may be limited to continuation of operating life beyond that presently assumed by the Company (~10 years) or as replacement to the deeper resources already identified.

SRK considers the current approach to Mineral Resource management to be limited and that the establishment of a formalised process as planned is critical to enable adequate technical and economic assessments of future proposals. To date this has been hindered by the combined impact of limited resources as well as a commitment to establish the necessary protocols. At Kagem however, SRK notes the Company's improvements in respect of introducing formalised geological processes and the focus on application of higher quality mining practices. The current focus in these areas must be continued to further develop the Company's management systems, thereby establishing the appropriate multi-disciplinary focus required to ensure continued success.

### **5.2E Expenditure Programme**

The Company's Strategic Plan assumes the expenditure of some US\$33.04m, to be expended from 1 April 2008 through 31 March 2010 inclusive over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$0.21m for care and maintenance costs at Mbuva-Chibolele; US\$1.00m for funding of loss position at Kariba; US\$7.55m for corporate operating expenses; and US\$19.84m for capital expenditures (Kagem Expansion, Indian polishing and cutting facilities and transaction costs).

Some 73.2% of this expenditure is directly allocated to the Kagem expansion and funding of two years of corporate operating expenditures.

The accuracy of the planned expenditures at Kagem largely reflects the level of technical work undertaken to date. The direct exploration expenditures, other than for Kagem only assume one successive phase of work and are generally limited to that required for maintaining current licence commitments.

In the context of the above limitations, SRK considers the expenditure programme as developed from 1 April 2008 through 31 March 2010 inclusive to be appropriately defined and warranted given the Mineral Resources delineated to date and the potential in the immediate areas of the defined orebodies and the other targets situated within the various licence areas.

Consequently SRK concludes that the character of the Gemstone Assets is of sufficient merit to justify the direct exploration expenditures allocated from 1 April 2008 through 31 March 2010 inclusive.

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Notwithstanding the above, SRK notes that the Company's Strategic Plan is ambitious and assumes substantive increases in production by July 2009. Furthermore, the level of technical work undertaken to support such expansion is only at a conceptual level and relies upon a number of high level assumptions. Accordingly SRK considers that completion of a multi-disciplinary PFS (to commence June 2008) which demonstrates the technical feasibility and economic viability of that proposed to be crucial and in the absence of such analysis a more prudent approach would be to consider a more gradual build up to full production, thereby delaying the current attainment of peak monthly production (July 2009) by some 12 months. Furthermore the proposed expansion is critically dependent upon the assumptions regarding the prevalence and concentration of Reaction Zones within the TMS across the full strike extent of the currently identified Inferred Mineral Resource. Should this not be demonstrated through the planned full strike length exposure, assumed 1 July 2009, achieving the increased production rate on a sustainable basis will be ambitious.

A further assumption which is key to the success of the Strategic Plan is the consideration of the potential impact of increased production on the overall demand-supply balances in respect of both rough and cut gemstones, specifically for emerald and beryl. This analysis is currently underway and the ability as a minimum to maintain current rough prices is crucial to ensuring the economic viability of the operations. The Company's intention to benefit from the establishment of cutting and polishing activities and hence benefit from the price uplift associated with such downstream activities, as well as implementing its other broader strategies including: marketing and branding; structured supply chain; ethical sourcing and assured provenance; consistent supplies to customers; and critical mass, market share and economies of scale may however offset any negative aspects associated with over-supply should they occur.

### **5.3E Environmental Liabilities**

SRK estimates that the Company's current environmental liabilities comprising both bio-physical closure costs and social (terminal benefits liabilities) costs are US\$15.61m. These liabilities are currently not funded and such funding is primarily dependent upon the establishment of cash positive operations through the proposed expansion at Kagem. Certain opportunities exist to limit the impact of such liabilities through sale of assets as well as the management of human resources in line with the requirements of the Expansion Programmes.

SRK notes however the absence of a formalised environmental management system which would address the bio-physical components of these liabilities, if not only through better quantification, and may also ensure that they do not increase through continuation of poor practices. The absence of formal policies and management systems also extends to occupational health and safety ("OHS") and these in combination with the environmental aspects require redress in order to ensure effective monitoring of their impacts.

Notwithstanding the above SRK notes the proactive steps proposed and commenced by the Company, specifically in respect of the Mineral Resource and Ore Reserve management as well as environmental matters. Specifically in respect of the latter the Company:

- is establishing a Safety, Health and Environmental department staffed by an environmental officer who will be responsible for monitoring of the Company's performance against stipulated norms and initiate corrective actions;
- is recruiting a senior level manager at the corporate level who will be directly responsible for establishing corporate policies in respect of environmental and OHS as well as the development of a Company wide environmental management plan; and
- has appointed an independent consultant to prepare an environmental project brief ("EPB") inclusive of an environmental management plan for the proposed Kagem Expansion.

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**For and behalf of SRK Consulting (UK) Limited**

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## GLOSSARY OF TERMS

Acquisition	The acquisition of a 75% interest in Kagem via the acquisition of the entire issued share capital of Greentop and Krinera, the put and call option to acquire a licence to use the Fabergé brand name and the put and call option to acquire Oriental Mining.
Admission	The admission to the Alternative Investment Market, a market operated by the London Stock Exchange plc.
Admission Document	The Admission Document published in connection with the Company's application to the London Stock Exchange.
Advanced Gemstone Assets	Assets upon which Mineral Resources reported in accordance with an internationally recognised reporting code: specifically Kagem and Kariba.
amethyst	A transparent to translucent, purple to pale-violet variety of quartz common as a semiprecious gemstone. The colour results from a hole defect associated with ferric iron substitution for silicon. A term applied to a deep-purple variety of corundum and to a pale reddish-violet variety of beryl.
beryl	A hexagonal mineral, $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$ ; green, blue-green, and other pale tints; in granite pegmatites, mica schists, and an accessory mineral in felsic igneous rocks; the chief source of beryllium. Transparent and colored gem varieties include emerald, aquamarine,morganite, heliodor, golden beryl, bixbite, and vorobievite.
bio-physical liabilities	That portion of an environmental liability which is related to the physical closure of a mining operation and specifically excludes any social.
capital expenditure	Expenditures incurred during the process of commencing, expanding or sustaining production.
care and maintenance	Where production has been temporarily suspended pending a change in technical-economic circumstances.
cash costs	An internationally recognised metric for stating operating costs per unit of saleable commodity: including direct smelting costs, direct overhead costs, by-product credits, consulting fees, management fees, transportation and distribution charges.
coloured gemstone	care and maintenance Where production has been temporarily suspended pending a change in technical-economic circumstances.
Company	Gemfields Resources Plc.
Effective Date	1 January 2008.

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emerald	A brilliant green gem variety of beryl, highly prized as a gemstone. The colour, which is caused by chromium or vanadium impurity, ranges from medium-light to medium-dark tones of slightly bluish green to slightly yellowish green.
Expenditure Programme	The projected expenditures commencing 1 April 2008 for a 24 month period including the capital investments in support of the Kagem Expansion, the establishment of the lapidary initiative in India and head-office operating expenditures.
Exploration Programme	The exploration programme as defined by the Company and incorporated into the Expenditure Programme as included in the Strategic Plan.
Exploration Properties	Assets upon which either historical mining or recent exploration activities have occurred.
Exploration Prospects	Assets upon which limited or no exploration activity has been undertaken to date.
Fabergé	Fabergé Limited.
Gemfields	Gemfields Resources Plc.
Gemstone Assets	The coloured gemstone assets comprising the Advanced Gemstone Assets, the Exploration Properties and the Exploration Prospects.
Greentop	Greentop International Inc.
Guidance Note	The Guidance note for Mining, Oil and Gas Companies, March 2006.
Indicated Mineral Resource	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
Inferred Mineral Resource	That part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.
JORC Code	The 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.

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Kagem	Kagem emerald mine.
Kagem Expansion	The planned production expansion at Kagem to increase processing of Reaction Zone material to 144ktpa.
Kagem ML	Kagem Mining Limited.
Krineria	Krineria Group S.A.
lapidary	A processing plant in which rough gemstones are cut, polished, or engraved.
Madagascar	Republic of Madagascar.
Measured Mineral Resource	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.
Mineral Resource	A concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
operating expenditure	All expenditures of a non capital nature necessary to realise projected sales revenue in any given reporting period.
Oriental Mining	Oriental Mining SARL.
Panama	Republic of Panama.
Pre-Feasibility Study	A technical and economic study which demonstrates the technical and economic viability of a mining project to within a range of accuracy of 25% and to an appropriate degree of detail such that a decision for proceeding to the project development stage may be made without substantive revision to either scope or scale.
Prospectus Rules	The Prospectus Rules as published by the FSA from time to time and governed by the UKLA.
Reaction Zone	The contact zone between the TMS and intrusive pegmatites within which economic concentrations of emerald and beryl may be found.
Rox	Rox Limited.
Rules	Collectively the AIM Rules, the Guidance Note, the Rules of the London Stock Exchange and the Prospectus Rules.

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social liability	That component of the environmental liability which <i>inter alia</i> includes terminal benefits liability.
SRK Group	SRK Global Limited.
Strategic Plan	The Company's development plan for transforming Gemfields into a vertically integrated gemstone producer through significant production expansion at Kagem as well as the establishment of a lapidary in India.
terminal benefits liability	Statutory expenditures to be incurred by a business on termination of employment.
Zambia	Republic of Zambia.

#### **ABBREVIATIONS**

AIM	Alternative Investment Market
BVI	British Virgin Islands
CPR	Competent Persons' Report
EPB	Environmental Project Brief
FSA	Financial Services Authority
GHZL	Gemfields Holdings Zambia Limited
GL	Gemstone Licences
GoZ	Government of Zambia
LSE	London Stock Exchange plc
NRERA	Ndola Rural Emerald Restricted Area
OHS	Occupational Health and Safety
PFS	Pre-Feasibility Study
PLLS	Prospecting Licence Large Scale
RL	Reduced Level
SRK	SRK Consulting (UK) Limited
TMS	talc-chlorite-tremolite-magnetite schist
UKLA	United Kingdom Listing Authority

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## UNITS

%	a percent
g/t	a gramme per tonne
kg/t	a kilogramme per tonne
km <sup>2</sup>	a square kilometre
kt	a thousand metric tonnes
ktpm	a thousand metric tonnes per month
m	a metre
Mct	a million carats
t	a metric tonne
tpa	a metric tonne per annum
US\$/ct	United States dollars per carat
US\$/kg	United States dollars per kilogramme
US\$m	a million United States dollars

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## AN INDEPENDENT COMPETENT PERSONS' REPORT ON THE GEMSTONE ASSETS OF GEMFIELDS RESOURCES PLC

### 1 INTRODUCTION

#### 1.1 Background

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Global Limited (the “SRK Group”) SRK has been commissioned by the board of Gemfields Resources Plc (hereinafter referred to as the “Company” or “Gemfields”) to prepare an independent Competent Persons’ Report (“CPR”) on the coloured gemstone assets (the “Gemstone Assets”) of Gemfields pursuant to the proposed acquisition (the “Acquisition”) from Rox Limited (“Rox” — a company registered in the Cayman Islands) of:

- a 75% beneficial interest in the Kagem emerald mine (“Kagem”) situated in the Republic of Zambia (“Zambia”) operated by Kagem Mining Limited (“Kagem ML”) through the acquisition of the entire issued share capital of:
  - Greentop International Inc. (“Greentop”) a company registered in the British Virgin Islands (“BVI”), and
  - Krinera Group S.A. (“Krinera”) a company registered in the Republic of Panama (“Panama”);
- a 100% beneficial interest in 15 exploration licences for gemstones in the Republic of Madagascar (“Madagascar”) via a put and call option to acquire a 100% interest in Oriental Mining SARL (“Oriental Mining”) a private company registered in Madagascar; and
- a put and call option to acquire a worldwide exclusive 15 year licence to use the Fabergé Limited’s (“Fabergé”) (brand name in respect of coloured gemstones (excluding diamonds)).

Further details regarding the Acquisition are included in the admission document (the “Admission Document”) within which this CPR is included. This CPR is written on the basis that the Acquisition has completed on 1 January 2008.

This CPR presents SRK’s opinion on the Company’s Mineral Resource statement dated 1 January 2008 and the projected expenditures necessary to execute the Company’s proposed strategic development plan (the “Strategic Plan”) as outlined in Section 2.2.2 of this CPR.

As at 1 January 2008 JORC Code compliant Mineral Resources at the Gemstone Assets are:

- an Inferred Mineral Resource of 1,462kt grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl); and
- an Inferred Mineral Resource of 325kt grading 37.1kg/t of amethyst.



Registered Address: 21 Gold Top, Newport, NP9 4PG, Wales, United Kingdom.

SRK Consulting (UK) Limited Reg No 1575403 (England and Wales)

Offices in  
Asia,  
Australia,  
Europe,  
North America,  
South Africa,  
South America

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During the financial period ending 30 June 2007 the Gemstone Assets produced 11.6Mct of emerald and beryl at a combined cash operating cost of US\$1.94/ct of emerald and beryl with amethyst sales reported as by-products. During the interim 6-month period ending 31 December 2007 the Gemstone Assets produced 4.9Mct of emerald and beryl at a cash operating cost of US\$2.22/ct of emerald and beryl, with amethyst sales reported as a by-product. Total capital expenditure incurred in respect of the Gemstone Assets in the financial period ending 30 June 2007 and interim 6-month period ending 31 December 2007 were reported at US\$2.96m and US\$0.04m respectively. As at 31 December 2007 the Gemstone Assets had Plant Property and Equipment (“PP&E”) valued at US\$9.34m.

In its Strategic Plan the Company has outlined an expenditure programme (the “Expenditure Programme”) with expenditures totalling US\$33.04m to be expended from 1 April 2008 through 31 March 2010 over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$0.21m for care and maintenance costs at Mbuva-Chibolele; US\$1.00m for funding of loss position at Kariba; US\$7.55m for corporate operating expenses; and US\$19.84m for capital expenditures (Kagem Expansion, Indian polishing and cutting facilities, and transaction costs).

The Gemstone Assets as reviewed by SRK are subdivided (Table 1.1) into:

- assets upon which Mineral Resources reported in accordance with an internationally recognised reporting code (“*The 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the “JORC Code”)*”) as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia”) have been defined, hereinafter termed Advanced Gemstone Assets;
- assets upon which either historical mining or recent exploration activities have occurred, hereinafter termed Exploration Properties; and
- assets upon which limited or no exploration activity has been undertaken to date, hereinafter termed Exploration Prospects.

**Table 1.1 Gemstone Assets<sup>(1), (2), (3)</sup>**

Gemstone Assets	Licence No	Country	Subsidiary	Ownership	Expiry	Area (km <sup>2</sup> )
<b>Advanced Gemstone Assets</b>						
Kagem <sup>(4), (5)</sup>	GL-713	Zambia	Kagem ML	75.0%	Mar-2015	43.00
Kariba <sup>(4), (6)</sup>	GL-86	Zambia	Kariba ML	50.0%	Jun-2017	2.50
<b>Subtotal</b>						<b>45.50</b>
<b>Exploration Properties</b>						
Mbuva	GL-145	Zambia	GHZL	100.0%	Sep-2007	0.40
Chibolele	GL-288	Zambia	GHZL	100.0%	Sep-2007	0.40
Arinus	GL-081/744	Zambia	GHZL	100.0%	Feb-2016	0.35
Kamakanga	GL-002	Zambia	GHZL	100.0%	Nov-2006	2.35
Pamodzi	GL-078	Zambia	GHZL	100.0%	Apr-2007	0.85
Kafubu	GL-757	Zambia	GHZL	100.0%	Mar-2017	2.90
<b>Subtotal</b>						<b>7.25</b>
<b>Exploration Prospects</b>						
Miputu	PLLS-14	Zambia	GHZL	100.0%	Mar-2008	290.00
Mitondo North	PLLS-29	Zambia	GHZL	100.0%	Feb-2007	31.07
NR South	PLLS-34	Zambia	GHZL	100.0%	Feb-2007	51.20
Mitondo West	PLLS-124	Zambia	GHZL	100.0%	Feb-2007	5.50
Mitondo East	PLLS-126	Zambia	GHZL	100.0%	Jul-2008	4.60
Nkabashila East	PLLS-136	Zambia	GHZL	100.0%	Jul-2006	9.10
Nkabashila West	PLLS-137	Zambia	GHZL	100.0%	Feb-2007	9.95
Mkushi pink tourmaline	PLLS 262	Zambia	GHZL	100.0%	Mar-2010	810.00
Kariba amethyst	PLLS-300	Zambia	GHZL	100.0%	Oct-2008	80.00
<b>Subtotal</b>						<b>1,291.42</b>
<b>Total</b>						<b>1,344.17</b>

(1) For all licences which have expired as of 31 December 2007 or are due to expire in calendar 2008, SRK has been informed that the necessary applications for renewal have been lodged with the regulatory authorities. For Miputu, Mitondo North, NR South, Mitondo West, Mitondo East, Nkabashila West applications have been made for conversion to Large Scale Mining Licences. For Nkabashila East application has been made for conversion to a Gemstone Licence.

(2) Abbreviations: Gemfields Holdings Zambia Limited (“GHZL”); Kariba Minerals Limited (“Kariba ML”); Gemstone Licences (“GL”); and Prospecting Licence Large Scale (“PLLS”).

(3) Excludes the option to acquire a 100% interest in Oriental Mining and the 15 associated licences with total area of 125.00km<sup>2</sup>.

(4) Gemstone Assets for which Mineral Resources have been stated in this CPR.

(5) Remaining 25% held by the Government of Zambia (“GoZ”).

(6) Remaining 50% held by the GoZ.

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Save for the Gemstone Assets as outlined in Table 1.1 which are held via the various companies identified in Figure 1.1, SRK has been informed that the Company has no other material Gemstone Assets held through holdings in direct subsidiaries, indirect subsidiaries, joint ventures (direct and indirect) and associated companies (direct and indirect). Further, this CPR assumes that the corporate structure as well as the equity participation is effective as at 1 January 2008.

For the purpose of the reliance statements in Section 1.4 of this CPR, reliance was sought from the Company and Rox, as appropriate for the Gemstone Assets, and reference to the Company and Rox should be construed as such.

SRK notes that the Gemstone Assets have not been valued by SRK and accordingly no such valuation is presented in this CPR.

## **1.2 Requirement, Structure and Compliance**

### **1.2.1 Requirement**

The CPR has been prepared by SRK and will be included in the Admission Document. The Admission Document is published in connection with the Company's application to the London Stock Exchange ("LSE") for the whole of the issued and to be issued ordinary share capital of the Company to be admitted (the "Admission") to the Alternative Investment Market ("AIM"), a market operated and regulated by the London Stock Exchange plc.

The CPR has been prepared in accordance with the following rules and recommendations (hereinafter referred to as the "Rules"):

- The rules for AIM companies, February 2007 (the "AIM Rules"): specifically Rule 3 relating to Admission Documents;
- The "Guidance note for Mining, Oil and Gas Companies, March 2006" (the "Guidance Note"): specifically and without limitation the CPR complies with the content requirements of Appendix 2 and includes the relevant summaries set out in Appendices 1 and 3, and SRK accepts responsibility for the CPR in accordance with Schedule 2(a) and paragraphs 1.1 and 1.2 of Annex 1 and paragraphs 1.1 and 1.2 of Annex III of the AIM Rules and consent to its inclusion in the Admission Document;
- The rules for trading AIM securities as set out in the "Rules of the London Stock Exchange"; and
- The AIM Rules Annex of the relevant part of the "Prospectus Rules" published by the Financial Services Authority ("FSA") from time to time and governed by the United Kingdom Listing Authority ("UKLA").

### **1.2.2 Structure**

The Gemstone Assets comprise operating mines, exploration properties and exploration prospects which are largely managed by companies incorporated in Zambia specifically: Kagem ML, GHZL and Kariba ML. Accordingly this CPR has been structured as follows:

- The three separate companies, as defined above with, where appropriate, technical detail reported on a discipline basis, e.g. geology, mining, mineral processing, infrastructure and capital expenditure, human resources and environmental;
- Technical aspects of the Exploration Properties and Exploration Prospects incorporating historical activity, geology, exploration potential and the planned Exploration Programme; and
- Summary of all expenditures as outlined in the two-year horizon of the Strategic Plan as proposed by the Company.

Unless specifically stated, all entries, including text, tables and other data, are quoted assuming 100% ownership.

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### 1.2.3 Compliance

This CPR has been prepared in accordance with the Rules; specifically the Guidance Note and the content requirements of Appendix 2 and the summaries set out in Appendices 1 and 3. Furthermore, SRK accepts responsibility for the CPR and confirms that, to the best of its knowledge and belief, having taken all reasonable care to ensure that such is the case, the information contained in the CPR is in accordance with the facts and contains no omission likely to affect its import for the purpose of paragraphs 1.1 and 1.2 of Annex I and paragraph 1.1 and 1.2 of Annex III of the AIM Rules.

In accordance with the Rules, the standard adopted for the reporting of the Mineral Resource statements for the Gemstone Assets is that defined by the terms and definitions given in *the* JORC Code.

This CPR has been prepared under the direction of the Competent Persons (the “CPs”, see Section 1.6) as defined by the JORC Code, who assume overall professional responsibility for the Mineral Resource statements as presented herein. The CPR however is published by SRK, the commissioned entity, and accordingly SRK assumes responsibility for the CPR. The JORC Code is an internationally recognised reporting code and is acceptable to the FSA.

Notwithstanding the above, SRK notes the following:

- A detailed statement of all legal proceedings relevant to the Gemstone Assets or an appropriate negative statement has been included in the Admission Document;
- Brief summaries of the Company’s existing and proposed directors are included in the Admission Document and details relating to qualifications of key technical and managerial staff have been excluded from this CPR for practical purposes of volume;
- Presentation of information contained elsewhere in the Admission Document which relates to information in the CPR is accurate, balanced and complete and not inconsistent with the CPR;
- Where any information in the CPR has been sourced from a third party, such information has been accurately reproduced and no facts have been omitted which would render the reproduced information inaccurate or misleading;
- Based on information supplied by the Company coincident with the Base Information Date (1 January 2008), there has been no material change to the subject matter of the CPR between the Base Information Date, the publication date of the CPR and the date of the Admission Document;
- Drafts of the CPR were provided to the Company and Rox, but only for the purpose of confirming both the accuracy of factual information and the reasonableness of assumptions relied upon in this CPR; and
- This CPR has not undergone regulatory review. SRK understands that the Nominated Advisor (the “Nomad”) has conducted an internal review of this CPR in accordance with the Rules.

This CPR is addressed to the Company, the Nominated Advisor (“Nomad”) Canaccord Adams Limited (“Canaccord”), and the Joint Brokers and co-lead managers, Canaccord and JP Morgan Cazenove Limited (“JPMC”).

SRK notes that emerald deposits, owing to the distribution of economic concentrations of reaction zones (the “Reaction Zones”) are notoriously difficult to sample, estimate and classify as their thickness and grade are highly variable and their exact location very difficult to predict. Current drilling techniques are inappropriate to provide sufficient data density to enable direct estimation of Reaction Zone tonnage and grade. Accordingly drilling as currently employed can only provide information to determine the volume of the geological entity in which such Reaction Zones are present and the location of such entities relative to other lithology and geological structures. Derivation of Mineral Resources is largely dependent on the availability of the results of bulk samples or equivalent such as historical production statistics. All the above uncertainties and the use of extrapolated grade and geological information require that only an Inferred Mineral Resource category be assigned to the resources associated with the Gemstone Assets.

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As no Ore Reserves have been defined for the Gemstone Assets, this CPR does not contain a valuation of the Gemstone Assets based on a discounted cashflow (“DCF”) analysis. Furthermore, SRK has not been requested to value the Gemstone Assets using alternative valuation methodologies.

### **1.3 Effective Date and Base (Technical) Information Date**

The effective date (the “Effective Date”) of this CPR is deemed to be 1 January 2008, and is some three months prior to the future cashflow projections (commencing 1 April 2008) as they relate to the Expenditure Programme as incorporated in the Strategic Plan and reported herein. Accordingly neither budgeted nor historical technical information is presented for the period from 1 January 2008 through 31 March 2008 inclusive. To the knowledge of SRK, as informed by the Company and Rox, there has been no material change in respect of the Gemstone Assets since 1 January 2008.

The Mineral Resources and the Expenditure Programme are dependent upon the following:

- Technical information as generated by the Company and Rox in accordance with their budgeting process with a Base Information Date (“BID”) of 1 January 2008; and
- Appropriate adjustments made by SRK to technical information provided by the Company and Rox.

### **1.4 Verification, Validation and Reliance**

This CPR is dependent upon technical, financial and legal input. In respect of the technical information as provided to and taken in good faith by SRK, and other than where expressly stated, this has not been independently verified by means of re-calculation. SRK has, however, conducted a review and assessment of all material technical issues likely to influence the Gemstone Assets, which included the following:

- Inspection visits to Kagem during the quarter ending 31 March 2007 which culminated in a report entitled “*Technical Due Diligence of the Kagem Gemstone Assets*” and dated October 2007;
- Inspection visits to the Gemstone Assets in December 2007 and January 2008;
- Discussion and enquiry following access to key project technical, head office and managerial personnel from January through March 2008;
- An examination of historical information (Kagem ML years ending 31 March 2005, 2006, 2007, and the 9-month period to 31 December 2007; GHZL years ending 30 June: 2006, 2007, and the six-month period ending 31 December 2007) and results made available by the Company and Rox in respect of the Gemstone Assets;
- Generation and reporting of a JORC Code compliant Mineral Resource statement; and
- A review, and where considered appropriate by SRK, modification of the Company’s Expenditure Programme as reflected in the Strategic Plan.

SRK has also assumed certain macro-economic parameters and commodity prices and relied on these as inputs to determine the potential economic viability of the stated Mineral Resources.

Where fundamental base data in support of the Mineral Resource statements has been provided (geological information, assay information, exploration programmes) for the purposes of review, SRK has performed all necessary validation and verification procedures deemed appropriate in order to place an appropriate level of reliance on such information.

To the knowledge of SRK, as informed by the Company and Rox there has been no material change in respect of the Gemstone Assets since 1 January 2008 or of any matter which would affect the content of the CPR as published in the Admission Document on 13 May 2008.

#### **1.4.1 Technical Reliance**

SRK places reliance on the Company and Rox and their respective technical representatives that all technical information provided to SRK, as of 1 January 2008, is accurate. The technical representative for the Company’s Mineral Resources is Mr Kartikeya Parikshya, MSc, Member

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of the Engineering Institute of Zambia (No. 007995). Mr Kartikeya is the Head of Planning and Exploration for the Company and is responsible for all technical matters in respect of Mineral Resources at the Company and has 21 years experience in the exploration and mining industry.

#### **1.4.2 Financial Reliance**

In consideration of all financial aspects relating to the Gemstone Assets, SRK has placed reliance on the Company that the following information for the Gemstone Assets is appropriate as at 1 January 2008:

- Operating expenditures as included in the Company's Expenditure Programme;
- Capital expenditures as included in the Company's Expenditure Programme; and
- All statutory and regulatory payments as may be necessary to execute the Expenditure Programme.

The financial information referred to above has been prepared under the direction of Mr Richard James (Chartered Accountant and Member of the New Zealand Institute of Chartered Accountants) and BDO Stoy Hayward LLP (the "Auditors") on behalf of the Board of Directors of the Company. Mr Richard James is the Chief Financial Officer of the Company and has 15 years experience in financial management.

#### **1.4.3 Legal Reliance**

In consideration of all legal aspects relating to the Gemstone Assets, SRK has placed reliance on the representations by the Company and Rox that the following are correct as at 1 January 2008 and remain correct until the date of the Admission Document:

- That, save as disclosed in the Admission Document, the Directors of the Company and Rox are not aware of any legal proceedings that may have an influence on the rights to explore for minerals;
- That the Company, Rox and their subsidiaries are the legal owners of all mineral and surface rights relating to the Gemstone Assets; and
- That save as expressly mentioned in the risk factors of the main body of the Admission Document, no significant legal issue exists which would affect the likely viability of the Gemstone Assets and/or the estimation and classification of the Mineral Resources as reported herein.

The legal representative of the Company in the United Kingdom is Reed Smith Richards Butler LLP and in Zambia is Buta Gondwe & Associates.

### **1.5 Limitations, Reliance on Information, Declaration, Consent and Copyright**

#### **1.5.1 Limitations**

SRK is responsible for this CPR as part of the Admission Document and declares that SRK has taken all reasonable care to ensure that the information contained in this report, is to the best of SRK's knowledge having made all reasonable enquiries, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in accordance with the requirements of Schedule Two of the AIM Rules.

Save for the responsibility arising under Paragraph (a) Schedule Two of the AIM Rules and the guidance to Schedule Two set out in Part Two — Guidance Notes to the AIM Rules, to the fullest extent permitted by law, SRK does not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this CPR or statements contained therein, required by and given solely for the purpose of complying with the AIM Rules and consenting to inclusion of the CPR in the Admission Document.

The Company and Rox have confirmed in writing to SRK that to their knowledge the information provided by them (when provided) was complete and not incorrect or misleading in any material respect. SRK has no reason to believe that any material facts have been withheld and the Company and Rox have confirmed in writing to SRK that they believe they have provided all material information.

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The achievability of the Strategic Plan and associated Expenditure Programme is neither warranted nor guaranteed by SRK. The Expenditure Programme as presented and discussed herein has been proposed by the Company's management, and adjusted where appropriate by SRK, and cannot be assured; it is necessarily based on economic assumptions, many of which are beyond the control of the Company. Future cash-flows derived from such forecasts are inherently uncertain as they are dependent on the outcome of the success of previous reporting periods, accordingly actual results may be significantly more or less favourable.

### **1.5.2 Reliance on Information**

SRK believes that its opinion must be considered as a whole and that selecting portions of the analysis or factors considered by it, without considering all factors and analysis together, could create a misleading view of the process underlying the opinions presented in the CPR. The preparation of a CPR is a complex process and does not lend itself to partial analysis or summary.

SRK's opinion in respect of the Mineral Resources declared and the Expenditure Programme is effective at 1 January 2008 and is based on information provided by the Company throughout the course of SRK's investigations, which in turn reflect various technical-economic conditions prevailing at the date of this report. Further, SRK has no obligation or undertaking to advise any person of any change in circumstances which comes to its attention after the date of this CPR or to review, revise or update the CPR or opinion.

### **1.5.3 Declaration**

SRK will receive a fee for the preparation of this report in accordance with normal professional consulting practice. This fee is not contingent on the outcome of the Admission and SRK will receive no other benefit for the preparation of this report. SRK does not have any pecuniary or other interests that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the Mineral Resources.

Neither SRK, the Competent Persons, nor any directors of SRK, have at the date of this report, nor have had within the previous two years, any shareholding or other interest in the Company or Rox, the Gemstone Assets or advisors of the Company. Consequently, SRK, the Competent Persons and the directors of SRK consider themselves to be independent of the Company and Rox.

In this CPR, SRK provides assurances to the Board of Directors of the Company that the Mineral Resources and Expenditure Programme for the Gemstone Assets as provided to SRK by the Company, and reviewed and, where appropriate, modified by SRK, are reasonable, given the information currently available.

This CPR includes technical information, which requires subsequent calculations to derive subtotals, totals and weighted averages. Such calculations may involve a degree of rounding and consequently introduce an error. Where such errors occur, SRK does not consider them to be material.

### **1.5.4 Consent**

SRK has given and has not withdrawn its written consent to the inclusion of the CPR set out in "Part VII: Competent Persons' Report" of the Admission Document and references to its report and its name in the form and context in which they are respectively included in the Admission Document. SRK has authorised the contents of its report and the context in which they are respectively included and has authorised the contents of its report for the purposes of paragraph 23.1 of Annex I to the AIM Rules.

Subject to the foregoing, neither the whole nor any part of this report nor any reference thereto may be included in any other document without the prior written consent of SRK as to the form and context in which it appears.

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### **1.5.5 Copyright**

Copyright of all text and other matter in this document, including the manner of presentation, is the exclusive property of SRK. It is an offence to publish this document or any part of the document under a different cover, or to reproduce and/or use, without written consent, any technical procedure and/or technique contained in this document. The intellectual property reflected in the contents resides with SRK and shall not be used for any activity that does not involve SRK, without the written consent of SRK.

### **1.5.6 Disclaimers and Cautionary Statements for US Investors**

The United States Securities and Exchange Commission (the “SEC”) permits mining companies, in their filings with the SEC, to disclose only those mineral deposits that a company can economically and legally extract or produce from. Certain terms are used in this report, such as “resources”, that the SEC guidelines strictly prohibit companies from including in filings.

The Expenditure Programme includes forward-looking statements. These forward-looking statements are necessarily estimates and involve a number of risks and uncertainties that could cause actual results to differ materially.

### **1.6 Qualifications of Consultants**

The SRK Group comprises over 700 staff, offering expertise in a wide range of resource engineering disciplines. The SRK Group’s independence is ensured by the fact that it holds no equity in any project. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgment issues. The SRK Group has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, CPRs, Mineral Experts’ Reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs. SRK also has specific experience in commissions of this nature.

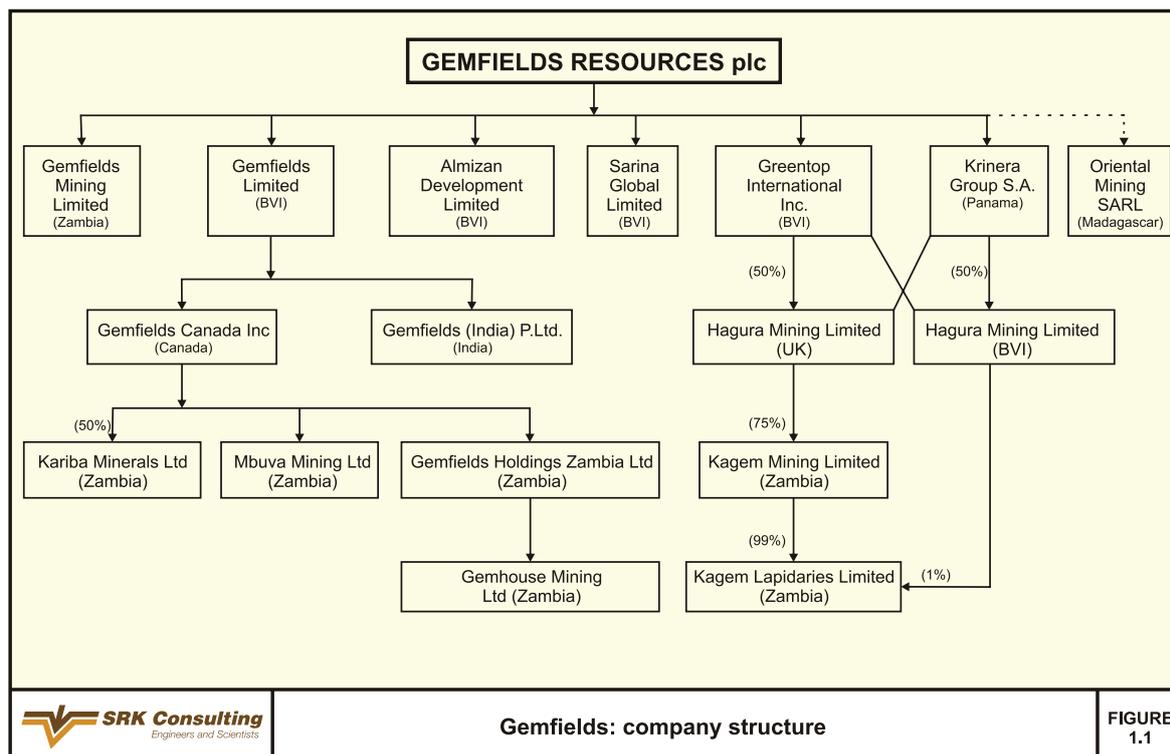
This CPR has been prepared based on a technical and economic review by a team of 7 consultants sourced from the SRK Group’s offices in the Republic of South Africa and the United Kingdom over a three-month period. These consultants are specialists in the fields of geology, resource and reserve estimation and classification, underground and open-pit mining, geotechnical engineering, mineral processing, waste rock and tailings/discard management, infrastructure, environmental management and mineral economics.

The individuals who have provided input to this CPR, who are listed below, have extensive experience in the mining and smelting industry and are members in good standing of appropriate professional institutions.

- Alwyn Annels, CEng, FIMMM, PhD;
- Andrew Smithen, Pr.Eng, MBL, MSAICE, MSAIAE, MSAIMM, MSc;
- David Pattinson, CEng, MIMMM, PhD;
- Iestyn Humphreys, MIMMM, AIME, PhD;
- John Miles, CEng, MSc, MSAIMM, MIMMM;
- Lucy Roberts, GMAusIMM, PhD; and
- Martin Pittuck, CEng, MIMMM, MSc.

The Competent Person with overall responsibility for reporting of the Mineral Resources and the Exploration Programme is Alwyn Annels, CEng, FIMMM, PhD who is an associate consultant of SRK. Dr Alwyn Annels is a resource geologist with 40 years experience in the mining industry and has been responsible for the reporting of Mineral Resources on various properties internationally during the past five years including gemstones.

**Figure 1.1 Gemfields: corporate structure**



## 2 THE GEMSTONE ASSETS

### 2.1 Introduction

This section gives an overview of the Company, including historical development, location and property description and historical (financial years ending 30 June for 2005, 2006, 2007, and the six month period ending 31 December 2007) operating results for the Gemstone Assets. The historical operating results for the consolidated Gemstone Assets are not reported on an attributable basis and have been compiled from monthly management statistics recorded at the operating subsidiary level. For Kagem ML and Kariba ML historical operating results are presented for financial periods ending 31 March 2005, 2006 and 2007 with the last period being 9 months to 31 December 2007.

Specifically where reference is made to legal compliance (in respect of title) within the regulatory environments in which the Company and Rox operate, SRK has placed reliance on the Company, Rox and their advisors.

The historical production and expenditure statistics, as reported in this section, have on an asset by asset basis, unless otherwise stated, been derived from the Company's and Rox's management accounts and on-mine statistics. These, in addition to historical information reported in other technical sections of this CPR, may differ from the Company's and Rox's published financial statements which are subject to equity reporting principles or such adjustments which may be included for public domain reporting. For example, generation of Gemfields' operating results using equity reporting principles and assuming that the proposed Acquisition was effective 1 July 2005 requires application of 75% to Kagem ML, 50% to Kariba ML and 100% to Mbuva-Chibolele for all production, sales and operating expenditures and 100% to all capital expenditures. Furthermore the cash cost statistics are reported on the basis of coloured gemstones produced, as is industry practice, and not coloured gemstone sales.

Country descriptions including summaries of applicable regulatory legislation is limited to Zambia, this being the principal location of the Gemstone Assets.

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## 2.2 Gemfields

Prior to the announcement of the Acquisition, Gemfields securities were originally admitted to trading on AIM on 25 November 2005 and pursuant to completion of the Acquisition and accompanying regulatory requirements its securities will be re-admitted to trading on AIM. The Company maintains its principal executive offices at Tenth Floor, Beaufort House, 15 St Botolph Street, London, England, United Kingdom.

The Company's principal activities include exploration, development, and operation of coloured gemstone mines and processing facilities which currently produce emerald, beryl and amethyst for sale as rough coloured gemstones to third parties. In its Strategic Plan the Company intends to limit sales of rough emerald and establish a cutting and polishing (lapidary) subsidiary in India and also carry out some cutting and polishing in Zambia.

The Company's Gemstone Assets comprise 17 licences which cover an area of 1,344.17km<sup>2</sup> in Zambia (Figure 2.2 through Figure 2.6 inclusive), Southern Africa and include: two Advanced Gemstone Assets, six Exploration Properties and 9 Exploration Prospects. In addition, the Company has options for 15 coloured gemstone licences in Madagascar.

Gemfields is a holding company which manages the Gemstone Assets through various subsidiaries and currently derives its revenues entirely from the Gemstone Assets. The subsidiaries comprise: holding companies, intermediate holding companies, coloured gemstone exploration and mining companies, coloured gemstone cutting and polishing companies, and various dormant companies. The principal operating companies are all based in Zambia and comprise:

- Kagem Mining Limited, in which Gemfields has a 75% beneficial interest, manages Kagem, comprising an open-pit emerald and beryl mine and associated processing facilities;
- Kariba Minerals Limited, in which Gemfields has a 50% beneficial interest, manages Kariba comprising an open-pit amethyst mine and an associated processing facility; and
- Gemfields Holdings Zambia Limited, in which Gemfields has a 100% beneficial interest, manages Mbuva-Chibolele comprising an open-pit emerald and beryl mine and an associated processing facility (currently on care and maintenance).

The Exploration Properties and the Exploration Prospects are all held by the Company's subsidiaries, specifically GHZL. Exploration and development activities are conducted through its representative office in Zambia which manages the licences for the Advanced Gemstone Assets, the Exploration Properties and the Exploration Prospects. The Company also provides management services to each of the operating companies including: sales and marketing; finance; legal; and technical support. Other administrative and regulatory aspects will also be provided in respect of co-ordinating group operating companies as well as public domain reporting.

As at 1 January 2008 (Table 2.1, Table 2.2), the Gemstone Assets have JORC Code compliant Mineral Resources comprising:

- an Inferred Mineral Resource of 1,462kt grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl); and
- an Inferred Mineral Resource of 325kt grading 37.1kg/t of amethyst.

As at 1 January 2008 (Table 2.3, Table 2.4), the Company has attributable JORC Code compliant Mineral Resources comprising:

- an Inferred Mineral Resource of 1,097kt grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl); and
- an Inferred Mineral Resource of 163kt grading 37.1kg/t of amethyst.

**Table 2.1 Gemstone Assets: emerald and beryl Mineral Resource statement (1 January 2008)<sup>(1)</sup>**

Mineral Resources	Tonnage (kt)	Grade			Content		
		(g/t emerald)	(g/t beryl)	(g/t Total)	(Mct emerald)	(Mct beryl)	(Mct Total)
Total Measured and Indicated	0	0.0	0.0	0.0	0.0	0.0	0.0
Inferred Mineral Resources	1,462	22.6	57.4	80.0	164.9	419.9	584.8
<b>Total Mineral Resources</b>	<b><u>1,462</u></b>	<b><u>22.6</u></b>	<b><u>57.4</u></b>	<b><u>80.0</u></b>	<b><u>164.9</u></b>	<b><u>419.9</u></b>	<b><u>584.8</u></b>

(1) No Measured or Indicated Mineral Resources are defined at Kagem and no Mineral Resources are defined at Mbuva-Chibolele.

**Table 2.2 Gemstone Assets: amethyst Mineral Resource statement (1 January 2008)<sup>(1)</sup>**

Mineral Resources	Tonnage (kt)	Grade (kg/t amethyst)	Content (kt amethyst)
Inferred Mineral Resources	325	37.1	12.1
<b>Total Mineral Resources</b>	<b><u>325</u></b>	<b><u>37.1</u></b>	<b><u>12.1</u></b>

(1) No Measured or Indicated Mineral Resources are defined at Kariba.

**Table 2.3 Gemfields: Attributable emerald and beryl Mineral Resource statement (1 January 2008)<sup>(1), (2)</sup>**

Mineral Resources	Tonnage (kt)	Grade			Content		
		(g/t emerald)	(g/t beryl)	(g/t Total)	(Mct emerald)	(Mct beryl)	(Mct Total)
Total Measured and Indicated	0	0.0	0.0	0.0	0.0	0.0	0.0
Inferred Mineral Resources	1,097	22.6	57.4	80.0	123.7	314.9	438.6
<b>Total Mineral Resources</b>	<b><u>1,097</u></b>	<b><u>22.6</u></b>	<b><u>57.4</u></b>	<b><u>80.0</u></b>	<b><u>123.7</u></b>	<b><u>314.9</u></b>	<b><u>438.6</u></b>

(1) No Measured or Indicated Mineral Resources are defined at Kagem and no Mineral Resources are defined at Mbuva-Chibolele.

(2) Reported using 75% equity participation for Kagem.

**Table 2.4 Gemfields: Attributable amethyst Mineral Resource statement (1 January 2008)<sup>(1), (2)</sup>**

Mineral Resources	Tonnage (kt)	Grade (kg/t amethyst)	Content (kt amethyst)
Inferred Mineral Resources	163	37.1	6.0
<b>Total Mineral Resources</b>	<b><u>163</u></b>	<b><u>37.1</u></b>	<b><u>6.0</u></b>

(1) No Measured or Indicated Mineral Resources are defined at Kariba.

(2) Reported using 50% equity participation for Kariba.

During the financial period ending 30 June 2007 the Gemstone Assets (Table 2.5) produced 11.6Mct of emerald and beryl at a combined cash operating cost of US\$1.94/ct of emerald and beryl with amethyst sales reported as by-products. During the interim 6-month period ending 31 December 2007 the Gemstone Assets produced 4.9Mct of emerald and beryl at a cash operating cost of US\$2.22/ct of emerald and beryl with amethyst sales reported as a by-product. Total capital expenditure incurred in respect of the Gemstone Assets in the financial period ending 30 June 2007 and interim 6-month period ending 31 December 2007 was reported at

US\$2.96m and US\$0.04m respectively. As at 31 December 2007 the Gemstone Assets had PP&E valued at US\$9.34m. The reduction in processed grade is largely attributable to the influence of lower grades at Mbuva-Chibolele as well as the increasing proportion of lower grade stockpile material processed at Kagem due to the limited availability of in pit ore resulting from a backlog of waste stripping.

**Table 2.5 Gemstone Assets: historical operating statistics<sup>(1)</sup>**

Statistics	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
<b>Processing</b>					
Tonnage	(kt)	17	29	62	42
Grade	(g/t emerald + beryl)	152.5	99.4	37.6	23.1
<b>Production</b>					
emerald and beryl	(Mct Total)	12.6	14.3	11.6	4.9
amethyst	(t)	1,140	1,081	1,480	688
<b>Sales</b>					
Sales (emerald and beryl)	(Mct)	11.3	15.0	16.4	4.6
Sales Price (emerald and beryl)	(US\$/ct)	0.57	0.70	0.94	1.04
Sales (amethyst)	(t)	1,573	1,117	1,254	224
Sales Price (amethyst)	(US\$/kg)	1.25	2.08	1.80	2.69
<b>Expenditure</b>					
Cash Costs <sup>(2)</sup>	(US\$m)	11.82	12.25	22.49	10.76
Cash Costs (emerald and beryl) <sup>(2)</sup>	(US\$/ct) <sup>(2)</sup>	0.94	0.86	1.94	2.22
Capital	(US\$m)	1.13	3.65	2.96	0.04

(1) Compiled from monthly management data to present 12-month periods ending 30 June for 2005, 2006, 2007 and six month periods ending 31 December 2007.

(2) Cash costs include sales revenue from amethyst sales reported on a by-product basis.

During the financial period ending 30 June 2007 the Company (Table 2.6) produced 8.7Mct of emerald and beryl at a combined cash operating cost of US\$2.15/ct of emerald and beryl with amethyst sales reported as by-products. During the interim 6-month period ending 31 December 2007 the Company produced 3.6Mct of emerald and beryl at a cash operating cost of US\$2.32/ct of emerald and beryl with amethyst sales reported as a by-product. Total capital expenditure incurred in respect of the Company in the financial period ending 30 June 2007 and interim 6-month period ending 31 December 2007 were reported at US\$2.96m and US\$0.04m respectively.

**Table 2.6 Gemfields: attributable historical operating statistics<sup>(1), (2), (3)</sup>**

Statistics	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
<b>Processing</b>					
Tonnage	(kt)	12	26	55	35
Grade	(g/t emerald and beryl)	152.5	83.2	31.8	20.8
<b>Production</b>					
emerald + beryl	(Mct Total)	9.5	10.7	8.7	3.6
amethyst	(t)	570	541	740	344
<b>Sales</b>					
Sales (emerald and beryl)	(Mct)	8.5	11.2	13.1	3.5
Sales Price (emerald and beryl)	(US\$/ct)	0.57	0.70	0.92	1.04
Sales (amethyst)	(t)	787	558	627	112
Sales Price (amethyst)	(US\$/kg)	1.25	2.08	1.80	2.69
<b>Expenditure</b>					
Cash Costs <sup>(4)</sup>	(US\$m)	8.90	9.43	18.72	8.47
Cash Costs (emerald and beryl) <sup>(4)</sup>	(US\$/ct)	0.94	0.88	2.15	2.32
Capital	(US\$m)	1.13	3.65	2.96	0.04

(1) Compiled from monthly management data to present 12-month periods ending 30 June for 2005, 2006, 2007 and six month periods ending 31 December 2007.

(2) Reported using 75% equity participation for Kagem.

(3) Reported using 50% equity participation for Kariba.

(4) Cash costs include sales revenue from amethyst sales reported on a by-product basis.

The Company employs 1,021 total employees costed (“TEC”), 986 of whom are engaged directly at the Gemstone Assets: Kagem (390), Kariba (424), Mbuva-Chibolele (172). A further 35 are employed at the Company’s principal executive and representative offices in the United Kingdom and Zambia.

Total environmental liabilities comprise bio-physical and social (terminal benefits) liabilities of US\$15.61m (bio-physical — US\$10.40m; terminal benefits — US\$5.21m).

### 2.2.1 History

Gemfields’ historical development began with the formation of Gemhouse Inc. (“Gembaix”) a company incorporated in New Brunswick, Canada in February 2000. In April 2004, the Company entered into a 50/50 joint venture with the GoZ in Kariba, an operating amethyst mine located in southern Zambia near Lake Kariba. In May 2004, the Company purchased a 51% interest in the Mbuva emerald and beryl mine and an option over the remaining 49% interest which was exercised in May 2005.

Also in May 2004, the Company was incorporated as a UK holding company and in June 2004 Gemhouse Inc. was amalgamated with another Canadian corporation, Gemfields (Canada) Inc. The original amalgamated Canadian businesses were then acquired by the Company in June 2004 in preparation for admission to AIM.

In July 2004, the Company entered into a joint venture providing it with a 70% interest in the Chibolele emerald and beryl mine and in January 2005 exercised an option to purchase the remaining 30% interest. In July 2005, the Company signed an agreement for the acquisition of various licences along with certain infrastructure, plant, property and offices at Kamakanga and Kitwe subject to the payment of an element of deferred consideration. The Company was admitted to AIM on 28 November 2005 and in December 2005, Gemfields made the deferred payment thereby giving the Gemfields 100% control of Kamakanga. In December 2006, the Company raised a further GBP3.2m through a private placing of shares.

The principal milestones, including those achieved by the Company and Rox in respect of the Gemstone Assets subsequent to the formation are:

- the formation of a 50/50 joint venture with the GoZ encompassing the mining and processing facilities at Kariba amethyst mine in April 2004 following acquisition of Lonrho Africa plc’s 50% interest for a consideration of US\$0.35m;

- the commissioning of the mining and processing facilities at Mbuva-Chibolele in January and November 2006 respectively at an overall capital investment of US\$16.64m, including acquisition expenditure of US\$3.5m;
- the acquisition of Kagem ML;
- securing a put and call option to acquire a worldwide exclusive 15 year licence to use the Fabergé brand name in respect of coloured gemstones (excluding diamonds); and
- securing the put and call option to acquire various exploration prospects in Madagascar from Oriental Mining (for the consideration of GBP1.00) comprising 15 gemstone licences with a combined area of 125.00km<sup>2</sup>.

### 2.2.2 Strategy

The Company's overall strategy including its rationale for the Acquisition is stated in Part 1 of the Admission Document. The Company's Strategic Plan assumes the expenditure of some US\$33.04m to be expended from 1 April 2008 through 31 March 2010 over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$7.55m for head office operating expenditures; US\$1.21m for the care and maintenance costs at Mbuva Chibolele and the funding of the loss position (1 year) at Kariba; and US\$19.84m of capital expenditure (Kagem Expansion, Indian lapidary and transaction costs). Some 73.2% of this total expenditure is directly allocated to the Kagem Expansion and funding of two years of corporate operating expenditures.

In this respect SRK notes the following key components:

- The Kagem Expansion requires an overall capital investment of US\$15.26m (exploration — US\$1.39m; capital equipment — US\$13.86m) to attain the peak monthly production rates for Reaction Zone mining and processing of 12ktpm, and a 470% (compared with financial year ending 31 March 2007) increase in coloured gemstone production to an annualised 57.6Mct (11.5t) of combined emerald and beryl by July 2009 at a unit cash cost of US\$0.59/ct;
- The establishment of the Company as a vertically integrated coloured gemstone producer through establishment of a lapidary in India at a capital cost of US\$2.29m. The cutting and polishing facilities are to be established in Jaipur and supported by an administrative office in Mumbai for securing suitable sales and marketing contracts;
- The branding of coloured gemstones through the exclusive Fabergé licence which will entitle the Company to brand coloured gemstones with the Fabergé name. Fabergé will be used as the Company's premium brand. Furthermore, the ownership of the producing assets along with an integrated supply chain will enable the Company to guarantee the exact provenance of its gemstones and assure customers of their ethical legacy;
- An exploration programme comprising expenditures of US\$4.04m for Kagem, Kamakanga, Ndola Rural Emerald Restricted Area ("NRERA") licences and unspecified acquisition targets; and
- Further technical assessments including completion of multi-disciplinary pre-feasibility studies ("PFS") to demonstrate the technical feasibility and economic viability of:
  - The current conceptual study in support of the proposed expansion at Kagem,
  - The conceptual expansion of production at Kariba which is critically dependent upon a significant increase in the sales price for rough amethyst, reduced unit costs as a function of significant expansion, and the effective doubling of the currently identified Mineral Resource base. In the interim, the Company has assumed continued funding of the current cash negative position, estimated at US\$1.00m per annum for one year only. Furthermore, the Company has stated that such expansion is conditional on successful negotiation with the GoZ to increase the Company's equity participation in Kariba ML to 76%, and
  - Establishing profitable operations at Mbuva-Chibolele following further bulk sampling down-dip to determine whether gemstone qualities improve and incorporating any price uplift due to downstream cutting and polishing initiatives. In the interim the Company has assumed continued funding of care and maintenance operating expenditures amounting to US\$0.08m per annum.

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In addition to the above, SRK considers that the Company's Strategic Plan should explicitly address the points noted in Section 4.0 of this CPR. Specifically in respect of policies and management systems which in combination with adequate resources enable improved technical assessment, management and reporting of all aspects relating to:

- Mineral Resources management including completion of appropriately detailed technical studies in support of greenfields and brownfields projects; and
- management of environmental issues (regulatory approval, compliance and monitoring) and environmental liabilities including bio-physical closure costs and terminal benefits as well as occupational health and safety.

## **2.3 Mining business**

### **2.3.1 Description of properties**

The Gemstone Assets comprise licences which cover some 1,344.17km<sup>2</sup> all of which are situated in Zambia (Table 2.7). The Advanced Gemstone Assets, the Exploration Properties and the Exploration Prospects cover an area of 45.50km<sup>2</sup>, 7.25km<sup>2</sup> and 1,291.42km<sup>2</sup> respectively. All licences are granted in respect of emerald and beryl with the exception of Mkushi (PLLS-262 at 810.00km<sup>2</sup> for pink tourmaline), Kariba amethyst (PLLS-300 at 80.00km<sup>2</sup> for amethyst) and Kariba (GL-86 at 2.50km<sup>2</sup> for amethyst).

In addition to the above, the Company also has options relating to 15 licences in Madagascar which are granted in respect of various coloured gemstones and cover a total area of 125.00km<sup>2</sup>. These licences are due to expire in June 2012.

A number of the licences have already expired, however SRK has been informed that applications for renewal or conversion to Large Scale Mining Licences are underway or have already been submitted. SRK notes that in respect of the Mineral Resources, the licence for Kariba will expire in June 2017 and that the licence for Kagem will expire in March 2015 and does not cover the projected life (2019) as assumed by the Company in its expansion plan.

Furthermore the Company confirms that all minimum expenditures necessitated by the licence conditions have been fulfilled and that it expects renewal of all licences reviewed in this CPR.

Table 2.8 gives the details of production capacities and throughputs attributable to the operating Gemstone Assets.

**Table 2.7 Gemstone Assets<sup>(1), (2)</sup>**

Gemstone Assets	Licence No	Country	Subsidiary	Ownership	Expiry	Area (km <sup>2</sup> )
<b>Advanced Gemstone Assets</b>						
Kagem <sup>(3), (4)</sup>	GL-713	Zambia	Kagem ML	75.0%	Mar-2015	43.00
Kariba <sup>(3), (5)</sup>	GL-86	Zambia	Kariba ML	50.0%	Jun-2017	2.50
<b>Subtotal</b>						<b>45.50</b>
<b>Exploration Properties</b>						
Mbuva	GL-145	Zambia	GHZL	100.0%	Sep-2007	0.40
Chibolele	GL-288	Zambia	GHZL	100.0%	Sep-2007	0.40
Arinus	GL-081/744	Zambia	GHZL	100.0%	Feb-2016	0.35
Kamakanga	GL-002	Zambia	GHZL	100.0%	Nov-2006	2.35
Pamodzi	GL-078	Zambia	GHZL	100.0%	Apr-2007	0.85
Kafubu	GL-125	Zambia	GHZL	100.0%	Mar-2017	2.90
<b>Subtotal</b>						<b>7.25</b>
<b>Exploration Prospects</b>						
Miputu	PLLS-14	Zambia	GHZL	100.0%	Mar-2008	290.00
Mitondo North	PLLS-29	Zambia	GHZL	100.0%	Feb-2007	31.07
NR South	PLLS-34	Zambia	GHZL	100.0%	Feb-2007	51.20
Mitondo West	PLLS-124	Zambia	GHZL	100.0%	Feb-2007	5.50
Mitondo East	PLLS-126	Zambia	GHZL	100.0%	Jul-2008	4.60
Nkabashila East	PLLS-136	Zambia	GHZL	100.0%	Jul-2006	9.10
Nkabashila West	PLLS-137	Zambia	GHZL	100.0%	Feb-2007	9.95
Mkushi pink tourmaline	PLLS 262	Zambia	GHZL	100.0%	Mar-2010	810.00
Kariba amethyst	PLLS-300	Zambia	GHZL	100.0%	Oct-2008	80.00
<b>Subtotal</b>						<b>1,291.42</b>
<b>Total</b>						<b>1,344.17</b>

(1) For all licences which have expired as of 31 December 2007 or are due to expire in calendar 2008, SRK has been informed that the necessary applications for renewal have been lodged with the regulatory authorities. For Miputu, Mitondo North, NR South, Mitondo West, Mitondo East, Nkabashila West applications have been made for conversion to Large Scale Mining Licences. For Nkabashila East application has been made for conversion to a Gemstone Licence.

(2) Excludes the option to acquire a 100% interest in Oriental Mining and the 15 associated licences with total area of 125.00km<sup>2</sup>.

(3) Gemstone Assets for which Mineral Resources have been stated in this CPR.

(4) Remaining 25% held by GoZ.

(5) Remaining 50% held by the GoZ.

**Table 2.8 Plant production capacities and throughput**

Processing Plant	Design Capacity (ktpa)	Dec-2007 Annualised throughput <sup>(1)</sup> (kt)
Kagem Plant-1	180	21
Kagem Plant-2 <sup>(2)</sup>	180	35
Kariba Plant	50	31
Mbuva-Chibolele Plant	35	34

(1) Compiled from monthly management data for the six-month period ending 31 December 2007.

(2) Process capacity increases from current 50tph (180ktpa) to 75tph (270ktpa) by March 2009.

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### 2.3.2 Exploration

The Company's exploration activities are undertaken by its various in country operating subsidiaries, principally GZHL. Exploration activities at the Gemstone Assets are largely focused on the following key areas:

- Extension drilling at the operating mines to test the dip and strike extent of currently delineated orebodies as well as infill drilling to upgrade resource classification, specifically at Kagem; and
- Greenfield exploration activity comprising: GIS analysis, regional reconnaissance prospecting, geophysical mapping (regional and local), geochemical soil/rock sampling, surface trenching, target generation and pre-resource drilling.

Exploration expenditure attributed to the Gemstone Assets from 1 July 2005 through 31 December 2007 amounts to US\$0.55m (excluding salaries). The current exploration programme includes direct exploration expenditures (assuming successful execution of various options) of US\$4.43m from 1 April 2008 through 31 March 2010 inclusive. The distribution of expenditures is as follows: Kagem (31.4%); Kamakanga (2.3%); Ndola Rural Emerald Restricted Area licences (19.0%); and unspecified acquisition targets (47.4%).

### 2.3.3 Geology

The Kafubu emerald deposits are situated in the Ndola Rural Emerald Restricted Area ("NRERA") which is located in the Copperbelt Province of Zambia, and covers an area of approximately 800km<sup>2</sup>. NRERA is covered by about 800 licences, of which Kagem ML's GL-713 at 43.0km<sup>2</sup> is the largest. The geology of the Copperbelt Province around NRERA is dominated by the rocks of the Zambian Copperbelt, which consists of the Neo-Proterozoic Katanga Supergroup, which can be several kilometres thick in places. The Katanga Supergroup is underlain by the Muva Supergroup, which lies unconformably on top of granites, amphibolite gneisses and quartz-biotite schists of the Lufubu Basement Complex (Palaeoproterozoic). The whole suite of rocks is deformed into a series of complexly folded synformal structures.

Sub-concordant bodies of amphibolite and ultramafic rock (flows, sills or tuffs) also occur within the Muva schists. The ultramafics, which vary in thickness from 20m to 140m, have been altered by metamorphism and hydrothermal activity into talc-chlorite-tremolite magnetite schist (locally referred to as "TMS") or talc-biotite schist ("TBS"). The amphibolites have also suffered varying degrees of alteration to biotite-actinolite schists.

The Kafubu emerald deposits belong to a group referred to as 'schist-hosted emeralds' which are considered to be related to mafic and ultramafic schists or unmetamorphosed ultramafic rocks in contact with felsic rocks, either pegmatoid dykes, granitic rocks, paragneisses or orthogneisses. These contacts are locally termed Reaction Zones and may be intrusive or tectonic and host the majority of economic emerald concentrations. The origin of these deposits is, however, controversial but where the emeralds occur in ultramafic rocks containing pegmatite dykes, they are explained by the interaction of these pegmatites or pneumatolithic hydrothermal Be-bearing fluids with Cr-bearing mafic or ultramafic rocks.

Whilst routine geological exploration techniques are applicable to the TMS horizon, the direct estimation of both the tonnage and associated economic concentration of coloured gemstones is difficult given the prevalence and nature of the Reaction Zones. Accordingly, significant reliance is placed on the results of bulk samples such as historical production statistics for which the declaration of JORC Code compliant Mineral Resources are largely dependent.

### 2.3.4 Mining

The mining process can be divided into two main phases for open-pit operations: creating access to the orebody; and mining the orebody. These basic processes apply to all of the Gemstone Assets:

- **Access to the orebody:** At the open-pits, the orebodies where not outcropping, are exposed through the process of pre-stripping where generally non-mineralised waste is removed to enable access to economic ore. Deepening of the open-pits occurs in stages, termed push-backs where waste material is mined sufficiently in advance to establish an

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inventory of pre-stripped ore. Access to the open-pits is via ramps whose gradients are generally less than 8% and enable truck access for transportation of both ore to Run-of-Mine (“RoM”) stockpiles and waste to dedicated rock dumps. Depending on the diggability of the rock, waste may either be free-digging or require drilling and blasting prior to excavation. Slope angles are generally lower closer to the surface, specifically in weathered material and mining progresses from each push-back, increasing in depth and haul distance to the ultimate pit design; and

- **Mining the orebody:** Once exposed, ore mining progresses in benches which are subdivided into vertical sections termed flitches. Depending on the strength of the rock-mass, the ore may require drilling and blasting prior to excavating and loading into dedicated mine trucks for hauling to the RoM stockpile or directly to the processing plant. Given the nature of the economic concentrations of coloured gemstones and the requirement to limit damage to high value stones, the ore mining process is largely reliant on manual methods using hand held chisels which accounts for some 75% of all coloured gemstone production. The remaining 25% is sourced from mining with excavators which then feed directly to the processing facilities. Accordingly the ore mining process is largely driven by visual inspection, and is overseen by considerable security measures and is limited to daylight hours.

### 2.3.5 Mineral Processing

The Company has four main processing facilities and employs relatively simple technology which supplements production of high quality stones sourced directly from the open-pit operations. The processes employed at the processing facilities include:

- **Comminution:** the process of breaking up the lower grade ore to expose and liberate coloured gemstones. This process includes primary and secondary crushers operating with vibrating screens to produce various products separated into various size fractions (Kagem: >2mm and <10mm; >10mm and <20mm; >20mm and <40mm; and >40mm) with the <2mm fines discarded; and
- **Sorting and Cleaning:** The sized products are directed to individual picking belts where the various stones are manually picked off the belt and placed in secure containers similar to those used in the open-pit operations. The combined products from the open-pit and the washing plant are then chipped where necessary and lightly tumbled and cleaned. The stones are then typically sorted into various grade/quality categories of emerald (subdivided into pre-select “P/S”, emerald and low grade emerald) and beryl (subdivided into beryl, specimen and fines categories). The products are then dried, dressed with oil, weighed, catalogued and stored for evaluation and subsequent export to Lusaka for auction.

At the Kariba amethyst mine, similar processes are followed, however the high grade and low grade stones with bigger crystals are sent to the knocking shed where amethyst is manually broken to reject the unwanted portions. The very small crystals are sent for sawing and the stones are upgraded by “pre-forming”. After knocking and sawing, amethyst is graded into marketable categories.

The Company has also stated its intention to establish a formal lapidary in Jaipur, India. In this instance emeralds will be sold directly to the subsidiary for polishing and cutting to produce stones for direct sale on the wholesale cut coloured gemstone market (See Section 10.3 for further details).

The Company is currently considering the introduction of optical sorting technology at the processing facilities with a view to:

- increase the efficiency in recoveries through technology controlled recovery and reduction of possible human errors; and
- decrease manual handling which may also result in significantly reduced theft.

The Company has initiated preliminary discussions with several vendors in regards to supply/installation of equipments. Once finalised the Company intends to install such equipment as part of the planned upgrades.

### 2.3.6 Services, supplies and material contracts

Mining activities require extensive services which include mining engineering, planning, mineral resource management, provision of supplies and materials, and other logistical support. These services are currently supplied by a combination of both in-house and external contractors and consultants. The majority of the contracts entered into in respect of the Gemstone Assets and the Acquisition are included in Part IX (Additional Information) of the Admission Document.

The principal agreements as they directly relate to the Gemstone Assets comprise the management agreement between the Company and Kagem ML which stipulates a management fee based on 5% of gross sales payable to the Company.

The various option agreements between the Company's subsidiaries and third parties are in respect of: the Oriental Mining option (the "Oriental Mining Option") relating to the various Madagascar licences; and the Fabergé option (the "Fabergé Option"):

- **Oriental Mining Option:** A put and call option to acquire various exploration prospects in Madagascar from Oriental Mining (for the consideration of GBP1.00) comprising 15 gemstone licences with a combined area of 125.00km<sup>2</sup>; and
- **Fabergé Option:** Fabergé Limited ("Fabergé") was established during 2006 for the purpose of acquiring the Fabergé brand and pursuing its heritage of excellence in creativity, design and craftsmanship. In January 2007, Fabergé acquired Unilever plc's worldwide portfolio of Fabergé trademarks, licences and associated rights. The Company has conditionally acquired the option (also exercisable by Fabergé) to enter into a 15 year worldwide and exclusive licence with Fabergé to use the Fabergé name in branding, marketing and selling coloured gemstones excluding diamonds.

### 2.3.7 Human resource management

The Company currently (Table 2.9) employs some 1,021 TECs, 97% (986) of which are engaged in direct operational activities at the Gemstone Assets. The Company's administrative team comprises 35 employees located at the principal executive offices as well as other representative offices including Zambia.

Each operational management team comprises of a general mine manager supported by discipline managers in the following areas: geology and mineral resources, mining, mineral processing, engineering, and financial.

SRK is not aware of any specific policies or practices in place which address, on an integrated basis, its human resource requirements: specifically in respect of training and development; productivity initiatives; remuneration; and industrial relations. Recruitment is informed in the main by the operational requirements for the Gemstone Assets for specific skills, by the extent of labour turnover levels and by relevant legislation.

Table 2.9 gives the historical human resource distribution for periods ending 30 June for 2005, 2006, 2007 and for the six-month period ending 31 December 2007.

**Table 2.9 Gemstone Assets and Head Office: human resources<sup>(1)</sup>**

Operation	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
Kagem	(No)	321	352	393	390
Kariba	(No)	438	419	377	424
Mbuva-Chibolele	(No)	20	300	300	172
Head Office	(No)	35	35	35	35
<b>Total</b>	<b>(No)</b>	<b>814</b>	<b>1,106</b>	<b>1,105</b>	<b>1,021</b>

(1) Compiled from monthly management data to present 12-month periods ending 30 June for 2005, 2006, 2007 and a six-month period ending 31 December 2007.

### 2.3.8 Occupational Health and Safety

The Company has no formal Occupational Health and Safety ("OHS") policy and currently does not prescribe to follow international conventions, specifically those aligned with World Bank Policies and Guidelines, International Finance Corporation Operational Policies, the International Labour Organisations and OHSAS18001.

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The principal occupational health issues at hard rock mining operations include silica dust exposure and silicosis, occupational lung diseases and noise induced hearing losses. Other than with respect to silicosis at Kagem, no evidence was, however, provided by the Company in respect of details supporting the assessment and the extent to which such occupational health issues impact on the current labour force.

Furthermore in respect of safety statistics the Company does not monitor lost time injury frequency rates (“LTIFR”) which are standard comparisons against the Ontario benchmark target of 7.50 per million man hours. Similar benchmark targets are normally set for fatality rates at 0.15 per million man hours. SRK has not been informed of any recorded fatalities from 1 April 2005 through 31 December 2007 inclusive.

Other social issues which are significant in Zambia are those related to HIV as the Zambian HIV prevalence rate is approximately 17% of the population. The Company has not developed a formal policy as established by other international operators in Zambia which typically includes programmes comprising counselling, supply of free condoms, care and free medical (including treatment of opportunistic infections) and anti-retroviral therapy (“ART”). The objective of such a programme would be to explain the Company policy and to educate and encourage all employees, their families and the community at large to undergo voluntary counselling and testing (“VCT”).

### **2.3.9 Environmental**

The Company has not developed any formal environmental or occupational health and safety policies which are then subsequently encompassed within formalised management systems. Furthermore, the lack of comprehensive on-going monitoring as well as the absence of OHS statistics are notable. SRK recognises that compliance to date has been largely tested against local requirements, however SRK considers that the current situation would be markedly improved should broader consideration be given to international benchmarks: specifically the principals embodied within the World Bank, Equator Principles or the principles established by the International Council of Mining and Metals (“ICMM”).

Currently none of the mines have a well-established environmental and social management and the following key issues are noted in respect of environmental management at each of the Company’s Gemstone Assets:

- The lack of an appropriately defined environmental management system;
- The lack of appropriate monitoring; and
- The lack of defined closure plans which adequately addresses both bio-physical closure costs as well as social aspects including human resource planning and terminal benefits liabilities.

The environmental project brief (the “EPB”) at Kariba is outdated, does not address the current operation in any adequate detail and consequently there is no documentation against which to assess compliance. Furthermore, SRK notes that no additional environmental work has been undertaken to assess the potential impacts of the proposed expanded operations at Kariba or Kagem.

Notwithstanding the above, the Company has recently stated its intention to rectify the various deficiencies outlined above by appointment of appropriately qualified individuals at both the corporate and operational level. At the corporate level the Company has outlined the development of formal policies with respect to environmental and OHS aspects as well as a broader implementation strategy. At the operational level the Company will engage a safety, health and environmental officer who will be directly responsible for day to day management of these aspects as well as assisting in developing, implementing and monitoring the various environmental programmes and action plans. To address a number of specific deficiencies at Kagem, the Company has also appointed independent consultants to assist in the generation of regulatory documentation as well as detailing closure plans and other environmental management programmes. SRK supports this approach as a marked improvement to the historical practices noted at the Gemstone Assets and considers that the actions proposed at Kagem should be adopted at the other operating assets.

SRK estimates that the Company’s current environmental liabilities comprising both bio-physical closure costs (US\$10.40m) and social (US\$5.21m terminal benefits liabilities) costs are

US\$15.61m (Table 2.10). These liabilities are currently not funded and such funding is primarily dependent upon the establishment of cash positive operations through the proposed expansion at Kagem. Certain opportunities exist to limit the impact of such liabilities through sale of assets as well as the management of human resources in line with the requirements of the expansion programmes.

**Table 2.10 Gemstone Assets: environmental liability (1 January 2008)**

Gemstone Asset	Bio-physical Liability (US\$m)	Terminal Benefits Liability (US\$m)	Total (US\$m)
Kagem	6.57	2.86	9.43
Kariba	1.41	2.35	3.75
Mbuva-Chibolele	1.46	0.00	1.46
Kamakanga	0.96	0.00	0.96
<b>Total</b>	<b>10.40</b>	<b>5.21</b>	<b>15.61</b>

## 2.4 Overview of the Gemstone Assets

### 2.4.1 Kagem

**Introduction:** Kagem comprises an open-pit mine which mines emerald and beryl bearing ore for processing at the Kagem processing plants. The current (9 months to 31 December 2007) annualised processing throughput is 53ktpa at a grade of 37.6g/t emerald and beryl. Annualised coloured gemstone production is currently (9 months to 31 December 2007) 16.4Mct at an overall cash cost of US\$0.75/ct. Historically the operation has been undercapitalised and this has resulted in the current situation where, due to limited waste stripping, the limited availability of ore has necessitated the processing of historical low grade stockpile material. The Company is currently implementing its Strategic Plan which assumes substantial increase in coloured gemstone production up to 56.7Mct at an overall cash cost of US\$0.59/ct. This is to be achieved through expansion of the mining capacity to some 10.8Mtpa and processing capacity to 75tph at an overall capital investment of US\$13.86m. The Company has a 75% equity interest in Kagem and as at 31 December 2007, the value of the PP&E is US\$5.94m. Currently coloured gemstones produced at Kariba are transported to Lusaka for auction, however, the Company is considering establishing a lapidary centre in India which will produce cut and polished stones, and transform the Company into an integrated producer which participates directly in the down-stream price uplift differential between rough and cut gemstones.

**History:** Kagem ML is a Zambian registered company founded in 1984 as a joint venture between Hagura UK (45%) and the GoZ (as Reserved Minerals Corporation Limited) (55%). Hagura UK provided start-up capital and had management control of Kagem. The GoZ assumed management control of Kagem in 1990. However, after experiencing operational and financial difficulties and 12 months of frozen production, Hagura UK regained management control in 1996. The shareholding of Hagura UK was increased to 75% in November 2005. Hagura UK is a private limited company registered in the United Kingdom in 1980 and is held as to 50% by each of Greentop and Krinera.

**Location:** Kagem is situated in the Ndola Rural District, Copperbelt Province (Figure 2.4, Figure 2.7), Zambia, approximately 260km north of Lusaka, the capital city of Zambia. Located at latitude 13°04'S and longitude 28°08'E at an elevation of 1,200m above mean sea level ("amsl"), the site is some 31km south-southwest of the Copperbelt town of Kitwe and the licence is bisected by the administrative boundary between Ndola Rural District and Luanshya District. The site is accessed along a combination of national (10km south of Kitwe to Fisenge along the M4) and local (22km) southwest towards the settlement of Sempala, a total travelled distance of 32km. Sempala has a population of some 1,225 within a 7km radius and is located in the northernmost corner of the licence area, and is situated in the GMT +2 time zone.

**Terrain:** Much of this ecoregion is flat or rolling, with local areas of higher relief. The site, however, is fairly flat, gently sloping towards the Kafubu stream in the north. The Kafubu stream forms the northern boundary of the permit area and lies in a wide valley. The biome is Tropical

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and Subtropical Grasslands, Savannas, and Shrublands. The vegetation is dominated by the Central Zambebian Miombo Woodlands which is a densely forested ecoregion that covers much of Central and East Africa. Trees grow to heights of 15m to 20m, rising over a broadleaf shrub understory with grassland underneath.

Animal life is limited by the disturbed nature of the area with small mammals occurring in the less disturbed areas. Numerous insects, birds and reptiles occur but documentation provided did not indicate endangered species. The aquatic environment is relatively undisturbed and fishing is common.

The site is located in the catchment of the Kafue river and is drained by the Kafubu which drains into the Kafue. The Kafubu stream, which has its origin some 50km to the northwest of the permit area, forms the northern boundary. It drains into the Kafue which is a major river and provides water to much of Zambia, including the city of Lusaka. The Kafue river flows approximately 6.5km to the east of the project area. Abandoned pits fill with water indicating a relatively shallow groundwater table between 8m and 10m below the surface.

**Climate:** The climate is classed as temperate humid. The dry season may be as long as 7 months, and 95% of the annual rainfall occurs from November to March, which is the region's summer. The mean annual precipitation is 1,222mm and monthly precipitation ranges from a low of 0mm in July through to 290mm in January (wet season: November through March). The mean annual evapotranspiration is 1,419mm with monthly values ranging from 90mm to 165mm. The mean monthly temperatures range from 16.1°C in June to 23.8°C in October. The monthly temperatures range from a minimum of 6.1°C in July to a maximum of 32.1°C in October. Wind speeds range between 0.7m/s to 1.5m/s and are predominantly from the southeast, east and northeast.

**Title and Rights:** The current licence (GL-713) extends over an area of 43.00km<sup>2</sup> and is valid until March 2015 which is sooner than the end of the operating life assumed through depletion of the currently defined Inferred Mineral Resources (2019). The licence was originally issued in March 2005 and the principal minerals are emerald and beryl. The Company's equity participation is 75%, with the remaining 25% held by the GoZ.

**Geology:** The coloured gemstone Kafubu deposits are situated in the NRERA which is located in the Copperbelt Province of Zambia and covers an area of approximately 800km<sup>2</sup>. The rocks containing the Kafubu deposits consists dominantly of quartzites and quartz-mica schists. Sub-concordant bodies of amphibolite and ultramafic rock also occur within these schists and the ultramafics have been altered by metamorphism and hydrothermal activity into talc-chlorite-tremolite-magnetite schist locally referred to as TMS. The TMS unit ranges in thickness from a few metres to 30m but is generally in the range of 8m to 15m with dips averaging at some 16°. Economic concentrations of emerald and beryl are located in contact zones termed Reaction Zones, occurring as pockets, where the TMS unit has been intersected by pegmatite dykes. The principal geological zones within the Kagem licence are: the Fibolele-Dabwisa belt; the Kanchule belt; the Fwaya-Fwaya-belt and the Libwente zone.

**Mineral Resources:** As at 1 January 2008, Kagem has JORC Code compliant Mineral Resources comprising an Inferred Mineral Resource of 1,462kt grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl).

**Mining Operations** comprise open-pit mining in the northeastern portion of the Fwaya-Fwaya belt and in respect of waste and TMS mining comprises conventional drill-blast-load-truck which is currently achieving a total annualised material moved production rate of 2.2Mtpa. The steeply dipping Reaction Zones are mined using manual intensive methods using picks and shovels with the assistance of hydraulic excavators under close supervision and only under daylight hours. All large and high grade coloured gemstones are hand sorted at the mining face and are placed in a drop safe type container that is numbered, tagged and closed with security controlled locks. The lower grade material mined is loaded into trucks and transported directly to the Kagem Plants.

The open-pit is currently 50m deep and the Strategic Plan assumes mining of the Inferred Mineral Resource to a depth of 125m below surface with 8m high benches, 3m berms and an overall slope angle of 45° to yield a stripping ratio of  $44.5t_{\text{waste}}:t_{\text{Reaction Zone}}$ . Haul roads are placed in the footwall of the TMS given the relatively shallow dip of 14°. The upper 15m to 20m of

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overburden is free-digging whilst all other waste (including internal TMS waste) is drilled and blasted. The Strategic Plan assumes increasing the total material mined to a maximum of 10.8Mtpa by July 2008 with peak Reaction Zone production of 144ktpa assumed to be achieved in July 2009.

**Processing Plants:** Kagem processes Reaction Zone material mined directly from the open-pit as well as historical low grade stockpiles situated nearby. The processing facilities comprising the older Kagem Plant-1 and the newer (2007) Kagem Plant-2 comprise a simple series of comminution, screening, washing and sorting facilities which are located close to the current mining activities in the Fwaya-Fwaya area. Both plants have a rated hourly capacity of 50tph (180ktpa) and Kagem Plant-2 is planned to achieve an increased processing rate of 75tph by March 2009. The processing of lower grade stockpile material will cease in August 2008, after which only Kagem Plant-2 will remain operational. Waste material from the washing plant, comprising the coarse (-2mm) discard is discharged from the process plants and tailings in slurry form from the settling ponds. All product is essentially hand sorted in a secure sort house facility where stones are upgraded using manual methods to produce emerald (subdivided into P/S, emerald and low grade emerald categories) and beryl (subdivided into beryl, specimen and fines categories). These are then dried, dressed with oil, weighed and catalogued and stored for evaluation and subsequent export to Lusaka for auction.

**Capital Projects:** The Company's Strategic Plan has outlined capital expenditures of some US\$13.86m for Kagem for the period commencing 1 April 2008 through 31 March 2010 inclusive. The substantial portion (US\$7.80m) of this expenditure is directly attributable to the expansion of the mobile mining fleet, US\$4.40m is for modification of the Kagem Plant-2 and US\$1.67m is required for infrastructural items. Capital expenditure for the period commencing 1 January 2008 through 31 March 2008 is forecasted by the Company at US\$2.39m. Sustaining capital requirements are also assumed at some US\$3.18m per annum.

**Human Resources:** The TEC as at 31 December 2007 was 390, of which 110 are employees and 280 are contractors.

**Environmental Liabilities** at Kagem comprise bio-physical (US\$6.57m) and social (US\$2.86m of terminal benefits) liabilities which amount to US\$9.43m.

**Operating Performance:** Total coloured gemstone production at Kagem has increased from 7.5Mct (year ending March 2005) to the current annualised (9 months to 31 December 2007) of 16.4Mct. This recent increase is directly related to the recent increase in processing from approximately 20ktpa to an annualised (9 months to 31 December 2007) rate of 53ktpa. Notwithstanding this aspect, SRK notes that the processed grades have reduced significantly due to the limited availability of Reaction Zones in the pit resulting from the historical backlog of waste stripping and the requirement to process the lower grade stockpiled material. Notwithstanding the above, unit cash costs have remained relatively constant.

**Future Considerations** at Kagem are directly dependent upon the principal assumptions as included in the Strategic Plan. Specifically, the assumed increase in production to some 57.6Mct annual derived from processing 144ktpa at a grade of 80g/t emerald plus beryl is dependent on establishing the assumed strike length of 920m through implementation of the waste stripping programme. The peak annualised mining (10.8Mtpa) and processing (144ktpa) production rate are assumed to be achieved by July 2008 and July 2009 respectively. SRK notes that the above technical assumptions are only supported by a conceptual level study and SRK considers the increased ore and coloured gemstone production to be challenging. Notwithstanding the combined risk of conceptual level studies and assumed mining of Inferred Mineral Resources, SRK considers that a more prudent assumption may be a delay of some 12 months in achieving the peak processing and coloured gemstone rate, once the full strike length (assumed July 2009) has been established and the assumed prevalence of the Reaction Zones demonstrated. Furthermore SRK notes that the Company also intends to complete a multi-disciplinary technical study to a PFS level to support the technical feasibility and economic viability of the proposed expansion as forecasted in the conceptual study.

Exploration potential within the wider Kagem licence is considered good specifically in respect of the Libwente and Dabwisa prospects.

**Table 2.11 Kagem: historical operating statistics<sup>(1)</sup>**

Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007
Processing					
Tonnage	(kt)	17	13	19	40
Grade	(g/t emerald and beryl)	144.4	221.5	130.3	37.6
<b>Production</b>					
emerald	(Mct)	2.1	2.4	3.6	3.9
beryl	(Mct)	5.5	10.0	10.6	8.4
Total	(Mct)	7.5	12.4	14.2	12.3
<b>Sales</b>					
Sales (emerald and beryl)	(Mct)	11.4	13.7	14.9	7.0
Sales Price (emerald and beryl)	(US\$/ct)	0.56	0.69	0.85	1.22
<b>Expenditure</b>					
Cash Costs	(US\$m)	6.34	8.62	10.03	9.26
Cash Costs (emerald and beryl)	(US\$/ct)	0.84	0.70	0.71	0.75
Capital	(US\$m)	1.13	3.65	2.96	0.04

(1) Compiled from monthly management data for the 12-month periods ending 31 March 2005, 2006 and 2007 and the 9-month period ending 31 December 2007.

## 2.4.2 Kariba

**Introduction:** Kariba comprises an open-pit mine which mines amethyst bearing ore for processing at the Kariba plant. The current (9 months to 31 December 2007) annualised processing throughput is 32ktpa which is less than that historically achieved, primarily as a result of low availability arising from limited maintenance/replacement expenditures. The increased grades processed have however assisted in limiting the impact on unit cash cost, however this has been insufficient to reverse the current cash negative position which has existed since 1 April 2005. The Company has developed a Conceptual Study which seeks to substantively expand production through increased throughput and assumed improvements in grades as well as the price received. The implementation of such expansion is dependent upon successful negotiation with the GoZ to increase its equity participation from the current 50% to 76%. As at 31 December 2007, the value of the PP&E is US\$0.77m.

**History:** Exploration, development and production history at Kariba commenced following formation of Northern Minerals Limited (“NML”) in 1956 with operations focused in the southern sector of the licence area. During the later 1970s and early 1980s mining activity was impaired largely due to regional conflict in neighbouring Zimbabwe. In 1984 the joint venture agreement between the GoZ and Lonrho (Africa) Limited (“Lonrho Africa”) acquired NML. In May 2004 Gemfields acquired Lonrho Africa’s equity interest in Kariba for a consideration of US\$0.35m.

**Location:** Kariba is situated in the Kalomo District, Southern Province (Figure 2.4, Figure 2.5), Zambia, approximately 295km southwest of Lusaka, the capital city of Zambia. Located at latitude 17°42’S and longitude 26°53’E at an elevation of 733m amsl, the site is some 110km east-northeast from Livingstone, the provincial capital. The site is accessed along a combination of local roads travelling northeast from Livingstone, to Shiakainga, westwards to Garampande, the Chijalile Range, Madyongo and the nearby settlement of Siawaza, a totalled travelled distance of 200km. The last 100km of the only access road is essentially un-surfaced and in very bad condition and takes 3 hours by 4 wheel drive vehicle. Siawaza has a population of some 2,700 within a 7km radius and is located 6km southwest of the licence area, and is situated in the GMT +2 time zone.

**Terrain:** Much of this ecoregion is made up of undulating river valleys and arid woodlands with steep but relatively short slopes. The area drains generally southwards towards the Zambezi. The biome is Tropical and Subtropical Grasslands, Savannas, and Shrublands. The vegetation in undisturbed areas is dominated by the Central Zambezian Miombo Woodlands. The predominant soil types are shallow and gravely with mixed rocks and pebbles. Land capability observations in the area in general indicate subsistence farming. Animal life in the immediate area is limited as a result of the existing disturbance.

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The mine is located within the catchment of the Zambezi river, 30km from the Zambian side of Lake Kariba. Any streams in proximity to the mining area will therefore drain into Lake Kariba. The EPB reports that all of these streams are seasonal which is consistent with the likely hydrological conditions of the area.

**Climate:** The climate is classed as hot and semi arid with the dry season extending from April to October and 95% of the annual rainfall occurring from November to March. The mean annual precipitation is 786mm and monthly precipitation ranges from a low of 0mm in July through to 206mm in December (wet season: November through March). The mean annual evapotranspiration is 1,462mm with monthly values ranging from 93mm to 172mm. The mean monthly temperature ranges from 14.9°C in July to 24.0°C in October. The mean monthly temperature ranges from a minimum of 5.7°C in July to a maximum of 32.0°C in October. Wind speeds range between 1.0m/s to 1.6m/s. predominantly from the southeast, east and northeast.

**Title and Rights:** The current licence (GL-86) extends over an area of 2.50km<sup>2</sup> and is valid to June 2017. The licence was originally issued in May 1997 and the principal mineral is amethyst. The Company's equity participation is 50%, with the remaining 50% held by the GoZ. The Kariba Amethyst licence (PLLS-300) expiring October 2008 is situated directly west of the current licence area and extends over some 80.0km<sup>2</sup>.

**Geology:** The Kariba amethyst deposits are underlain by alternating bands of basement complex, consisting mainly of gneisses, schists and marbles, intruded by igneous rocks of varying ages. The amethyst veins occur within a wide shear zone which lies along a contact zone between marble, calc-silicates and granitic gneisses. The shear zone has a predominantly north-easterly strike, with a regional dip of 70° towards the west. Mineralisation occurs in tension fractures, forming a large stockwork of amethyst bearing veins within the shear zone. The size of the individual crystals within individual fractures tends to increase towards the centre of the vein.

The highest quality amethyst mineralisation occurs in the gneisses, with lower quality occurring in the calc-silicates and marbles. The gneiss hosted mineralisation tends to produce amethyst crystals which are larger, typically up to 15cm in length, and individual mineralised vein widths of up to 115cm. In the calc-silicates, the crystals tend to be smaller, approximately 5cm in length, and individual veins only reach 20cm in width.

**Mineral Resources:** As at 1 January 2008, Kariba has JORC Code compliant Mineral Resources comprising an Inferred Mineral Resource of 325kt grading 37.1g/t of amethyst. The economic viability of this Mineral Resource is, however, dependent on the assumptions incorporated in the conceptual expansion programme.

**Mining Operations** comprise open-pit mining in a number of shallow open-pits up to 25m in depth. Both waste and ore are currently free-dig and waste mining operations are largely undertaken using hydraulic excavators and articulated dump trucks. The current slope angles are some 50° and in high grade areas selective manual methods are employed using picks and shovels with small hydraulic excavators assisting only under direct supervision. The large and high grade amethyst stones are hand sorted from the face where possible and bagged under supervision. In lower grade zones hydraulic excavators are used to excavate the ore into trailers that are transported to the washing and sorting plant. The conceptual study assumes the introduction of more mobile fleet to expand mining production from the current (9 month period ending 31 December 2007) annualised 281ktpa to 3.2Mtpa, the development of five larger and separate open-pits with an associated stripping ratio of  $47t_{\text{waste}}:t_{\text{ore}}$ .

**Processing Plants:** Kariba processes ore mined directly from the open-pit at the Kariba Plant with a rated capacity of 20tph. The processing facilities comprise a simple series of washing, screening, crushing and sorting to produce a marketable product including high grade (0.2%), low grade (28.2%) and very low grade (71.6%). Waste material from the washing plant comprises the coarse (-4mm) discard which is stored in nearby facilities. At the Kariba Plant amethysts are hand picked on conveyor belts in three size fractions with the larger crystals sent to the knocking shed to reject unwanted portions. The smaller crystals are upgraded by "pre-forming". The final product is transported to Kariba ML's facilities located at Lusaka for sale and export.

**Capital Projects:** Pending the successful outcome of negotiations with the GoZ to increase its equity stake to 76%, the Company has not outlined any further substantive capital expenditures for Kariba. The Kariba conceptual study (the "Kariba Conceptual Study") as developed by the

Company in support of the proposed expansion, however, necessitates investment of some US\$7.3m (dated April 2007). This expenditure is required to support the increased process plant throughput from the current 32ktpa to 75ktpa and the total material mined from 281ktpa to 3.5Mtpa. Sustaining capital expenditure requirements beyond the initial project capital are estimated at US\$1.7m per annum thereafter.

**Human Resources:** The TEC as at 31 December 2007 was 424, of which 267 are employees and 157 are contractors.

**Environmental Liabilities** at Kariba comprise bio-physical (US\$1.41m) and social (US\$2.35 terminal benefits) liabilities which amount to a total of US\$3.75m.

**Operating Performance:** Total rough coloured gemstone production at Kariba has increased from 1,129t (financial year March 2005) to the current (9 month period to 31 December 2007) annualised rate of 1,400t of amethyst. This increase is largely attributable to the increased grade when compared with financial year March 2006 which has offset the significantly reduced process throughput from the then 49ktpa to the current annualised rate of 32ktpa. This reduction in throughput is largely attributable to the historical undercapitalisation resulting in low availability arising from low maintenance/replacement expenditure. Unit cash costs during this period have however decreased despite the increased stripping ratio ( $>11t_{\text{waste}}:t_{\text{ore}}$ ) which has to some extent been offset by the higher grades compared with financial year March 2006.

**Future Considerations** at Kariba are directly dependent upon the success of the Company's negotiations with the GoZ to increase its equity participation from 50% to 76% which will subsequently trigger execution of the proposed expansion as incorporated in the Kariba Conceptual Study. The economic viability of the Kariba Conceptual Study, which proposes a three-fold increase in amethyst production, is dependent on: increasing the resource grade from the current 44.1kg/t to 68.1kg/t; achieving an increase in the sales price from US\$1.72/kg to US\$3.89/kg; and an effective doubling of the current Inferred Mineral Resource estimate. Accordingly additional drilling, in conjunction with completion of the necessary technical studies is considered prudent prior to implementation of the proposed expansion. In addition to the above exploration, potential also exists in the nearby prospecting licence (PLLS-300) where exploration to date is at preliminary grassroots stage.

**Table 2.12 Kariba: historical operating statistics<sup>(1)</sup>**

Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007
<b>Processing</b>					
Tonnage	(kt)	26	49	27	24
Grade	(kg/t amethyst)	42.8	21.7	53.4	44.1
<b>Production</b>					
amethyst	(t)	1,129	1,068	1,429	1,066
<b>Sales</b>					
Sales (amethyst)	(t)	1,517	1,107	1,172	598
Sales Price (amethyst)	(US\$/kg)	1.24	2.05	1.91	1.96
<b>Expenditure</b>					
Cash Costs	(US\$m)	1.81	2.61	2.36	1.95
Cash Costs (amethyst)	(US\$/kg)	1.60	2.44	1.65	1.83
Capital	(US\$m)	1.13	3.65	2.96	0.04

(1) Compiled from monthly management data for the 12-month periods ending 31 March 2005, 2006 and 2007 and the 9-month period ending 31 December 2007.

### 2.4.3 Mbuva-Chibolele

**Introduction:** Mbuva-Chibolele comprises an open-pit mine which mines emerald and beryl bearing ore for processing at the Mbuva-Chibolele Plant. The operation is currently operated on a care and maintenance basis following a combination of the non-achievement of the initially planned grades as well as lower than expected unit sales prices. The current (6 months to 31 December 2007) annualised processing throughput is 28ktpa at a processed grade of 36.7g/t emerald and beryl with total production since commencement of operations being 15.9Mct at an average unit cash cost of US\$0.92/ct. The unit sales price received for the limited sales

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undertaken to February 2007 was US\$0.54/ct. SRK notes, however, that this predominantly consisted of emeralds and that, had the placed auction (November) prices for beryl been achieved, this would be reduced to US\$0.20/ct. Currently coloured gemstones produced at Kariba are transported to Lusaka for auction. The Company has a 100% equity interest in Mbuva-Chibolele and as at 31 December 2007, the value of the PP&E is US\$2.62m.

**History:** On 30 May 2004, the Company signed a share purchase agreement between Gemhouse Inc (“Gemhouse”), Mbuva Mining Ltd (“Mbuva”) and the existing shareholders of Mbuva, covering Gemstone Licence No. GL-145. In this agreement Gemhouse held 51% and an option to purchase the remaining 49% at a price which had been agreed. On 23 July 2004 the Company signed an agreement, between Chibolele Mining Cooperative Society (“CMCS”), GHZL and Gemchib Minerals Ltd (“Gemchib”), covering Gemstone Licence No. GL-288, under which Gemfields held 70% of a joint venture with CMCS and an option to purchase the remaining 30% at a price which had already been agreed.

All options were executed in 2005 and the Company acquired 100% of the Mbuva-Chibolele licences for a consideration of US\$3.50m.

**Location:** Mbuva-Chibolele is situated in the Ndola Rural District, Copperbelt Province (Figure 2.4), Zambia, approximately 255km due north of Lusaka, the capital city of Zambia. Located at latitude 13°06’S and longitude 28°07’E at an elevation of 1,200m amsl, the site is some 35km south-southwest of the Copperbelt town of Kitwe and the licence is bisected by the administrative boundary between Ndola Rural District and Luanshya District. The site is accessed along a combination of national (10km south of Kitwe to Fisenge along the M4) and local (22km) southwest towards the settlement of Sempala, a total travelled distance of 32km. Sempala has a population of some 1,225 within a 7km radius, and is located in the northernmost corner of the licence area, and is situated in the GMT +2 time zone.

**Terrain:** See description for Kagem.

**Climate:** See description for Kagem.

**Title and Rights:** The current licences include Mbuva (GL-145 at 0.40km<sup>2</sup>), Chibolele (GL-288 at 0.40km<sup>2</sup>) and Arinus (GL-081/744 at 0.35km<sup>2</sup>) all of which are situated south of and bordering with Kagem. The principal minerals covered are emerald and beryl. The Arinus licence is valid until February 2016. The Mbuva and Chibolele licences expired in September 2007 and SRK has been informed by the Company that these are the subject of applications for renewal. The Company’s equity participation in all licences is 100%.

**Geology:** The Fwaya-Fwaya belt (see Kagem) cuts across the Mbuva and Chibolele licence areas with a variable strike and the 1km long TMS outcrop is a south-western continuation of the TMS exposed in Kagem’s Fwaya-Fwaya open-pits located some 2.5km to the north-northeast. The strike of the TMS is 250° in the western section and changing to 000° in the central areas and curving back to 250° in the east. The outcrop is generally no more than 10m wide and in the western and central parts of the outcrop there are two units separated by some 50m to 80m. The TMS dips at approximately 25° to the south and weathering has affected the rockmass down to a depth of approximately 20m. Economic concentrations of coloured gemstone occur in Reaction Zones at the three way intersection of TMS, cross-cutting pegmatite and the thin hangingwall pegmatite.

**Mineral Resources:** SRK notes that, given the combination of the historical sales price received to date and the lower (less than a fifth of Kagem) concentration of emerald and the inability to derive potentially economically mineable Mineral Resources, there are no JORC Code compliant Mineral Resources at Mbuva-Chibolele. In order to establish profitable operations, an increase of some 200% in the unit sales price is required.

**Mining Operations** to 31 December 2007 comprised open-pit mining in three open-pits: Mbuva, Chibolele A and Chibolele B which were developed to expose the prospective TMS along strike. The excavation is well laid out and incorporates benches 5m in height and overall slope angles of 50°. Mining operations have now ceased and during the latter months were focused solely on the extraction of the remaining ore exposed at the Chibolele B pit. Waste mining was conducted using excavators and articulated dump trucks and ore mining is by manual methods using picks and shovels with the assistance of excavators only under close supervision. As at Kagem coloured gemstones were actively recovered at the mine face and placed in drop safe type boxes

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for security, and ore loaded into trucks and trailers was transported to the Mbuva-Chibolele plant for processing. Total tonnage mined to 31 December 2007 amounts to 7.7Mt of which 0.8Mt is classified as TMS from which 90kt was mined as Reaction Zone material yielding an average stripping ratio of  $76.50(t_{\text{waste}}:t_{\text{Reaction Zone}})$ . The average grade mined over the period is recorded as 35.2g/t combined emerald and beryl.

**Processing Plants:** Mbuva-Chibolele processes material mined directly from the open-pit and has a processing capacity of 20tph, achieving an annualised rate of 34ktpa in the 6 month period ending 31 December 2007. The facilities comprise a simple series of comminution, screening, washing and sorting sections which are located close to the current open-pits. Waste material from the washing plant, comprising the coarse (>100mm) and fine (<3mm) discard, is discharged from the process plants. All product is essentially hand sorted in a secure sort-house facility where stones are upgraded using manual methods to produce emerald (subdivided into P/S, emerald and low grade emerald categories) and beryl (subdivided into beryl, specimen and fines categories). These are then dried, dressed with oil, weighed and catalogued and stored for evaluation and subsequent transport to Lusaka for auction.

**Capital Projects:** As the current operations have been placed on a care and maintenance status, no further capital projects are assumed at Mbuva-Chibolele.

**Human Resources:** The TEC as at 31 December 2007 was 172, all of which are engaged as contractors.

**Environmental Liabilities** at Mbuva-Chibolele comprise bio-physical (US\$1.46m) and social (US\$0.00m Terminal Benefits) liabilities which amount to US\$1.46m.

**Operating Performance:** Total rough coloured gemstone production at Mbuva-Chibolele reached a maximum of 9.1Mct (financial year ending 30 June 2007), thereafter declining as a direct consequence of the Company's decision to discontinue operations due to a combination of non-achievement of the proposed auction prices (see section 7.3.6 for further detail) and poorer quality of stones than initially expected. Total rough coloured gemstone production since commencement of operations is 15.9Mct of which sales (last auction on February 2007) were only 3.3Mct, of which 66% were emerald. The average unit sales price achieved was US\$0.54/ct which is substantially less than the unit cash cost of US\$1.04/ct reported during financial year ending 30 June 2007 (period of maximum production). Accordingly Mbuva-Chibolele has been in a loss making position since commencement of operations. This is partly attributable to the reliance on grades from the nearby Kamakanga (3.0g/t<sub>TMS</sub> emerald and beryl) operation and the assumption that a 50% improvement (to 4.5g/t<sub>TMS</sub> emerald and beryl) on such grades was achievable due to improved washing and security arrangements. All material mined to date achieved 2.9g/t<sub>TMS</sub> emerald and beryl, which is comparable to that noted at Kamakanga.

**Future Considerations** at Mbuva-Chibolele are directly related to the possibility that grades and quality of stones may improve with depth and that the potential participation in the price uplift by entering the downstream lapidary business would result in a cash positive operation. Further potential beyond this relates to the wider licence areas of GL-145, GL-288 and GL-081/744.

**Table 2.13 Mbuva-Chibolele: historical operating statistics<sup>(1)</sup>**

Statistics	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
Processing					
Tonnage	(kt)	0	17	34	14
Grade	(g/t emerald and beryl)	0.0	50.0	54.1	36.7
<b>Production</b>					
emerald	(Mct)	0.0	0.1	0.9	0.5
beryl	(Mct)	0.0	4.1	8.2	2.1
Total	(Mct)	0.0	4.2	9.1	2.6
<b>Sales</b>					
Sales (emerald and beryl)	(Mct)	0.0	0.0	3.3	0.0
Sales Price (emerald and beryl)	(US\$/ct)	0.00	0.00	0.54	0.00
<b>Expenditure</b>					
Cash Costs	(US\$m)	0.83	1.07	9.43	3.35
Cash Costs (emerald and beryl)	(US\$/ct)	0.00	0.25	1.04	1.30
Capital	(US\$m)	0.06	0.04	0.08	0.00

(1) Compiled from monthly management data for the 12 month periods ending 30 June 2005, 2006 and 2007 and the six month period ending 31 December 2007.

#### 2.4.4 Head Office

**Introduction:** The Company's registered offices provide management services to each of the operating mines including: sales and marketing; finance; legal; and technical support. Other administrative services are also provided in respect of co-ordinating group operating companies as well as facilitating public domain reporting.

**Location:** The Company's registered office is located in London with representative offices for the subsidiaries, both operational and holding companies, located in Zambia, India and the BVI.

**Capital Projects:** Total capital expenditure planned for the period commencing 1 April 2008 through 31 March 2010 is forecasted at US\$3.70m, of which US\$3.66m is directly attributable to the transaction costs.

**Human Resources:** The TEC as at 31 December 2007 was 35, all of which were employees.

**Operating Performance:** Historical operating expenditures to date have reduced from fiscal 2005 (US\$3.23m) to the current annualised expenditure of US\$1.58m.

**Future Considerations** comprise the proposed simplification of the current corporate structure as well as enhancing the services provided to the various in-country subsidiaries, specifically in respect of additional resources to facilitate and standardise the implementation of group wide technical and financial management. Future operating expenditures are forecasted at US\$3.77m, some 50% of which are directly attributable to salaries comprising non-executive directors, directors and employees in London and the BVI registered companies.

**Table 2.14 Gemfields: historical head office operating expenditures<sup>(1)</sup>**

Statistics	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
Expenditure					
Cash Costs	(US\$m)	3.23	2.54	1.58	0.79
Cash Costs	(US\$/ct)	0.26	0.18	0.14	0.16

(1) Compiled from monthly management data for the 12 month periods ending 30 June 2005, 2006 and 2007 and the six month period ending 31 December 2007.

#### 2.4.5 Exploration Properties, Exploration Prospects and Option Agreements

In addition to the Advanced Exploration Properties, the company has some 7.25km<sup>2</sup> of Exploration Properties and 1,291.42km<sup>2</sup> of Exploration Prospects (Table 2.15), the majority of which are the subject of application for renewal. All licences are located in Zambia and are wholly owned and directly held by GHZL. The principal focus of these are emerald and beryl with the exception of PLLS-262 and PLLS-300 which target pink tourmaline and amethyst respectively.

**Table 2.15 Gemfields: Exploration Properties and Exploration Prospects<sup>(1),(2)</sup>**

Gemstone Assets	Licence No	Country	Subsidiary	Ownership	Expiry	Area (km <sup>2</sup> )
<b>Exploration Properties</b>						
Mbuva	GL-145	Zambia	GHZL	100.0%	Sep-2007	0.40
Chibolele	GL-288	Zambia	GHZL	100.0%	Sep-2007	0.40
Arinus	GL-081/744	Zambia	GHZL	100.0%	Feb-2016	0.35
Kamakanga	GL-002	Zambia	GHZL	100.0%	Nov-2006	2.35
Pamodzi	GL-078	Zambia	GHZL	100.0%	Apr-2007	0.85
Kafubu	GL-125	Zambia	GHZL	100.0%	Mar-2017	2.90
<b>Subtotal</b>						<b>7.25</b>
<b>Exploration Prospects</b>						
Miputu	PLLS-14	Zambia	GHZL	100.0%	Mar-2008	290.00
Mitondo North	PLLS-29	Zambia	GHZL	100.0%	Feb-2007	31.07
NR South	PLLS-34	Zambia	GHZL	100.0%	Feb-2007	51.20
Mitondo West	PLLS-124	Zambia	GHZL	100.0%	Feb-2007	5.50
Mitondo East	PLLS-126	Zambia	GHZL	100.0%	Jul-2008	4.60
Nkabashila East	PLLS-136	Zambia	GHZL	100.0%	Jul-2006	9.10
Nkabashila West	PLLS-137	Zambia	GHZL	100.0%	Feb-2007	9.95
Mkushi pink tourmaline	PLLS 262	Zambia	GHZL	100.0%	Mar-2010	810.00
Kariba amethyst	PLLS-300	Zambia	GHZL	100.0%	Oct-2008	80.00
<b>Subtotal</b>						<b>1,291.42</b>
<b>Total</b>						<b>1,298.67</b>

(1) For all licences which have expired as of 31 December 2007 or are due to expire in calendar 2008, SRK has been informed that the necessary applications for renewal have been lodged with the regulatory authorities. For Miputu, Mitondo North, NR South, Mitondo West, Mitondo East, Nkabashila West applications have been made for conversion to Large Scale Mining Licences. For Nkabashila East application has been made for conversion to a Gemstone Licence.

(2) Excludes the option to acquire a 100% interest in Oriental Mining and the 15 associated licences with total area of 125.00km<sup>2</sup>.

In addition to the above the Company has a put and call option to acquire various exploration prospects in Madagascar from Oriental Mining (for the consideration of GBP1.00) comprising 15 gemstone licences with a combined area of 125.00km<sup>2</sup>. No additional technical information is currently available.

In total the Company has outlined some US\$4.43m of which US\$1.39m, US\$0.10m, US\$0.84m and US\$2.10m are allocated as direct exploration expenditure for Kagem, Kamakanga, NRERA licences and unspecified targets respectively. Given the Company's current focus on the proposed Kagem Expansion, the expenditures allocated for Kamakanga and the NRERA licences are largely allocated on the basis of compliance with the current licence conditions.

The **Kamakanga** Exploration Property (GL-002) is located 8.5km southwest of the Kagem licence (GL-713) and covers an area of 2.35km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licence expired in November 2006 and SRK has been informed that this is currently the subject of an application for renewal.

Kamakanga is one of the earliest mines to have come into operation and production in the Zambian emerald area. The mine began production in the early 1970s. It had limited capital injected into operations until the late 1990s when second hand equipment was used to mine emerald and beryl. The mine produced emerald worth in excess of US\$15m between 1992 and 2003 without a washing facility (until 1998) or professional security in place. Kamakanga is located 5.5km west-southwest along the regional strike from the Mbuva-Chibolele properties, and 2km west of the active Grizzly mines. Previous mapping of the Kamakanga licence has indicated a relatively uniform TMS band mined over a strike length of 640m.

In July 2005, GHZL signed an agreement with Kuber Mineral and Metal Mining Company Limited and Haree Enterprises Limited for the acquisition by GHZL of various licences along with certain infrastructure, plant, property and offices. The total consideration was US\$2.45m of

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which US\$1.35m was deferred to a date on or before the expiry of 180 days from the date the agreement was signed. In December 2005, Gemfields made this deferred payment after completion of the transfer of ownership of the licences, the property and the assets, thereby giving Gemfields 100% control of Kamakanga.

The **Pamodzi** Exploration Property (GL-078) is located north of the Kamakanga licence (GL-002) with which it shares its southernmost boundary and covers an area of 0.85km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licence expired in April 2007 and SRK has been informed by the Company that this is currently the subject of an application for renewal.

The **Kafubu** Exploration Property (GL-125) is located 8.5km southwest of the Kagem licence (GL-713) in the Ndola Rural district of the Copperbelt Province. The licence covers three separate areas which join at specific boundary points. The licence is valid until March 2017.

The **Miputu** Exploration Prospect (PLLS-014) is located to the west and south of the majority of the Company's licences sharing boundaries with the eastern boundaries of Kagem (GL-713), Nkabashila East (PLLS-137), and NR South (PLLS-034). Miputu extends over an area of 290km<sup>2</sup> in the Luanshya, Maisaiti and Mpongwe districts of the Copperbelt Province. The licence expires in March 2008 and SRK has been informed by the Company that this is currently the subject of an application for conversion to a Large Scale Mining Licence ("LSML").

The **Mitondo North** Exploration Prospect (PLLS-29) is located 14.5km southwest of the Kagem licence (GL-713) and covers an area of 31.07km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licence expired in February 2007 and SRK has been informed that this is currently the subject of an application for conversion to a LSML.

The **NR South** Exploration Prospect (PLLS-034) is located 16.5km south of the Kagem licence (GL-713) and covers an area of 51.20km<sup>2</sup> in the Ndola Rural and Mpongwe districts of the Copperbelt Province. The licence expired in February 2007 and SRK has been informed that this is currently the subject of an application for conversion to a LSML.

The **Mitondo West** Exploration Prospect (PLLS-124) is located 14.5km southwest of the Kagem licence (GL-713) and covers an area of 5.50km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licence shares its northern boundary with the southern boundary of Mitondo North (PLLS-29). The licence expired in February 2007 and SRK has been informed that this is currently the subject of an application for conversion to a LSML.

The **Mitondo East** Exploration Prospect (PLLS-126) comprises three distinct areas extending over an area of 4.60km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licences are located west of the Kagem licence (GL-713). The licence is valid until July 2008 and SRK has been informed that this is currently the subject of an application for renewal.

The **Nkabashila East** Exploration Prospect (PLLS-136) is located 11.5km southwest of the Kagem licence (GL-713) and covers an area of 9.10km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licence expired in July 2006 and SRK has been informed that this is currently the subject of an application for conversion to a Gemstone Licence.

The **Nkabashila West** Exploration Prospect (PLLS-137) is located 8.0km south-southwest of the Kagem licence (GL-713) and covers an area of 9.95km<sup>2</sup> in the Ndola Rural district of the Copperbelt Province. The licence expired in February 2007 and SRK has been informed that this is currently the subject of an application for conversion to a LSML.

The **Mkushi pink tourmaline** Exploration Prospect (PLLS-262) is located (Figure 2.5) west of Kariba licence (GL-086) and covers an area of 810.0km<sup>2</sup> in the Mkushi district of the Central Province some 90km east of the provincial town of Kabwe. The licence is valid until March 2010.

The **Kariba Amethyst** Exploration Prospect (PLLS-300) is located west of the Kariba licence (GL-086) with which it shares its easternmost boundary and covers an area of 80.0km<sup>2</sup> in the Kalomo and Sinzanongwe districts of the Southern Province. The licence is currently valid and is due to expire in October 2008.

## 2.5 **Zambian Country Description**

Zambia, officially the Republic of Zambia, is a landlocked country in southern Africa. Formerly Northern Rhodesia, the country is named after the Zambezi River and gained independence from the United Kingdom on 24 October 1964.

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During the 1970s the country continued its post colonial development and actively engaged in support of independence movements in southern African countries. In the 1980s and 1990s, declining copper prices and a prolonged drought negatively impacted the economy.

Elections in 1991 brought an end to one-party rule, but the subsequent vote in 1996 saw harassment of opposition parties. The election in 2001 was marked by administrative problems with three parties filing a legal petition challenging the election of ruling party candidate Levy Mwanawasa. The new president launched an anticorruption task force in 2002; however the government has yet to make a prosecution. The Zambian leader was re-elected in 2006 in an election that was deemed free and fair and whose government is currently focusing more on diversification, growth and investment, budgetary reform, HIV/AIDS, and anti-corruption measures.

Zambia's status is marked by membership of: the African Development Bank; the African Union ("AU"); the Common Market for Eastern and Southern Africa ("COMESA"); the Commonwealth of African States; IFC; the International Monetary Fund (the "IMF"); the Southern African Development Community ("SADC"); and the World Trade Organisation.

By World Bank measures, Zambia is grouped in Sub-Saharan Africa whose income group category is Low Income: where Gross National Income ("GNI") is US\$875 per capita or less.

Zambia is a member of SADC, whose aims are inter alia to promote economic development in the southern African region. Other members comprise Angola, Botswana, DRC, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, and Zimbabwe.

Table 2.16 gives the relative performance of Zambia to other benchmark countries and Table 2.17 gives a seven year history of key economic and demographic statistics. Figure 2.1 presents the historical macro-economic parameters to 31 December 2007 for Zambia and the United States.

**Geographically** Zambia extends over 750 thousand km<sup>2</sup> of which 740 thousand km<sup>2</sup> is represented by land mass extending over central southern Africa. Zambia with geographic coordinates: 15°S, 30°E is landlocked and its land boundaries extend some 5,700km. Countries bordering Zambia are Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia, Angola and the DRC. The protruding south-eastern area of the DRC nearly bisects Zambia into two major geographic areas.

Zambia's terrain is mostly a high plateau, 1,000m to 1,500m amsl. Lusaka is one of the higher points in the country at 1,280m. The highest point is Mwanda Peak at 2,150m on the border with Malawi. There are four major valleys: the Zambezi, the Kafue, the Luangwa and the Luapula. Zambia has several large lakes: man-made Kariba in the south, lakes Tanganyika and Mweru in the north, and lake Bangweulu in the interior.

The climate is classified as temperate humid which is modified by altitude. Temperatures are highest in the valleys of the Zambezi, Luangwa, and Kafue and by the shores of Lakes Tanganyika, Mweru, and Bangweulu. There are wide seasonal variations in temperature and rainfall. The main rainy season starts in mid-November, with heavy tropical storms lasting well into April. The northern and north-western provinces have an annual rainfall of about 1,250mm, while areas in the far south have as little as 750mm. May to mid-August is the cool season, after which temperatures rise rapidly. Daytime temperatures may range from 23°C to 31°C, dropping at night to as low as 5°C in June and July.

Land use is distributed as follows: arable land (6.99%); permanent crops (0.04%); and other (92.97%).

The **transport system** in Zambia supports almost all of Zambia's industries, commercial agriculture, and major cities are located along the rail lines, which are often paralleled by highways. The Zambia Railways system consists of 2,157km of track. The rail link with the Atlantic via the Katanga and Benguela railways to Lobito Bay in Angola has been affected by instability in Angola since the mid-1970s. Construction began in October 1970 on the Tazara railway, a 1,860km line linking Dar es Salaam in Tanzania with Kapiri Mposhi, north of Lusaka; intended to lessen Zambian dependence on the former white-minority regimes of South Africa and the former Rhodesia (presently Zimbabwe), the line (890km of which is in Zambia) was completed and commissioned in July 1976. Equipment and operational problems have kept the

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railway from reaching its full potential and rail cargo links with South Africa and Mozambique ports, passing through Zimbabwe, remain important for Zambian commerce.

Zambia had 66,781km of roadway in 2002. The principal routes were the Great North Road (809km), running from Kapiri Mposhi through Tanzania to Dar es Salaam, with a connecting road in Zambia from Kapiri Mposhi south to Livingstone (Maramba); the Great East Road (586km), from Lusaka to Chipata and thence to the Malawi border, with a connecting road (583km) from Mongu to Lusaka; the DRC Border Road, from Kapiri Mposhi on the Great North Road through the Copperbelt region to Katanga, DRC; and the Kafue-Harare (Zimbabwe) road. Road services continue to play an important role in transporting copper and general cargo to and from Dar es Salaam. Transport services on the main routes are also provided by the National Transport Corp. of Zambia, the state-owned freight and passenger transport service. The United Bus Co. of Zambia is the largest passenger carrier.

There are 107 airports, only 9 of which have paved runways. Lusaka International is the principal airport. State-owned Zambia Airways is the national airline. Zambia Airways, as well as other international carriers, provides international service from Lusaka to several African and European countries, as well as domestic service to 17 Zambian centres.

There are 2,250km of waterways, including Lake Tanganyika and the Zambezi and Luapula rivers. Mpulungu on Lake Tanganyika is Zambia's only port and receives goods supplied through Tanzania. There are several fishing harbours on Kariba Lake.

The **political and administrative** structure in Zambia is a presidential democratic republic with an executive president and a parliament (National Assembly) consisting of 150 members. Both are elected by universal suffrage and serve a term of five years. The President of Zambia is both head of state and head of a government in a pluriform multi-party system. The cabinet is appointed by the president from among the members of the National Assembly elections and the president elected by popular vote for a five-year term (eligible for a second term). The last election was held on 28 September 2006 (next to be held 2011). The vice president is appointed by the president.

Zambia, extending over one time zone (GMT+2) is divided into nine administrative divisions termed provinces, each of which is administered by an appointed deputy minister. Each province is subdivided into four or twelve districts to make a total of 72 districts.

The legal system is based on English common law and customary law, and judicial review of legislative acts in an ad hoc constitutional council. The legal system has not accepted compulsory ICJ jurisdiction. The Supreme Court (the final court of appeal) includes justices which are appointed by the president) and the High Court has unlimited jurisdiction to hear civil and criminal cases.

The official language is English and the other major vernaculars include Bemba, Kaonda, Lozi, Lunda, Luvale, Nyanja, Tonga, and about 70 other indigenous languages. Practicing religions include Christianity (50% to 75%), Islam and Hinduism (24% to 49%) and indigenous beliefs (1%).

The **economic structure** of Zambia has historically largely been based on the copper mining industry. During the last three decades, macroeconomic instability, incomplete policy implementation, and inefficient state-owned enterprises have had a negative effect on the economy. This was compounded by a collapse in copper prices, oil price shocks, and a continuing contraction of food production. As a result, per capita income fell by nearly 5% annually between 1974 and 1990.

Despite progress in privatization and budgetary reform, Zambia's economic growth remains below the 7% necessary to reduce poverty significantly. Privatization of government-owned copper mines relieved the government from covering mammoth losses generated by the industry and greatly improved the chances for copper mining to return to profitability and spur economic growth. Copper output has recently increased due to higher copper prices. The maize harvest doubled in 2003, helping boost GDP by 4.0%. Co-operation continues with international bodies on programmes to reduce poverty, including a new lending arrangement with the IMF. A tighter monetary policy has helped to cut inflation, but Zambia still has a serious problem with fiscal discipline.

The GoZ is pursuing an economic diversification programme to reduce the economy's reliance on the copper industry. This initiative seeks to exploit other components of Zambia's rich

resource base by promoting agriculture, tourism, gemstone mining, and hydro-power. The GoZ has recently been granting licences to international resource companies to prospect for minerals such as nickel and uranium.

The GoZ's macro-economic objectives for 2008 are: to achieve real GDP growth of at least 7% whilst limiting borrowing to 1.2% of GDP; to bring down end-year inflation to no more than 7%; maintain the coverage of gross international reserves at no less than 3.6 months of import cover. These are stated to be achieved through: building capacity within spending agencies; development of rural infrastructure; and continuation of structural reforms. The proposed budget for 2008 shows an overall increase of 14% in government expenditure as compared to the 2007 budget, with general public services, education and health sectors taking the higher proportion of the expenditure. This increase is expected to be financed by increases of 17% and 14% in tax revenues and domestic borrowing respectively with the increase in tax revenue mainly driven by proposed changes in the tax regime for the mining sector.

Current growth in real GDP is 6.0% (2006) and is estimated to continue at 6.0% and 6.2% for calendar 2007 and 2008 respectively. Consumer Price Index ("CPI") is estimated at 8.2% for the year to date 31 December 2007 and 10.7% for the average for calendar year 2007. The exchange rate closing 31 December 2007 was 3,830 Zambian Kwacha ("ZMK") to one United States dollar ("US\$").

The labour force is estimated at 5.0m and by occupation comprises (2007 estimate): agriculture (85%); industry (6%); and services (9%). Current unemployment rate is estimated at 50%.

Principal industries comprise copper mining and processing, construction, foodstuffs, beverages, chemicals, textiles, fertilizer, horticulture and industrial production growth rate is estimated at 9.8%. Agricultural products include: corn, sorghum, rice, peanuts, sunflower seeds, vegetables, flowers, tobacco, cotton, sugarcane, cassava (tapioca), cattle, goats, pigs, poultry, milk, eggs, hides and coffee.

Exports amount to US\$3.8bn (free on board basis) for 2006 and mainly comprise crude materials (excluding fuels) at 14.1%, manufactured goods at 72.6% and food and live animals at 3.6%. The principal export partners are: South Africa 27.8%, Malawi 8.5%, Thailand 7.6%, Japan 7.5%, Saint Pierre and Miquelon 7.5%, China 5.2%, Egypt 5.2%, and the Netherlands 4.6%.

Imports amount to US\$3.0bn (carriage insurance and freight basis) and mainly comprise machinery and transport equipment at 39.9%, mineral fuels, lubricants and related materials at 15.0%, chemicals at 14.8% and manufactured goods at 14.2%. The principal import partners are South Africa (69.4%), United States (3.3%) and (China 3.2%).

HIV/AIDS is one of Zambia's most significant problems, with 17% prevalence amongst the adult population.

**Table 2.16 Zambia: comparison of economic and demographic statistics with SADEC members**

Country	GDP – nominal <sup>(1)</sup> (US\$bn)	GDP – annual growth (Real) <sup>(1)</sup> (%)	GDP per capita, PPP (nominal) <sup>(1)</sup> (US\$/capita)	Inflation – CPI <sup>(2)</sup> (%)
Angola	44.0	14.6%	2,678	12.3%
Botswana	10.3	4.2%	13,089	7.1%
Lesotho	1.5	2.8%	3,592	8.1%
Malawi	2.2	8.4%	731	7.9%
Mauritius	6.4	3.5%	13,446	9.4%
Mozambique	7.6	8.5%	1,345	8.2%
Namibia	6.4	4.6%	8,142	6.8%
Seychelles	0.7	4.5%	17,476	5.0%
South Africa	255.0	5.0%	11,960	7.1%
Swaziland	2.6	2.1%	5,137	4.5%
Tanzania	12.8	5.9%	751	3.7%
Zambia	10.9	6.0%	1,098	10.7%
Zimbabwe	5.0	-4.8%	2,011	495.4%

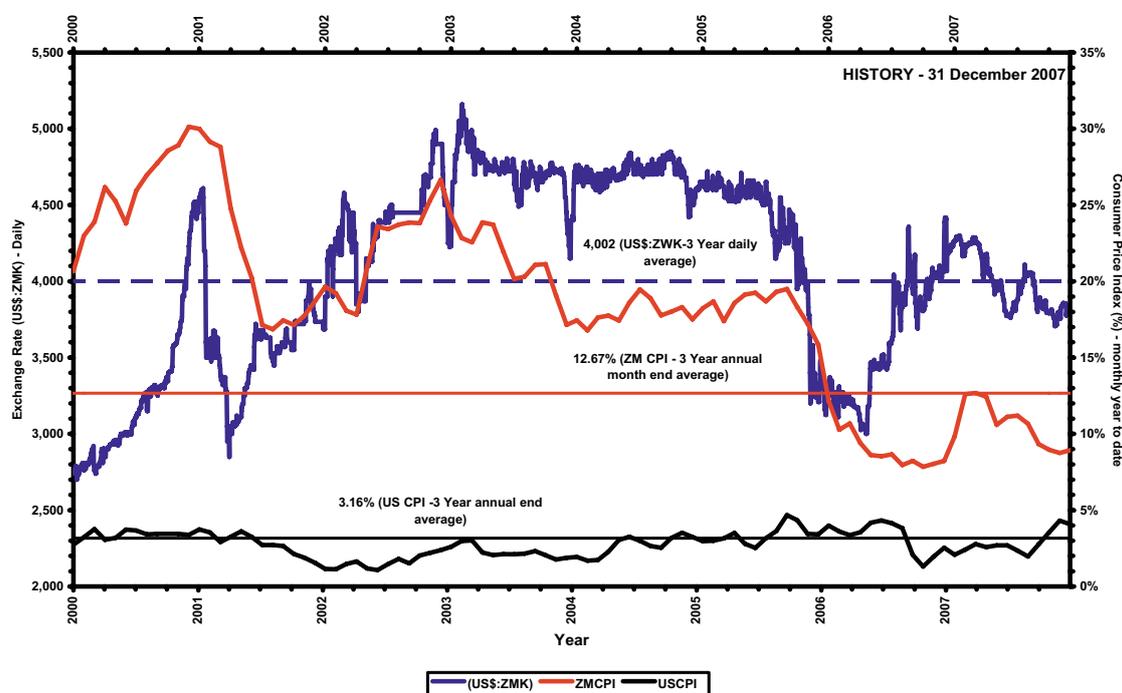
(1) Based on actual calendar 2006 records.

(2) Based on actual calendar 2007 records. CPI rates are based on annual averages with CPI derived from indices with 2000=100. Zimbabwe CPI only recorded for the first quarter of calendar 2007.

**Table 2.17 Zambia: economic and demographic statistics**

Statistics	Units	2000	2001	2002	2003	2004	2005	2006
<b>Economy</b>								
GDP — annual	(US\$bn)	3.2	3.6	3.7	4.3	5.4	7.3	10.9
GDP — annual growth Real	(%)	3.6%	4.9%	3.3%	5.1%	5.4%	5.2%	6.0%
GDP per capita, PPP (current)	(US\$/capita)	786	828	855	902	960	1,023	1,098
Foreign Direct Investment	(US\$bn)	0.1	0.1	0.1	0.2	0.2	0.3	n/a
External Debt	(US\$bn)	5.7	6.1	6.5	6.9	7.3	5.7	n/a
Lending Rate	(%)	38.8%	46.2%	45.2%	40.6%	30.7%	28.2%	23.2%
Exchange Rate	(US\$:ZMK)	4,450	3,735	4,500	4,400	4,600	3,340	4,417
<b>Inflation</b>								
CPI	(%)	30.1%	18.7%	26.7%	17.2%	17.5%	15.9%	8.2%
<b>Demographics</b>								
Population	(millions)	10.7	10.9	11.1	11.3	11.5	11.7	11.9
Population growth — annual	(%)	2.0%	1.9%	1.8%	1.7%	1.6%	1.6%	1.6%

**Figure 2.1 Historical macro-economic parameters to 31 December 2007**



### 2.5.1 Mining and Exploration licencing

In line with its stated Mining Policy, the GoZ has recently enacted new legislation — the Mines and Minerals Development Act No.7 of 2008 (the “2008 Act”). The 2008 Act, which came into effect on 27 March 2008, repeals and replaces the Mines and Minerals Act (1995) (the “1995 Act”). The 2008 Act looks to improve on, and clarify some of the ambiguous elements of the 1995 Act. The 2008 Act continues in the same vein as the 1995 Act with its simplified licensing procedures, minimum reasonable constraints on prospecting and mining activities, and furthering of a favourable investment environment.

This is achieved by enshrining in the legislation the following basic assurances that the foreign investor expects. A framework for responsible development has also been created through publication of the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, 1997 (the “1997 Rules”). Basic assurances anticipated include:

- Secure title to mining rights;
- Foreign exchange retention;
- Right to market mine products;

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- Right to assign (right to trade the mining right);
  - Stability in environmental management; and
  - Freedom of commercial operation.

GoZ policy is not to participate in exploration or other mining activities or any shareholding other than in a regulatory and promotional role or via its existing shareholdings in mining companies at privatisation, which holdings are held through ZCCM Investment Holdings. Minerals in the ground are vested in the President on behalf of the state. The right to explore or produce minerals is authorised by a licence granted under the 2008 Act as follows: prospecting licence; a large-scale mining licence; a large-scale gemstone licence; a prospecting permit; a small-scale mining licence; a small-scale gemstone licence; and an artisan's mining right. The 2008 Act also introduced two non-mining rights; a mineral processing licence and a gemstone sale certificate.

**Part III of the 2008 Act** deals with Large Scale Mining operations and includes the following licences:

- **Prospecting Licences** (“PLLS”) for Mining Operations:
  - In Zambia no distinction is made between a prospecting and exploration licence. A prospecting licence is renewable with relinquishments of at least 50% of the mining area at each stage, and
  - Initial grant will be two years renewable for successive periods of two years each but the total maximum period shall not exceed seven years.

The Minister may further renew the licence in order for the holder to complete the feasibility study but for a period not exceeding one year. In addition:

- the prospecting licence obliges the licence holder to, amongst others, adhere to an agreed programme of work; financial commitment; employment and training of Zambians,
  - in carrying out these obligations the mineral rights holder has exclusive rights for mineral prospecting operations in the mining area. Quarterly and annual reports must be submitted in addition to geological reports at the end of the licence period, and
  - the holder of a prospecting licence has the right to apply for and be granted a large-scale mining licence for mining within the prospecting area, upon fulfilling certain conditions;
- **Large Scale Mining Licence** (“LSML”): The holder of a prospecting licence is entitled, subject to meeting certain conditions contained in the 2008 Act, to a LSML. The duration of the LSML is 25 years renewable for 25 years. Monthly returns, quarterly and annual reports are required. This application is to be accompanied by:
    - a statement of the period for which the licence is sought,
    - a statement of the minerals to be mined under the licence,
    - a comprehensive statement of the mineral deposits in the area over which the licence is sought,
    - a proposed programme of mining operations,
    - applicable environmental protection plan,
    - a proposal for the employment and training of citizens of Zambia, and
    - proposals for the promotion of local business development.

The LSML cannot be withdrawn once granted except on specified grounds clearly spelt out in the law and adequate accepted procedures followed. The holder of the large-scale-mining licence has the exclusive right subject to the act, regulations and conditions in the licence to carry on all operations in accordance with the programme of mining operations and environmental plans.

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**Part IV of the 2008 Act** deals with Small Scale Mining Operations and includes the following licences:

- **Prospecting Permits:** A prospecting permit confers on the holder exclusive rights to carry on prospecting operations in the prospecting area for the minerals (not being gemstones) specified in the licence. Under the 2008 Act this type of permit can only be granted to citizens of Zambia or a citizen-owned company.
  - The area of a prospecting permit shall not exceed 300 cadastre units (10.02km<sup>2</sup>). A “cadastre unit” means a quadrilateral formed by the intersection of meridians and parallels and with a distance equal to six sexagesimal seconds, and that covers an average planimetric surface area of 3.3400Ha (0.0334km<sup>2</sup>),
  - A prospecting permit will be granted for a period not exceeding five years and shall not be renewable,
  - In carrying out these obligations the mineral rights holder has exclusive rights for mineral prospecting operations in the area, and
  - The holder of a prospecting permit has the right to apply for and be granted a Small Scale Mining Licence for mining within the prospecting area, upon fulfilling certain conditions;
- **Small Scale Mining Licences:** A small scale mining licence confers on the holder exclusive rights to carry on mining operations in the mining area for minerals other than gemstones.
  - The area of a small scale mining licence must not exceed 120 cadastre units (4.0km<sup>2</sup>),
  - Initial grant will be 10 years maximum and is renewable for such further period not exceeding ten years,
  - The small scale mining licence obliges the licence holder to develop the mining area, commence and carry on mining operations in accordance with an agreed programme of mining operations, and
  - Confers the right to: erect the necessary equipment, plant and buildings for the purposes of mining, transporting, dressing or treating the mineral recovered by the licence holder in the course of the mining operations; dispose of any mineral products recovered; prospect within the mining area for any mineral, and stack or dump any mineral or waste product.

The Director may require: (a) any applicant for a small scale mining licence; or (b) the holder of a small scale mining licence, if the Director considers on reasonable grounds that the holder is engaged in mining operations on a substantial scale; to apply for a large scale mining licence, and, in any such case, the provisions of the 2008 Act shall apply, with any necessary modifications, to the applicant as if he were the holder of the prospecting licence who applies for a large-scale mining licence;

- **Gemstone Licences:** The 2008 Act introduces two different types of licence for gemstones; a large-scale gemstone licence and a small-scale gemstone licence. A large-scale gemstone licence confers on the holder the same exclusive rights as a prospecting permit and a small-scale mining licence, but only in relation to gemstones:
  - The area of a large-scale gemstone licence must not exceed 7,485 cadastre units (250km<sup>2</sup>),
  - Initial grant will be 10 years maximum and is renewable for such further period not exceeding ten years, and
  - The large-scale gemstone licence obliges the licence holder to adhere to an agreed programme of mining operations which includes a forecast of investment, the estimated recovery rate of ore and gemstones,

In respect of precious minerals (diamonds, emeralds and rubies) the following fees apply:

- Basic Licence fee of ZMK20k,
- For each additional precious mineral an amount of ZMK100k/km<sup>2</sup>/year,

- 
- For each additional semi-precious mineral an amount of ZMK80k/km<sup>2</sup>/year, and
  - For each additional mineral (other than precious or semi-precious) an amount of ZMK40k/km<sup>2</sup>/year.

In respect of semi-precious minerals (amethysts, aquamarine, tourmaline etc.) the following fees apply:

- Basic Licence fee of ZMK10k,
- Area Charges of ZMK60k/km<sup>2</sup>/year,
- For each additional mineral an amount of ZMK60k/km<sup>2</sup>/year.

**Part V of the 2008 Act** deals with Artisanal Mining and is restricted to citizens of Zambia for a maximum period of two years.

In addition to the above all land in Zambia is ultimately vested in the President and all surface rights at the Mining Assets are therefore covered by several leases over the townships, surface facilities and mining licence areas. Such leases may vary in their term and generally range up to 99 years and are renewable at the request of the holder provided they have complied with the terms of the lease.

The Environmental Council of Zambia (“ECZ”) issues permits for the discharge of effluents and waste water (Statutory Instrument No. 72 of 1993), air pollution control (Statutory Instrument No. 141 of 1996), and the transportation of wastes and waste disposal sites (Statutory Instrument No. 71 of 1993). The Ministry of Mines, through the Mining (Mineral Resources Extraction) Regulations (Statutory Instrument No. 119 of 1994), charges operators for the emission of sulphur dioxide gases in excess of 30% of the contained sulphur which is not fixed in the processes. The Water Rights are issued by the Water Development Board and require renewal every five years.

## 2.5.2 Environmental regulations

The principal pieces of environmental legislation applicable to exploration and mining assets are:

- The **2008 Act** states that all mineral rights are vested in the President of Zambia on behalf of Zambia. The 2008 Act specifies how the rights to prospect, mine and dispose of minerals can be acquired and held. A LSML confers on the holder exclusive rights to carry on mining and prospecting operations in the mining licence area (“MLA”). This includes erecting the equipment needed to mine, process and transport the minerals, disposal of mining wastes, stockpiling of minerals or waste products and prospecting within the licence area. An application for a licence must include a mine plan, an environmental plan, and a proposal for the employment and training of citizens of Zambia.

The environmental plan details the proposals for the prevention of pollution, the treatment of wastes and the rehabilitation of land and water resources. Conditions can be included in the mining right or imposed separately by means of written notice to ensure: the protection or conservation of the environment; the rehabilitation of land; the filling in or sealing of excavations, shafts and tunnels; and payment of a cash deposit into an Environmental Protection Fund administered by the Minister;

- **Statutory Instrument No 29 of 1997 — Mines and Minerals (Environmental) Regulations, 1997 (“MMER”)** states that an environmental authorisation to develop a mine must be obtained from the Director of Mine Safety (the “Director”). The Director grants authorisation in consultation with the ECZ. Documents required from the mine developer to inform the authorisation decision are a project brief (First Schedule) and an environmental impact statement (“EIS”) (Second Schedule). The EIS must be done by persons who, in the opinion of the Minister, are suitably qualified and competent. The EIS itself must contain an executive summary, an environmental management plan, a rehabilitation plan and an estimate of the cost of protecting the environment. The cost estimate must detail the operational environmental management cost, the rehabilitation cost, the decommissioning cost and the post-closure environmental protection cost. The EIS must be updated annually by a competent person and audited externally by at least two competent independent

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persons at a frequency specified by the Director. Application for partial or complete closure of the mine must be accompanied by an environmental audit report prepared by an independent person. Closure will be granted when all conditions made under the regulations are met. The regulations also include requirements relating to the management of: mine residue deposits; air quality; water pollution; storage and handling of hazardous wastes; and contribution to an Environmental Protection Fund. Some of these cross reference to other legislation (see below);

- **SI No 102 of 1998 — The Mines and Minerals (Environmental Protection Fund) Regulations, 1998.** The objective is to provide assurance that the developer will execute the EIS and protect the Government against the risk of having to undertake rehabilitation of a mining area if the holder of the mining licence fails to do so. The fund will be used to affect required remediation work when the holder of a mining licence fails to do this. The monies will be recovered from the holder of the licence where it is a contributor to the fund. The Mine Safety Directorate (the “MSD”) of Zambia has directed all mining licence holders to conduct an environmental audit to assess the contribution payable to the central Environmental Protection Fund. This audit has been completed for Kagem and the report has been submitted to the MSD for review and approval;
- **Environmental Protection and Pollution Control Act (No 12 of 1990) as administered by the ECZ:** The aim of the council is to ensure the necessary conservation of the environment and prevent and control pollution, so as to provide for the health and welfare of persons, animals, plants and the environment. The role of the ECZ is to advise the government on policies, measures, investigations and projects on the management of natural resources and the environment. Its role extends to the monitoring of environmental trends, creating environmental awareness, providing financial support for environmental conservation, and identifying where environmental assessments of projects and policies are required. In the Environmental Protection and Pollution Control (Amendment) Act 12 of 1999 the inspector’s powers have been increased to include the ability to arrest, without a warrant, a person who is committing or is reasonably suspected of committing an offence under the Act. Before a licence or permit can be granted by the Inspectorate, it must publish its intention to grant in the Gazette and invite representation from any interested person. This must occur 28 days before the licence or permit is granted;
- **SI No 28 of 1997 — The Environmental Protection and Pollution Control Act (Environmental Impact Assessment) Regulations, 1997:** This regulation provides further guidance on the EIS process including public involvement;
- **SI No 72 of 1993 — The Water Pollution Control (Effluent and Waste Water) Regulations, 1993:** The ECZ has responsibility for the protection of the aquatic environment (this includes groundwater). According to the Act it is an offence to allow release of poisonous, toxic, erotoxic, obnoxious or obstructing matter, radiation or other pollutant into the aquatic environment. To ensure protection of the resource the ECZ has powers to carry out the following activities: establish water quality and effluent standards; determine conditions of discharge of effluents to the environment (a licence is required); promote research; collect data from industries and local authorities; and
- **SI No 141 of 1996 — The Air Pollution Control (Licensing and Emission Standards) Regulations, 1996:** The regulations give ambient air quality guidelines and long term emission limits. All new plants must comply with these. The Inspectorate should determine the time within which existing operators shall meet the limits and should set intermediate emission limits for these operators. Holders of licences must monitor air quality and submit monthly emission returns to the ECZ.

### 2.5.3 Labour legislation

Labour legislation in Zambia is governed by the various regulatory authorities, and mining and labour codes. Employment of local workers in Zambia is regulated by the Employment Act (Cap512), collective bargaining under the Industrial Act (No. 27 of 1993) or the Minimum Wages and Conditions of Employment Act 1992. The Minimum Wages and Conditions of Employment (General) Order, 1990 regulates the employment of specific workers such as general workers and watchmen.

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Terminal benefit arrangements in Zambia are considered to be onerous whereby typical arrangements include the following:

- For employees with less than 30 years service the packages are based on two months salary per year plus 28 months; and
- For employees with more than 30 years service the packages are based on three months salary per year plus 28 months.

In addition to these amounts medical benefits can continue for up to five years after termination of employment and, in the case of termination due to work accident for life.

#### 2.5.4 Taxation

Under the 2008 Act the GoZ is now prohibited from entering into agreements (referred to as Development Agreements). The GoZ now explicitly provides, through the 2008 Act, that there shall be no fiscal terms or tax benefits agreed to outside the terms of the law. This implies that investors in the mining sector will no longer be able to negotiate tax concessions outside the tax legislation. Recent amendments however as announced in the 2008 budgetary changes indicate that the new taxes will make the new tax regime more complex and is likely to increase compliance costs for both taxpayers and the GoZ.

Mining related taxation in Zambia can be grouped as follows:

- **Corporate Income Tax (“CIT”):** The CIT applicable to Gemstone Licences is 35%. All other mining companies are assessed at 30%. Furthermore the following deductions apply:
  - A maximum of 25% deduction of pre-production expenses and other capital expenditures as defined in the Income Tax Act. Capital expenditure on new projects will be ring fenced and only become deductible when the project starts,
  - Depreciation allowances for expenditure on machinery and equipment with allowances of 25% on plant, machinery and commercial vehicles; 20% on non-commercial vehicles; 5% on industrial buildings,
  - 100% of prospecting and exploration expenditure under special circumstances, and
  - Expenditures incurred on a non-producing mine and mining expenses incurred by a mine of irregular production close to the end of its life, and
  - Trading losses to be carried forward for a maximum of 10 years.

Mining companies will no longer be able to deduct their losses from financial deals (for example hedging of future sales) from taxable income because hedging activities will not be given the same tax treatment as mining activities;

- **Variable Profit Tax (“VPT”):** A variable profit tax, in addition to the 30% CIT, of up to 15% on taxable income, which is above 8% of the gross income;
- **Windfall Tax (“WT”):** A windfall tax charged on the sales value of copper (also referred to as an additional royalty which is deductible for CIT basis) which will be triggered at different price levels for the sale of base metals, gemstones and all precious metals is to be introduced. A reference price, which will be determined to be arms length price, will be introduced for the purposes of assessing mineral royalties and any transactions between related or associated parties. In respect of base metals the reference price will be the price tenable at the London Metal Exchange, Metal Bulletin or any other commodity exchange market recognised by the Commissioner General. The draft provisions of the Income Tax Amendment Bill indicate that the windfall tax will be computed by reference to the daily closing commodity prices as quoted on the London Stock Exchange as opposed to the actual price received by the mining companies. For copper the WT will be:
  - 25% at a copper price of above US\$2.50/lb but below US\$3.00/lb,
  - 50% at a copper price of between US\$3.00/lb and US\$3.50/lb, and
  - 75% at a copper price which exceeds US\$3.50/lb;

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- **Value Added Taxation (“VAT”):** A holder of a mining right is exempt from customs, excise and VAT duties in respect of all machinery and equipment required for exploration or mining activities. In general however the following applies:
    - 16.0% for the supply of goods and services in Zambia,
    - 16.0% for the import of goods and services into Zambia, and
    - 0.0% for the export of goods and services from Zambia.

The GoZ has proposed that mining companies should account for VAT on a cash accounting basis. As the majority of mining companies export their product the companies are generally in a VAT refund position. Under cash accounting mining companies will only be entitled to reclaim input VAT on invoices from suppliers once payment has been made;

- **Mining Royalties:** The New Act provides that the holder of a large-scale mining licence, large-scale gemstone licence, small-scale mining licence, small-scale gemstone licence or an artisan’s mining right shall pay a mineral royalty at the rate of:
  - 3% of the norm value of the base metals produced or recoverable under the licence,
  - 3% of the gross value of the industrial minerals produced or recoverable under the licence,
  - 3% of the gross value of the energy minerals produced or recoverable under the licence,
  - 5% of the norm value of the precious metals produced or recoverable under the licence, and
  - 5% of the gross value of the gemstones produced under the licence.

In addition to the above the following also apply:

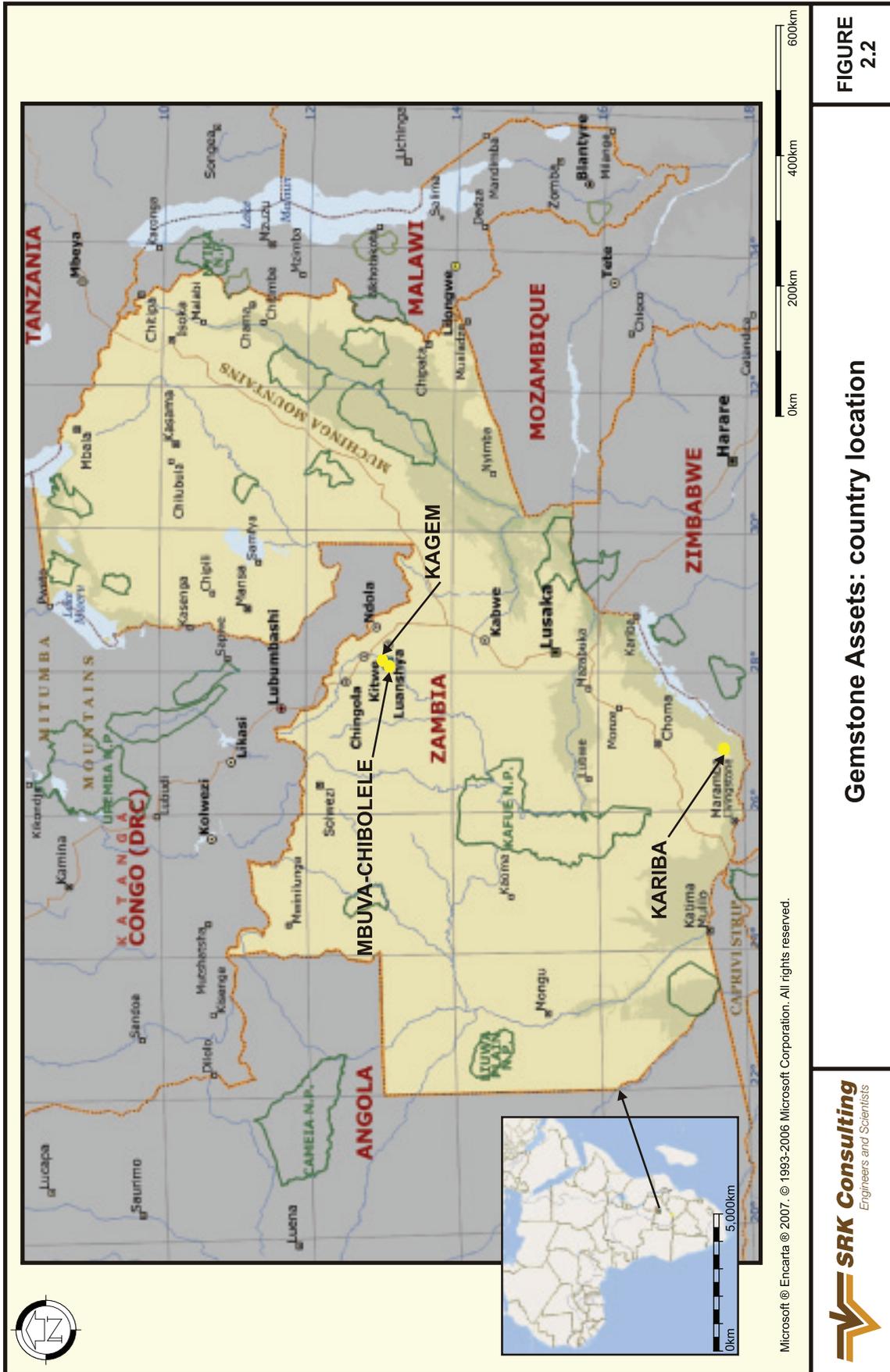
- The mineral royalty payable is due and payable within 14 days after the end of the month in which the sale of minerals is due,
- A person required to pay mineral royalties shall submit monthly mineral royalty returns in the prescribed form containing such particulars as may be required by the Commissioner General within 14 days after the end of the month in which the sale of the minerals is done,
- The Income Tax Act shall, with the necessary modification, apply to the collection, assessment, penalising, enforcement of, and right of appeal with respect to any royalty imposed by the New Act,
- The Commissioner General may, on application by a holder of a mining right defer payment of royalty due from the holder if, during any period for which a payment or royalty is due as prescribed under this Act , the cash operating margin of the holder in respect of mining operations in the mining area falls below zero, and in any such case, the amount payable on account of royalty in respect of that period shall be reduced to such extent as is necessary to increase the cash operating margins to zero, and payment of the difference between the royalty due in respect of that period and the reduced amount shall be deferred, and
- Where a holder of a mining right fails to pay any royalty or provisional royalty payable by the holder of the mining right on or before the due date or any extension allowed by the Commissioner General, the Commissioner General, may be order served on the holder, prohibit the disposal of any minerals from the mining area concerned, or from any other mining area held by that holder, until an arrangement has been made that is acceptable to the Commissioner General for the payment of royalties.

Norm value means:

- The monthly average London Metal Exchange cash price per metric tonne multiplied by the quantity of the metal or recoverable metal sold,
- The monthly average Metal Bulletin cash price per tonne multiplied by the quantity of metal sold or recoverable metal sold to the extent that the metal price is not quoted on the London Metal Exchange, and

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- The monthly average of any other exchange market approved by the Commissioner-General cash price per metric tonne multiplied by the quantity of the metal or recoverable metal sold to the extent that the metal price is not quoted on the London Metal Exchange or Metal Bulletin;
  - **Remissions:** There are no restrictions in respect of the amount of profits, dividends, or royalties that may be externalized, although a withholding tax of 15% is levied on interests, royalties, management fees and payments to affiliates or sub-contractors and consultants in the mining sector that will be calculated at the rate of 15% of the assumed value. In the case of services sourced from overseas the tax paid by such companies and individuals will be apportioned between the country in which such services are procured and Zambia; and
  - **Other Taxes:**
    - Export Levy of 15% on the export of copper concentrates,
    - Workers compensation at 5.63% of gross salaries,
    - Pension contributions at 5% of gross salaries,
    - Interest tax at 15% of interest income,
    - Medical tax 1% of interest income, and
    - Fuel tax at 15% of fuel cost.

Figure 2.2 Gemstone Assets: country location



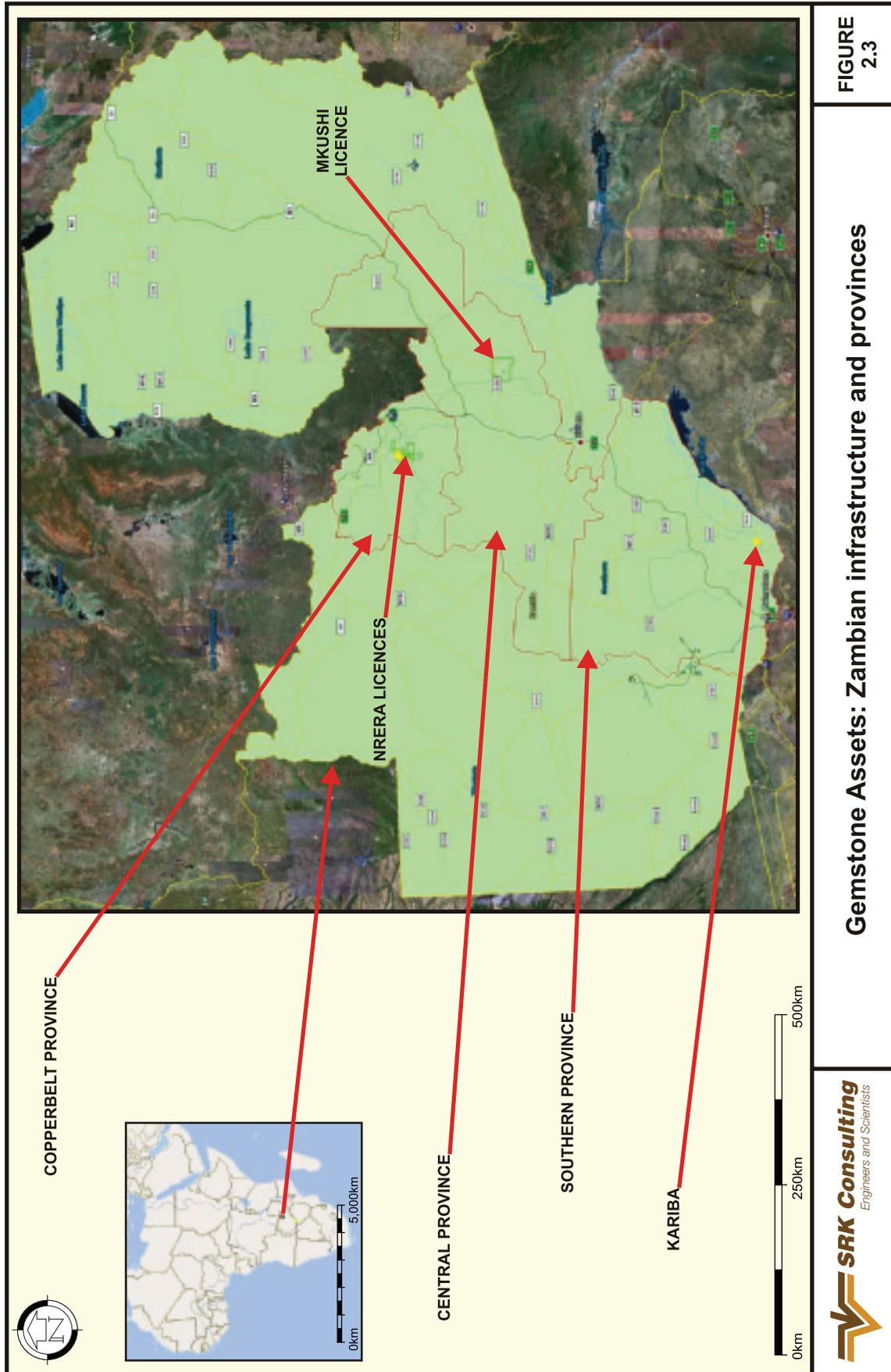
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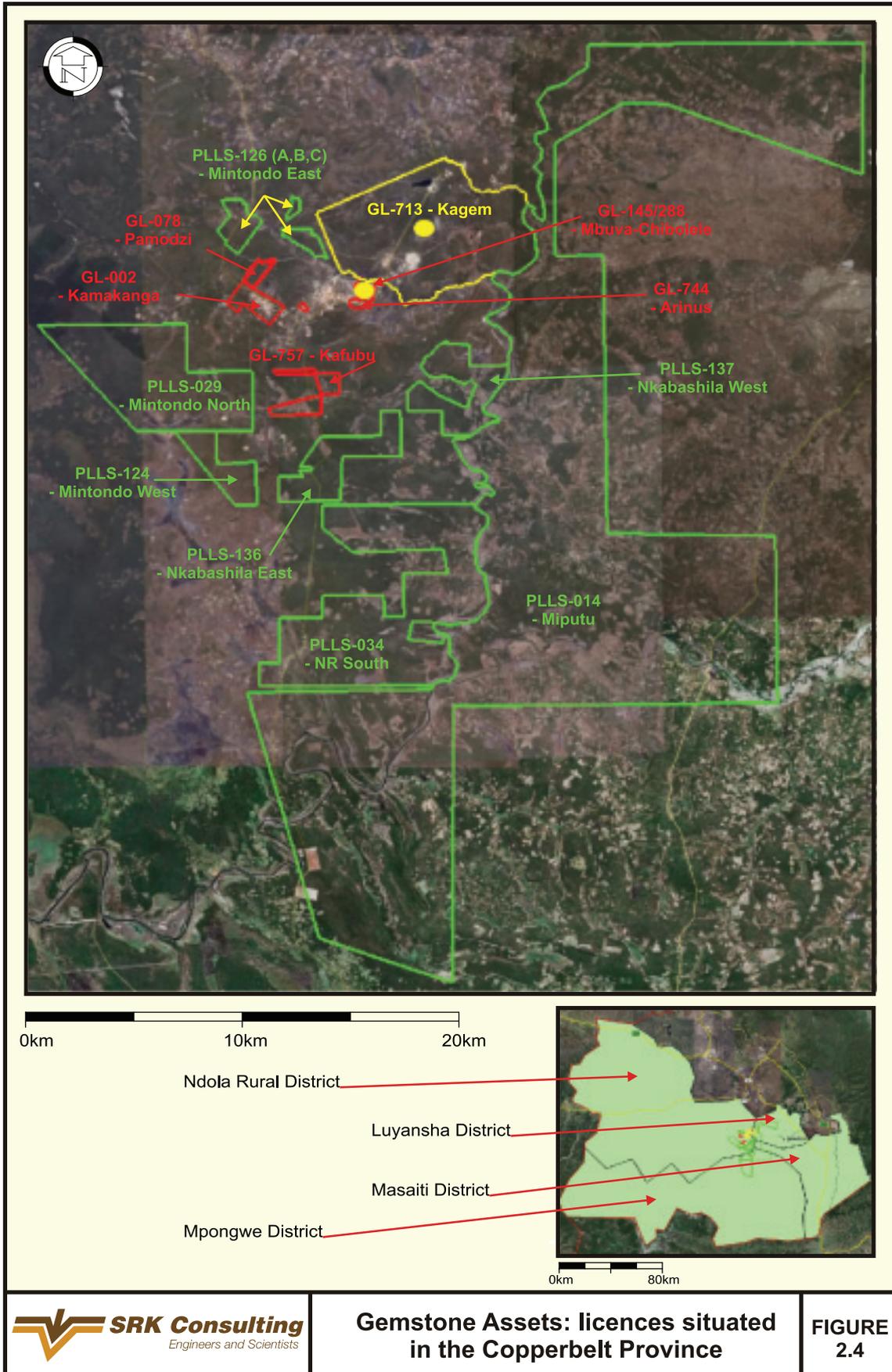
Gemstone Assets: country location

FIGURE 2.2

Figure 2.3 Gemstone Assets: Zambian infrastructure and provinces



**Figure 2.4 Gemstone Assets: licences situated in the Copperbelt Province**



**Figure 2.5 Gemstone Assets: licences situated in the Southern Province**

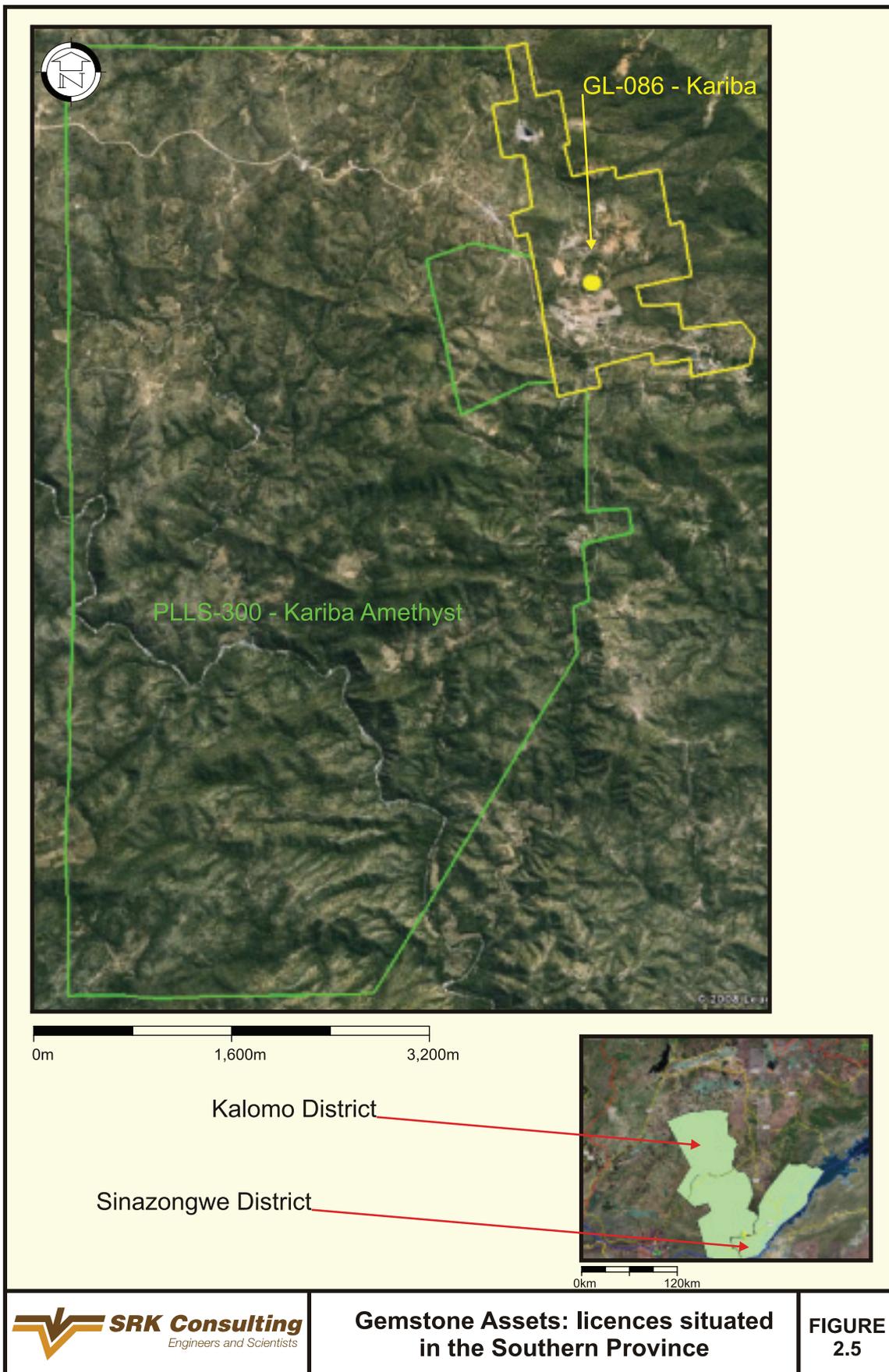


Figure 2.6 Gemstone Assets: licences situated in the Central Province

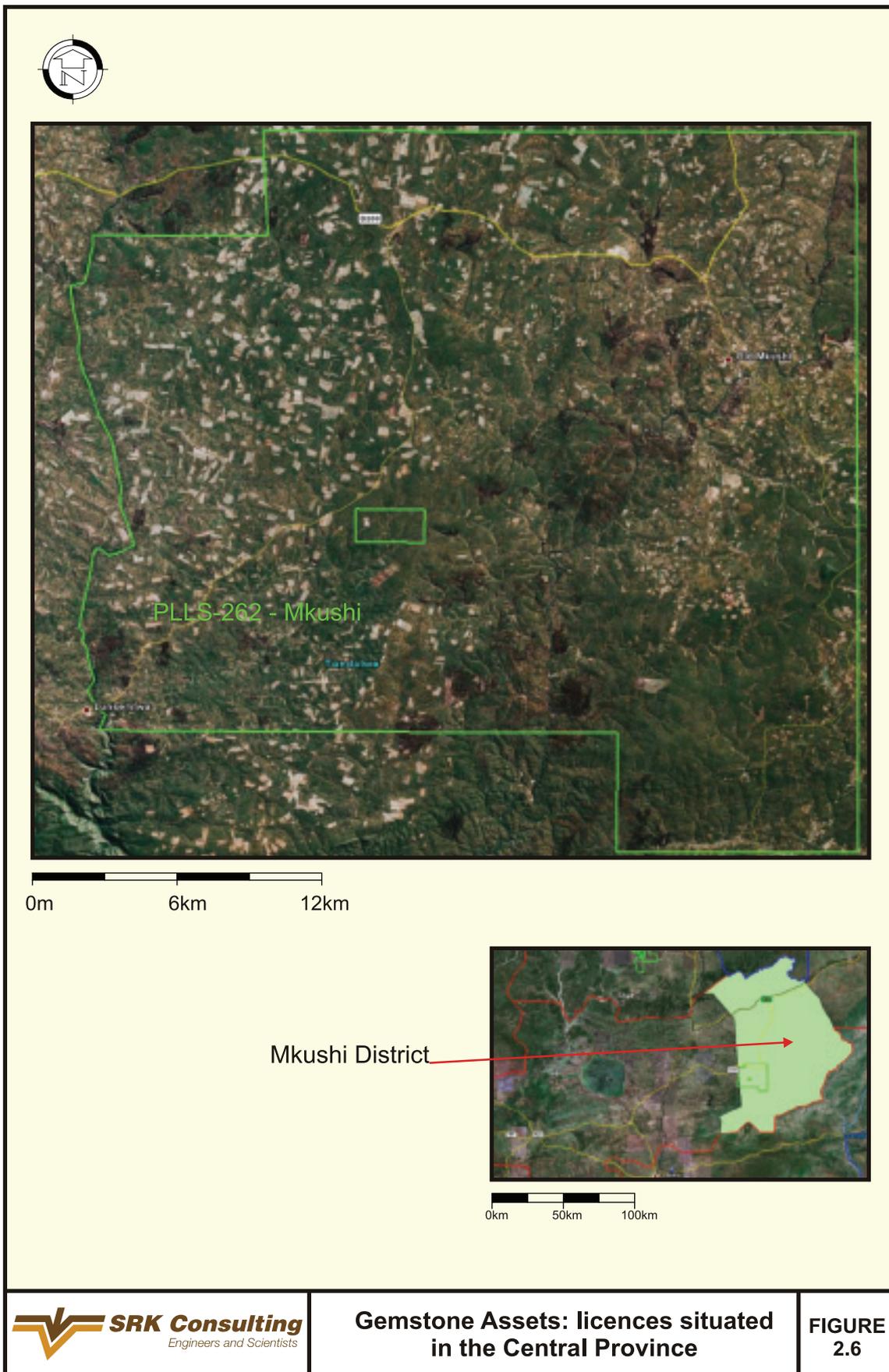
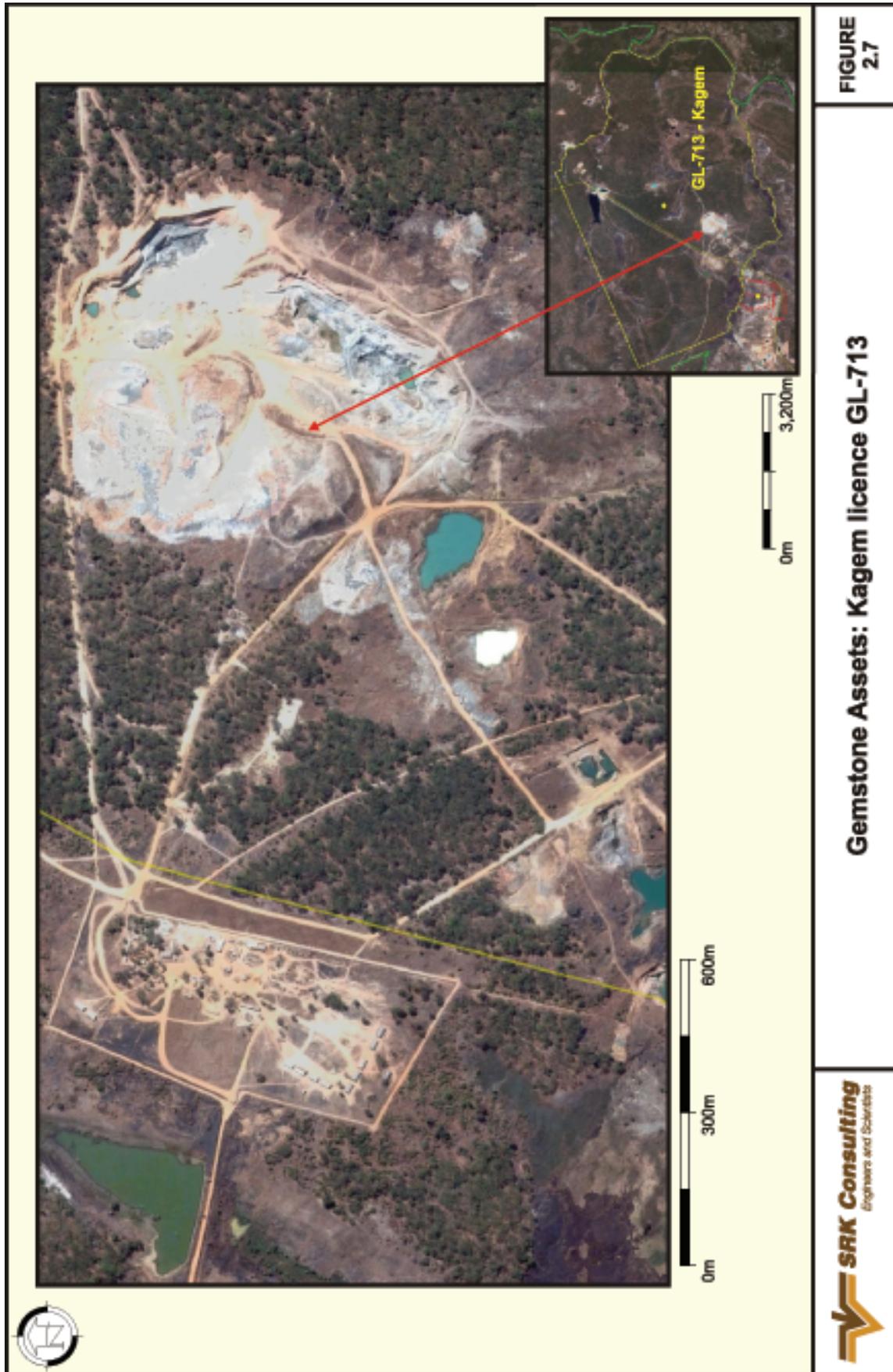


Figure 2.7 Gemstone Assets: Kagem licence GL-713



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### **3 COMMODITY PRICES AND MACRO-ECONOMICS**

#### **3.1 Introduction**

The following section includes historical commodity price and macro-economic statistics as they apply to the various Gemstone Assets. In respect of commodity prices the Company has engaged the services of Gemworld International Inc (“Gemworld”) who has provided an overview of the emerald market. With the exception of the graphical interpretations, the text in Section 3.2 through 3.2.7 inclusive is sourced directly from the stand-alone report compiled by Gemworld.

SRK notes however that this overview does not quantitatively analyse historical demand-supply-price relationships nor attempts to comment on the impact on price of assumed increases in supply such as that proposed by the Company. Furthermore the price overview is limited to cut stones and any potential relationships between historical rough and cut prices are not discussed to enable an assessment of the value chain and the potential uplift should the Company’s strategic objectives in India be realised. Additionally the markets for beryl and amethyst are not covered.

Notwithstanding this limitation, SRK notes that the current rough value received, specifically when combined as an average, is asset dependent given the distribution of stones between the various grades and their relative qualities.

Furthermore SRK notes that consensus market forecasts are not available for coloured gemstones and accordingly reliance for future price scenarios are generally linked to that achieved historically.

#### **3.2 Emerald**

Colombia, Zambia and Brazil are the primary producers of emerald in the international coloured gemstone trade. Each produces emerald in all grades. Small quantities of fine material are also produced in Afghanistan. Numerous secondary sources exist but they are currently of no significant value to the coloured gemstone trade.

##### **3.2.1 Colombian dominance**

Colombia has been the principal producer of fine quality emerald for centuries. Traditionally the three main mining districts were Muzo, Coscuez and Chivor, with Muzo emerald prized (and priced) above all other by the international coloured gemstone trade. More recently the La Pita mine has been a major producer of Colombian emerald surpassing Muzo and Coscuez in total kilograms of rough emerald produced. Whilst all qualities are produced, fine and extra fine quality stones are scarce.

Colombian Production totals (Source USGS): 1996 — 2,100kg; 1998 — 2,500kg; 2000 — 2,200kg; 2002 — 1,600kg; and 2004 — 2,500kg.

Emerald mining in Colombia exists as a relationship between government and private enterprise whereby the government renting the land to the mining companies. Beyond that the government has little involvement in the gemstones mining areas and as a result, the region’s development is dependent on allocation of revenues from mining companies to develop and improve infrastructure. In recent years, several newcomers have attempted to adopt practices that would allow much of the benefit associated with these resources to remain in the mining region for the betterment of the local communities.

Rough is sold at auction at the mines on a monthly or quarterly basis depending in part on production levels. Typically the buyers are representatives of the major cutters in Bogota. As miners are also allotted a percentage of their production, private sales can occur outside of the auction system. However, they are small on scale and the buyers of these stones tend to be the mine owners.

In Bogota, cutters and brokers are concentrated in the “emerald district” located in the Candelaria district. Brokers visit buyers from their list of known serious dealers to show goods. Their compensation is typically based on commissions. Brokers can represent the cutter, initial buyer or group of dealers that may partner on the stone/parcel.

During the late 1990s through the early part of the current decade Colombia’s emerald industry had found it harder to bring product to the international gem trade. However, since 2004, the

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Colombian emerald industry has witnessed an increase in foreign buyers that come to Bogota. Free trade zones established near Colombia's international airport facilitates safe, quick trips by buyers into and out of the country and foreign buyers have become more common along the emerald district during the past few years. Although violence against foreigners remains a concern, President Uribe's government has dealt effectively with both the anti-government rebels and drug lords to make the nation safer. Colombian dealers also participate in many of the international trade shows.

Emerald was one of the top selling gemstones in the international market during the mid to late 1980s through the early 1990s. Driven by demand, emerald prices hit record highs during this period. Increased demand by Japanese and European buyers helped trigger pricing volatility. With demand outpacing supply, prices remained volatile. However, during 1991 and 1992 the market received indications that future production in Colombia was slowing. This was a result of increasing violence in the three-decade old war between rebels and government forces. Producers were able to maintain production levels by tightening security at the mines and smuggling gems to market.

In 1997, a lawsuit filed in the US brought the issue of emerald enhancement to the attention of retail jewellers and consumers. This practice, benignly described for decades as "oiling", now took on international implications. As the market learned more about the process an increasing number of dealers and retailers grew uneasy about the quality, and more importantly the value of fine quality emeralds. The dealers learned that most emeralds were not treated with cedar wood oil as believed, but instead contained synthetic polymers that were rumoured to have the ability to hide significant fractures in the stones more effectively than cedarwood oil. The perception that inexpensive commercial quality material could be treated with polymers such as Opticon™ to produce emeralds that appeared to be fine quality shocked the market. Many of these "fillers" proved unstable and as a result could change the appearance of the emerald when the filling medium dried out or turned colour. This failure by producers to accurately disclose, or educate the industry about polymer treatments contributed to massive erosion in value. At that time, no gemstone had received greater scrutiny as a result of gem treatments than emerald. As a result of the knowledge gained from the controversy, today most producers enhance their emeralds with mediums that can be removed from the stone should it "dry out" or if the client requests it.

### **3.2.2   Zambian Influence**

During this same period coloured gemstone purchasers turned to an alternative source located in Africa. This source, Zambia, hosts several important emerald deposits including the Ndola Rural Restricted Area. Emerald deposits have been known for decades in Zambia, with some newer deposits less than a decade old. Colombia produces approximately 42% of the emerald consumed by the gem trade, while Brazil, Zambia and the secondary sources comprise the remainder. However, the market appreciation of Zambian emerald is not based on supply, but instead quality. Zambian emeralds tend to have a higher clarity than those of the other two main sources Colombia and Brazil. Many dealers prize Zambian emeralds for their transparency, with many stones exhibiting a clear "crystal" transparency that gives them a wonderfully attractive appearance. Zambian emeralds are also prized for their rich bluish green colour, a colour which is generally considered unique to this area. As a result the need for treatment of this material is less than that of any other known active emerald source. This has proven increasingly important to consumers.

### **3.2.3   Distribution Network for Zambian Emeralds**

Zambia is a geologically rich and diverse country and an important source to the international emerald trade. Emeralds are produced at numerous locations along Zambia's Copper belt. However, production is reported to be most active at Kagem. Until recently this mine was operated by the GoZ in partnership with an Indian firm. The mine is reported to be the primary producer of Zambia's emerald production. Rough emerald mined at the Kagem location has been historically sold in bimonthly open auctions where the rough is priced and sold by the gramme. The initial buyers may cut the stones or broker the rough to other cutters that do not travel to the location. Indian firms comprise the largest client base however there is also a significant Israeli presence in this market.

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The remaining production originates from several mines, some of which are owned by local firms although foreign investment in the area has increased in recent years. Gemfields' interest is a significant one in this sector.

In December of 2007, Pallinghurst Resources LLP completed the acquisition of controlling interests in each of the major Zambian emerald mining operations. Kagem is stated to produce about 3.6Mct a year (financial year ending March 2007) in rough emerald.

Access to rough emerald is the key to profitably developing this market further. With the major emerald fields of Zambia now under the control of a single management group this enhances the potential for greater investment into the emerald sector. Further development as well as the transition to mechanized mining would enhance production. It could also serve to streamline the distribution channel from mine to retailer.

Currently, production from these mines is sold through local markets to mostly Indian and Israeli gem buyers, both of which have established themselves as the niche cutters of Zambian emerald (See Section 3.2.4 below). Presently few stones are actually faceted in Zambia. In the past, the GoZ reportedly attempted to develop a cutting sector and constructed a cutting factory in Kitwe, but it has closed.

The USGS has compiled global emerald production statistics as part of the agency's ongoing research into geologic and mineral related industries. The following data applies to global production (Colombian specific data was provided above). The USGS was the source of the production data reported in this document. However, because it is likely that a percentage of transactions have occurred but are not reported, it is the opinion of Gemworld that the production data reported in the USGS documents are likely to be lower than the actual levels of production. It is generally reported in the gem industry that Zambia produces 20% to 30% of total annual global production of emerald. However, the data attributed to Zambia supports a higher percentage than that\*: 2002 — 4,200kg; 2003 — 5,200kg; 2004 — 5,600kg; and 2005 — 5,900kg.

Production is expected to continue to grow as current demand increases in the major gemstone market. Investment in further exploration should result in the development of more diverse sources in the future. The transition from small scale labour intensive to more mechanized mining techniques should enhance efficiency. Colombia remains the largest producer but Brazil and Zambia are increasing every year.

Prices for finished emeralds from all three major producing nations have increased since 2004. Higher prices have held firm due to increased demand in India and China.

Zambian emerald production from this period is estimated at: 2002 — 1,860kg; 2003 — 2,000kg; 2004 — 2,100kg; and 2005 — 2,500kg (compare with \* above).

### **3.2.4 The Market Mechanisms**

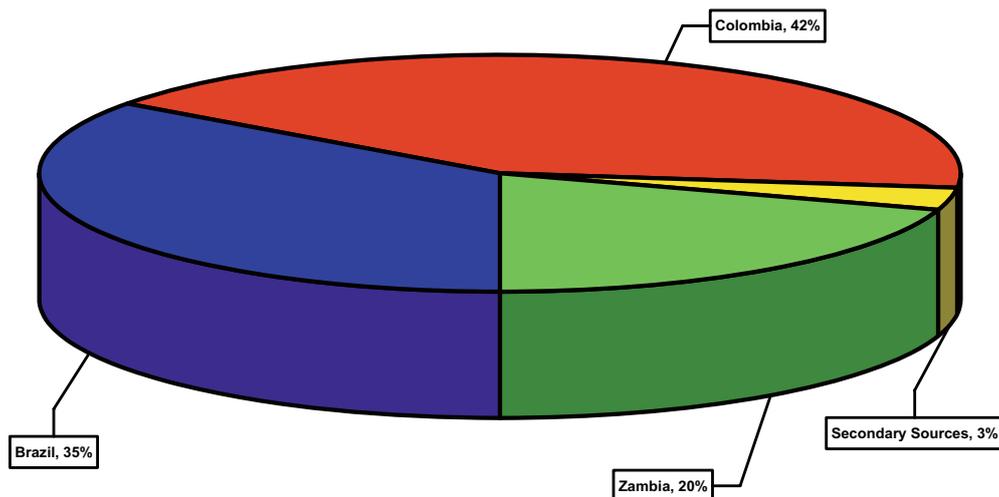
Once finished (faceted), Zambian emeralds are sold on the wholesale market globally. Two distinct routes to market exist. One is through international coloured gemstone trade-shows such as the annual Tucson (US) GemFair, others include the international Hong Kong and Bangkok gem shows. The second route is the more common method observed in the coloured gemstone market. This involves Zambian emerald buyers visiting the cutting canters in Jaipur, India and Ramat Gan and Tel Aviv, Israel to purchase rough directly from the cutters and private brokers and dealers.

Zambian emeralds service an important niche in the global gemstone market, because Zambian rough emerald produces a certain quality and size of product at an attractive price point.

### **3.2.5 Emerald Quality**

As noted above, while a universal grading scale does not exist, Gemworld's publication uses four grading categories: commercial, good, fine and extra fine. All four grades are commonly sold. Commercial to good can be found in mass merchandise and television shopping networks. Fine to extra fine can be found in medium to upscale jewellery stores.

**Figure 3.1 Global rough emerald production (2007)**



### 3.2.6 Emerald Price Trend Analysis

Since 2002, prices for emerald have been on the increase. Although demand remains below that of the peak years, it has shown steady improvement during the past three years. Emerald has been well insulated from the high-tech treatments that created concern in the ruby, and to a lesser extent, sapphire markets. At this same time, the global coloured gemstone trade has been experiencing an increase in production at the primary emerald sources in Colombia and Africa.

Private investment in the Zambian mineral sector has increased. Further development of the coloured gemstone sector will create additional jobs both in the mining sector as well as in adjacent cutting and trading sectors. Although some large scale producers operate in this industry the majority of mining is still small scale.

The vigorous developments currently being observed in the emerald producing areas of Zambia, hold great promise for continued growth of this market. Currently, the emerald market is seeing an upward movement in price. Conditions present in the market suggest that this trend is sustainable.

Unlike ruby and rough sapphire which have traditionally been exported to Thailand, and more recently China for cutting and polishing before being exported further up the distribution channel to world markets, rough emerald is cut in major centres around the world including Colombia, Hong Kong, US, India and Israel. Other emerging centres such as in South Africa and China are becoming increasingly relevant. However, as stated above the vast majority of commercial quality emeralds are typically processed in India while finer quality and important stones are finished in Israel, Hong Kong or the US. There has been some movement away from this in last few years. As producing nations have become more aware of the value of their mineral resources, there has been a growing movement among many to secure a greater percentage of that wealth in their countries by development of the industry. Emphasis has been placed on not only further exploration for mineral resources, but also on development of the sector with attention to creating jobs beyond mining. In that regard, some nations have begun restricting the amount of material that leaves the region prior to cutting and polishing.

Although generally applauded, such requirements have created marginal concern in the private sector. The concern rests in the fears that some countries could move to nationalize successful operations produced in part by private sector investment. However, in the case of Zambia which has a good record in this regard such concerns presently appear unwarranted. However, such is not the case with other emerald producing countries such as Zimbabwe, where nationalising of mines has become an issue.

### 3.2.7 Emerald Value

Given a careful examination of current market conditions, emerald possess the strongest potential for an increase in value and market share of any of the top four trading gemstones in the global market. Today emeralds continue to trade below the peaks price points of the 1980s.

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Although emerald prices have risen dramatically in the past three years, they are not experiencing the degree of resistance now being seen in the ruby market.

In addition to improved demand, prices for fine gemstones have also continued to rise. Of course one factor is the value of the US\$, which has weakened since 2001.

Accompanying this trend is the fact that top grade gemstones have become scarcer in the global market; as a result competition in the trading centres for them being fierce.

Examination of the data shows that of the big three (ruby, sapphire and emerald), if one looks in terms of individual gemstones, emerald experienced the most significant increase in value. For the period of the import data analysed, the imported total only increased 12.4%, but the per-carat price increase was nearly 50%.

Emeralds also offer the retail jeweller a much more attractive profit margin compared to the slim margins seen in diamonds. Emeralds already possess a strong product brand with consumers. Emeralds are one of the earliest gems used in jewellery and have been held in high regard dating back many centuries.

Emeralds, both in Colombia and Zambia have been traditionally mined in small scale cooperatives. This structure is inviting to socially responsible fair trade practices. The concept of fair trade is new to the gem industry. However, fair trade principles have been steadily growing in importance to buyers according to the Jewellery Consumer Opinion Council. It has been suggested that the “beauty” of gem products can be further enhanced by providing workers a reasonable share of the value achieved by the trade. Globally third world gem producing areas remain some of the poorest areas in spite of the wealth that others further up the distribution channel gain through the sale of these products.

Development of mining areas through construction of social necessities such as schools and medical clinics can further enhance these gemstone products.

Although emerald mining has traditionally been conducted following variants of small scale models, there is tremendous upside to emergence of a large scale model in the Zambian emerald industry. The obvious advantage would be the ability for vertical integration of product into the market. Such a model would be ineffectual on small scale.

However, on the larger scale potential is quite promising. Through proper development the Zambian emerald industry can expand its important niche of supplying the world market with calibrated fine quality emeralds. The relationship between government and private sector is favourable to further the development of the mineral resources of the nation.

The vertical integration marketing model is enhanced by current market condition that finds relative softness in the US gemstone market, while the European and Asian markets are reported to be stronger. Assuming the proper investment in product development and brand enhancement, emerald continues to offer strong upward potential. In that regard, the desirability for Zambian emerald (traditionally recognized in the gemological community for its higher clarity) cannot be overstated. The control of the supply chain that vertical integration affords would also facilitate the beneficiation that consumers desire while protecting the margin.

### **3.2.8 Historical cut emerald prices**

Table 3.1 presents the historical (nominal) cut emerald prices (US\$/ct) for 1ct stones and includes the following categories: commercial, good, fine and extra fine. The prices listed below are for emerald with a moderate level of enhancement, from multiple origins. The prices are an average of data surveyed for the price and time range. Prices for un-enhanced or slightly enhanced material of equal quality would command a premium. Specific origins may have a positive or negative impact. The price decreases seen starting in 2000 to 2001 are the result of increased production at one source in Colombia. The price increases seen from 2004 forward result from improved demand, beginning of the tapering off of production at the La Pita source and the stronger exchange rates seen in overseas markets.

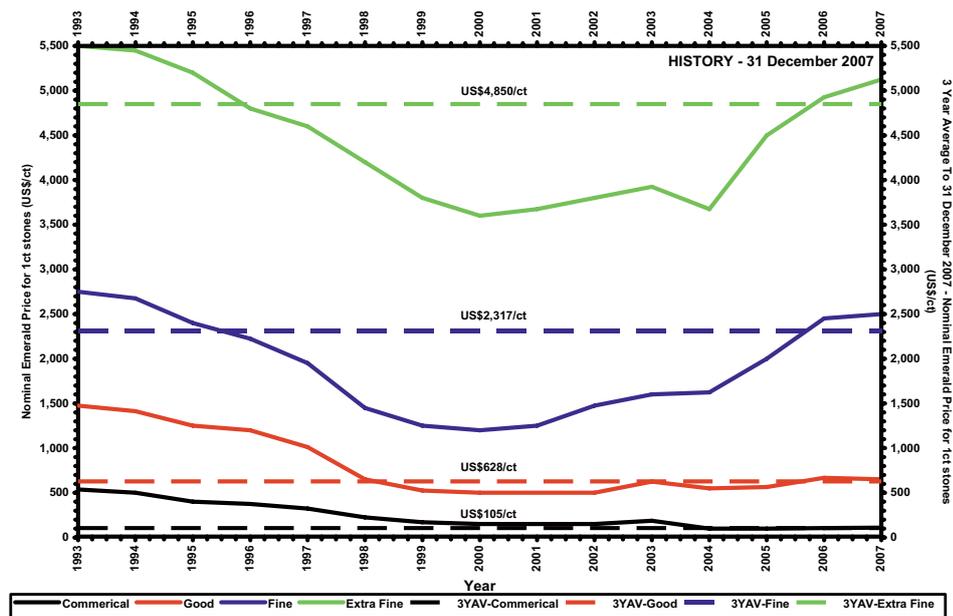
**Table 3.1 Historical cut emerald prices<sup>(1)</sup>**

Year	Commercial <sup>(2)</sup> (US\$/ct)	Good <sup>(3)</sup> (US\$/ct)	Fine <sup>(4)</sup> (US\$/ct)	Extra Fine <sup>(5)</sup> (US\$/ct)
1993	538	1,475	2,750	5,500
1994	500	1,413	2,675	5,450
1995	400	1,250	2,400	5,200
1996	375	1,200	2,225	4,800
1997	325	1,013	1,950	4,600
1998	225	650	1,450	4,200
1999	170	525	1,250	3,800
2000	150	500	1,200	3,600
2001	150	500	1,250	3,675
2002	150	500	1,475	3,800
2003	188	625	1,600	3,925
2004	100	550	1,625	3,675
2005	100	565	2,000	4,500
2006	105	668	2,450	4,925
2007	110	650	2,500	5,125
<b>3 Year Average</b>	<b><u>105</u></b>	<b><u>628</u></b>	<b><u>2,317</u></b>	<b><u>4,850</u></b>

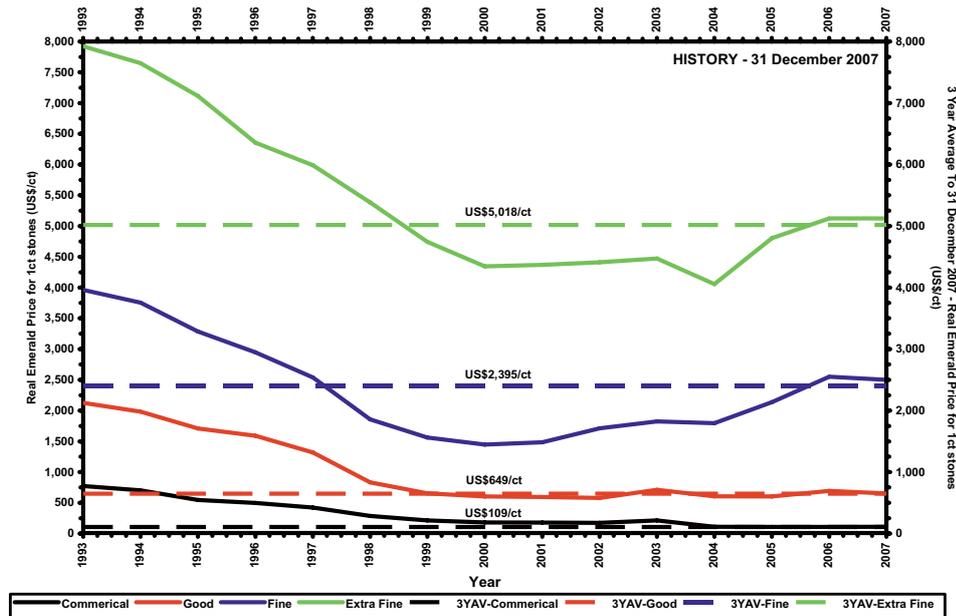
- (1) Sourced from data provided by Gemworld and converted to calendar year basis using simple averaging of spring and autumn sales.
- (2) Commercial stone grades 1 through 4.
- (3) Good stone grades 4 through 6.
- (4) Fine stone grades 6 through 8.
- (5) Extra Fine stone grades 8 through 10.

Figure 3.2 and Figure 3.3 present the historical emerald prices for one carat stones for nominal and real (1 January 2008) prices respectively. In real terms SRK notes that prices for extra fine stones and fine stones have increased by some 25% and 43% over the past three years respectively. In stark contrast the good and commercial grades have remained relatively constant since 1998 with no appreciable real terms increase. In nominal terms the prices for extra fine and fine have almost regained the 1993 prices thus reversing the negative trends denoted from 1993 through to 1998. Unit prices for good and commercial do not appear to maintain the low prices of 2000 with only the good grade category denoting a marginal increase.

**Figure 3.2 Nominal historical cut emerald prices of 1ct stones**



**Figure 3.3 Real terms (1 January 2008) historical emerald prices of 1ct stones**



### 3.3 Historical Prices: Gemstone Assets

Historical prices as recorded for the Gemstone Assets are largely based on a weighted average price received at formal auctions and do not necessarily distinguish between emerald and beryl as in the case of Kagem. Accordingly SRK notes the following:

- At Kagem the historical time weighted average (simple month) price received for rough emerald and beryl over a three year period ending 31 December 2007 is US\$4.5/g and for the 9-month period ending 31 December 2007 was US\$6.1/g. Based on the annual results for the financial periods ending 31 March 2005, 2006, 2007 and the 9-month period to 31 December 2007 the sales price received increased from US\$2.8/g to US\$6.1/g;
- At Kariba the historical time weighted average (simple month) price received for rough amethyst over a three year period ending 31 December 2007 is US\$1.91/kg and for the 9-month period ending 31 December 2007 is US\$1.96/kg. Based on the annual results for the financial periods ending 31 March 2005, 2006, 2007 and the 9-month period to 31 December 2007 the sales price received ranged between US\$1.24/kg and US\$2.05/kg; and
- At Mbuva-Chibolele the limited rough emerald only historical sales yielded a weighted average of US\$4.1/g. Assuming that the sales of all emerald and beryl produced achieved the intended auction price (November 2006) the average price would be US\$1.01/g.

#### 3.3.1 Gemstone Marketing Strategy

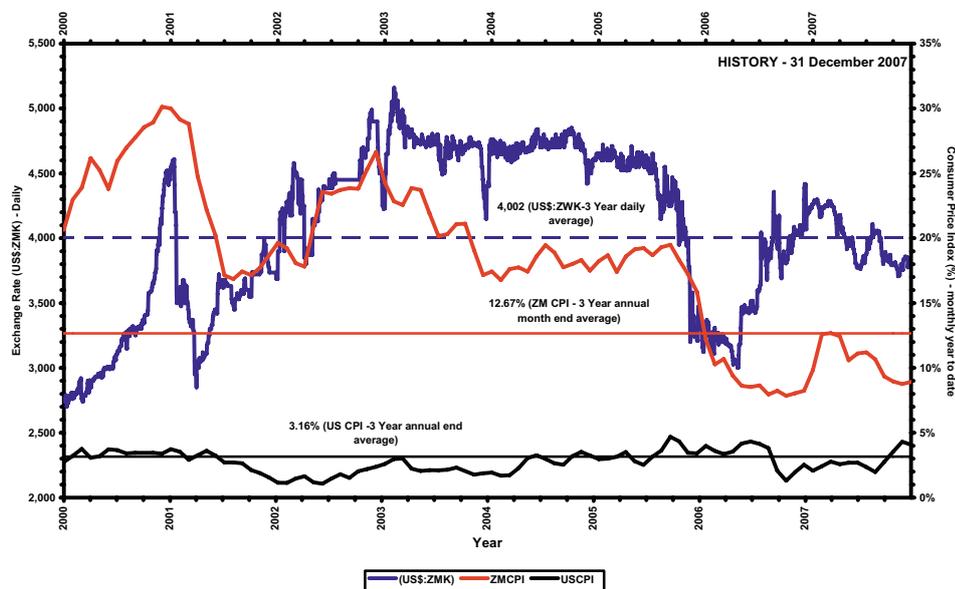
Notwithstanding the limitations in respect of a historical and forecast supply-demand-price analysis, SRK notes the Company's overall objectives in developing a strategy whereby the substantial increase in production at Kagem will in essence seek to compete within the broader gemstone market. Accordingly the Company considers that the projected increase in overall production whilst significant in respect of rough emerald will ultimately be absorbed without a negative correction for the price of cut emerald. The fundamental cornerstone of this strategy is outlined in the main body of the Admission Document and addresses the following key items:

- Marketing and branding;
- Structured Supply Chain;
- Ethical Sourcing and Assured Provenance;
- Consistent Supplies to Customers; and
- Critical Mass, Market Share and Economies of Scale.

### 3.4 Macro-Economics

Figure 3.4 presents graphically the historical macro-economic parameters in respect of inflation and exchange rates for the period 1 January 2000 through 31 December 2007 inclusive. Inflation statistics are sourced from monthly published data and exchange rates from daily (closing) data. Table 3.2 presents similar data from 31 December 1990 through 31 December 2007 inclusive and with inflation based on a 12-month December to December basis and exchange rate data are quoted as at 31 December of each period.

**Figure 3.4 Historical macro-economic parameters to 31 December 2007**



**Table 3.2 Historical macro-economic statistics<sup>(1)</sup>**

Statistics	ZMCPI (%)	USCPI (%)	Exchange Rate (ZMK:US\$)
1990	110.8%	6.1%	46
1991	99.7%	3.1%	87
1992	180.6%	2.9%	315
1993	128.1%	2.7%	561
1994	38.3%	2.7%	699
1995	46.0%	2.5%	978
1996	35.2%	3.3%	1,287
1997	18.6%	1.7%	1,440
1998	30.6%	1.6%	2,425
1999	20.6%	2.7%	2,760
2000	30.1%	3.4%	4,450
2001	18.7%	1.6%	3,735
2002	26.7%	2.4%	4,500
2003	17.2%	1.9%	4,400
2004	17.5%	3.3%	4,600
2005	15.9%	3.4%	3,340
2006	8.2%	2.5%	4,417
2007	8.9%	4.1%	3,830

(1) All statistics are quoted in calendar years. Inflation statistics are the based on the 12 month inflation to 31 December and exchange rate statistics are based on closing period (31 December).

During the three year period from 1 January 2005 through to 31 December 2007 inclusive the exchange rate of the ZMK against the US\$ has ranged from 3,707 to 4,417 and yielded an average of 4,002.

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During the three year period from 1 January 2005 through 31 December 2007 inclusive the US CPI ranged between 1.3% and 4.7% reported on a 12-month basis, yielding an average of 3.2%. During the period from 1 January 2005 through 31 December 2007 inclusive the Zambian CPI has ranged between 7.9% and 19.5% reported on a 12-month basis, yielding an average of 12.7%.

### **3.5 SRK Comments**

Emerald prices for the higher quality grades appear to have recovered substantially in the past three years and in nominal terms have almost attained unit prices as recorded in 1993. Unit prices in respect of the lower quality grades marginally improved with the lowest grades static and even declining in real terms.

Currently, Zambian production accounts for some 20% of global production of rough emeralds. No analysis has been presented which estimates the Company's current or planned contribution to this 20%. SRK notes that Company's Strategic Plan assumes some four fold increase in production of total emerald and beryl, impact of which on the current and forecasted emerald price has not been addressed. Notwithstanding this aspect, the Company has outlined in the Admission Document the following key activities which collectively will facilitate competition in the larger gemstone market and not solely on an emerald for emerald basis: Marketing and branding; Structured Supply Chain; Ethical Sourcing and Assured Provenance; Consistent Supplies to Customers; and Critical Mass, Market Share and Economies of Scale.

No analysis has been undertaken to support the potential for the higher amethyst prices which in combination with the proposed expansion is necessary to establish profitable operations at Kariba.

Macro-economic forecasts appear to continue to display non-purchase price parity relationships whereby local Zambian inflation of 9% and a weakening US\$ continue to maintain upward pressure on US\$ denominated operating costs.

### **3.6 Risks and Opportunities**

The principal risks in respect of commodity prices and macro-economics are:

- the risk that continued local inflation and US\$ weakening results in further increases in US\$ denominated operating expenditures; and
- the risk that the substantial increases in coloured gemstone production at Kagem have a negative impact on unit prices given the probable material percentage contribution of Zambia to global production of rough emerald and potentially creating an oversupply.

The principal opportunities in respect of commodity prices are:

- that unit prices in the upper grade categories for emeralds continue to improve based on historical trends; and
- that establishment of the cutting and polishing centres in India to enable direct participation in the apparently significant value uplift which results from participation in the wholesale coloured gemstone market, specifically for emerald: creating an increase in steady and reliable supply which increases demand; and increasing final buyer's appetite for Fabergé branded gemstones, again increasing price and demand.

## **4 GENERAL SRK COMMENTS**

### **4.1 Introduction**

The following section includes general comments on technical aspects which, where applicable, are considered common to all of the Gemstone Assets.

### **4.2 Mineral Resources Management**

SRK considers the current approach to Mineral Resource management to be limited and that the establishment of a formalised process is critical to enable adequate technical and economic assessments of future proposals. To date this has been hindered by the combined impact of

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limited resources as well as a commitment to establish the necessary protocols. At Kagem however, SRK notes the Company's improvements in respect of introducing formalised geological processes and the focus on application of higher quality mining practices. The current focus in these areas must be continued to further develop the Company's management systems, thereby establish the appropriate multi-disciplinary focus required to ensure continued success. Specific items to be addressed in implementing a formal Mineral Resource and Ore Reserve Management system are:

- The currently limited application and documentation of Quality Control and Quality Assurance procedures;
- The currently limited reconciliation, specifically in respect of Reaction Zones;
- The current reliance on manual methods at Kariba;
- The current limited and conceptual nature of mine design and production scheduling undertaken to substantiate the significant expansion programmes; and
- The absence of a consolidated technical document which demonstrates the technical feasibility (on a multi-disciplinary basis) and economic viability of Company forecasts such as a Life-of-Mine plan ("LoMp") or in the case of brownfield expansions a minimum of a PFS.

Key to implementing such a strategy is the development of a formal corporate policy and establishing an in-house team with sufficient capacity to develop and implement the appropriate systems, ensure common practice at all operations and enable on-going reporting requirements as a listed company.

SRK has been informed by the Company that a PFS for Kagem has been initiated and is planned for completion by October 2008 to support and confirm the projections as assumed in the Strategic Plan. The scope of the PFS includes the generation of monthly, quarterly and annual mining and processing schedules to enable detailing of the operating and capital expenditure requirements. Supporting technical studies, specifically the geotechnical analysis is currently underway.

Furthermore, the Company has stated its intention to enhance its technical services group to establish formal policies and procedures with respect to Mineral Resource and Ore Reserve reporting as well as the development of internal standards for the generation of technical studies including LoMps.

### **4.3 Environmental**

SRK estimates that the Company's current environmental liabilities comprising both bio-physical closure costs and social (terminal benefits liabilities) costs are US\$15.61m. These liabilities are currently not funded and such funding is primarily dependent upon the establishment of cash positive operations through the proposed expansion at Kagem. Certain opportunities exist to limit the impact of such liabilities through sale of assets as well as the management of human resources in line with the requirements of the expansion programmes.

SRK notes however that the absence of a formalised environmental management system which would address the bio-physical components of these liabilities, if not only through better quantification, may also ensure that liabilities do not increase through continuation of poor practices. The absence of formal policies and management systems also extends to Occupational Health and Safety ("OHS") and these in combination with the environmental aspects require corrective action in order to ensure effective monitoring of their impacts.

Due to the presence of free silica, Kagem falls under the 'scheduled mines' regulations of Zambia which governs the frequency of periodic silicosis examination of its employees and requires that examinations are undertaken every year. During calendar year 2007 Kagem conducted 164 examinations. Mbuva-Chibolele and Kariba are currently classified as 'non-scheduled mines' accordingly are only required to undertake examinations once every three years. The prevalence of free silica at these operations have not to date been tested and accordingly the likelihood as to whether they will be classified as 'specified mines' is unknown.

Currently none of the mines have a well-established environmental and social management programme and the following key issues are noted:

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- **Environmental Management**, specifically the limitations in respect of the following at each of the Company's Gemstone Assets:
    - The lack of an appropriately defined environmental management system,
    - The lack of appropriate monitoring, and
    - The lack of defined closure plans which adequately address both bio-physical closure costs as well as social aspects including human resource planning and terminal benefits liabilities; and
  - **Environmental Compliance:** The Company has not developed any formal environmental or occupational health and safety policies which are then subsequently encompassed within formalised management systems. Furthermore, the lack of on-going monitoring as well as the absence of Occupational Health and Safety statistics is notable. SRK recognises that compliance to date has been largely tested against local requirements, however SRK considers that the current deficiencies would be markedly improved should broader consideration be given to international benchmarks: specifically the principals embodied within the World Bank, Equator Principles or the principles established by the ICMM.

The EPB at Kariba is outdated, does not address the current operation in any adequate detail and consequently there is no documentation against which to assess compliance. Furthermore, SRK notes that no additional environmental work has been undertaken to assess the potential impacts of the proposed expanded operations at Kariba or Kagem.

Notwithstanding the above, SRK has been informed that certain recent steps have been implemented to redress the deficiencies outlined above, specifically:

- The establishment of a Safety, Health and Environmental department staffed by an environmental officer who will be responsible for monitoring of the Company's performance against stipulated norms and initiate corrective actions;
- The recruitment of a senior level manager at the corporate level who will be directly responsible for establishing corporate policies in respect of Environmental and OHS as well as the development of a company wide environmental management plan; and
- The appointment of independent consultants to prepare an EPB inclusive of an environmental management plan for the proposed Kagem Expansion.

## 5 KAGEM

### 5.1 Introduction

This section includes discussion and comment on the following technical aspects of the Kagem emerald mine: geology; Mineral Resources; mining; mineral processing; waste rock dumps and discard facilities; infrastructure, overheads and capital expenditure; human resources and environmental. Historical and forecast tables are presented to support assumptions regarding the declaration of Mineral Resources.

Historical sales, production and cost information as presented in this section is sourced from the Company's management accounts which is based on Kagem ML's financial year (ending 31 March). SRK notes that due to various accounting practices these may be different to those included in the audited financial statements for either Kagem ML or the historical consolidation for the Company. Accordingly historical information in this section is reported to assess the validity of various technical aspects associated with the Mineral Resource statements and historical performance only.

In its Strategic Plan, the Company has indicated its intention to significantly increase production at Kagem. The principal targets comprise increasing total waste and ore mining capacity to 10.8Mtpa by July 2008 and to achieve an annualised (July 2009) processing rate of 144ktpa of material grading 80.0g/t and containing 57.6Mct of emerald and beryl combined at a cash cost of US\$0.59/g (US\$0.12/ct). The remaining capital expenditure required to facilitate the expansion is estimated at US\$13.86m excluding exploration expenditure of US\$1.39m. SRK considers that the current Strategic Plan has only been undertaken to a conceptual level and that completion of a multi-disciplinary technical study undertaken to a PFS level is required to support the

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technical feasibility and economic viability of the proposed production expansion. Furthermore, SRK notes that the economic concentrations (the Reaction Zones) of emerald and beryl are contained within some 9.5% (based on historical analysis from 1 April 2004 through 31 December 2007 inclusive) of the principal host lithological unit, where mining operations are unavoidably manual and labour intensive in order to preserve the quality of the gemstones. Accordingly further exploration and waste mining is required in order to expose the host lithological unit and in combination with supporting technical analysis of historical information to determine the 'optimal' production rate of the Reaction Zones.

## **5.2 Geology**

### **5.2.1 Geology of the Kafubu Emerald Deposits**

The Kafubu emerald deposits are situated in the NRERA which is located in the Copperbelt Province of Zambia, and covers an area of approximately 800km<sup>2</sup>. NRERA is covered by about 800 licences, of which Kagem ML's GL-713 at 43.0km<sup>2</sup> is the largest. The geology of the Copperbelt Province around NRERA is dominated by the rocks of the Zambian Copperbelt, which consists of the Neo-Proterozoic Katanga Supergroup, which can be several kilometres thick in places. The Katanga Supergroup is underlain by the Muva Supergroup, which lies unconformably on top of granites, amphibolite gneisses and quartz-biotite schists of the Lufubu Basement Complex (Palaeoproterozoic). The whole suite of rocks is deformed into a series of complexly folded synformal structures.

The rocks containing the Kafubu deposits consist dominantly of quartzites and quartz-mica schists of the Proterozoic Muva Supergroup which are sandwiched between granite gneisses of the Basement Complex and meta-sediments of the Katangan Super group which hosts the Cu-Co deposits of the Zambian Copperbelt.

Sub-concordant bodies of amphibolite and ultramafic rock (flows, sills or tuffs) also occur within the Muva schists. The ultramafics, which vary in thickness from 20m to 140m, have been altered by metamorphism and hydrothermal activity into talc-chlorite-tremolite magnetite schist (locally referred to as TMS) or talc-biotite schist (TBS). The amphibolites have also suffered varying degrees of alteration to biotite-actinolite schists.

The Kafubu emerald deposits belong to a group referred to as 'schist-hosted emeralds' which are considered to be related to mafic and ultramafic schists or unmetamorphosed ultramafic rocks in contact with felsic rocks, either pegmatoid dykes, granitic rocks, paragneisses or orthogneisses. These contacts are locally termed Reaction Zones and may be intrusive or tectonic and host the majority of economic emerald concentrations. The origin of these deposits is, however, controversial but where the emeralds occur in ultramafic rocks containing pegmatite dykes, they are explained by the interaction of these pegmatites or pneumatolitic hydrothermal Be-bearing fluids with Cr-bearing mafic or ultramafic rocks.

Emeralds are a member of the beryl group of minerals which have the chemical formula  $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$  and which show a strong prismatic habit and an imperfect (0001) cleavage perpendicular to the long axis of the crystal (basal pinacoid). They have a hardness of 7.5 to 8.0 and a specific gravity of 2.65 to 2.80. Emerald is the deep green translucent variety of beryl and results from the substitution of Cr and ferrous iron for Al in the crystal lattice.

Kafubu deposit beryls are typically white to yellowish to bluish white, while the emeralds have a moderate to strong green colouration due to low to moderate levels of  $\text{Cr}_2\text{O}_3$  in the range 0.11wt% to 0.77wt%. Typical compositional ranges reported by Seifert et al, 2004, for beryl and emerald, are listed in Table 5.1 below. Medium to dark emeralds generally have  $\text{Cr}_2\text{O}_3$  values of >0.40% while FeO is generally >1.10%. Vanadium is not mentioned in this table but there is a school of thought that this element is partly or wholly responsible for the green colouration.

**Table 5.1 Composition ranges for NRERA emerald and beryl**

Oxide	Compositional Range	
	From (%)	To (%)
SiO <sub>2</sub>	64.05%	66.23%
Cr <sub>2</sub> O <sub>3</sub>	0.11%	0.77%
Al <sub>2</sub> O <sub>3</sub>	13.96%	15.37%
FeO	0.76%	1.88%
MgO	1.55%	2.64%
Na <sub>2</sub> O	1.72%	2.22%
BeO	13.36%	13.83%

### 5.2.2 Deposit Geology

The ultramafic rocks are komatiitic in composition while the amphibolite units are basaltic to andesitic in composition. The host schists are meta-sedimentary rocks consisting of variable quantities of quartz, muscovite, biotite or phlogopite and albite. All these lithologies are cut by pegmatite dykes and sills related to faults, thrusts, shear zones and associated fractures. These pegmatites are related to post tectonic Kibaran granite intrusion but were deformed during the Pan African Lufilian tectonic event (550Ma ±50Ma).

Examination of the licence area (Figure 5.2) reveals that there are three main pegmatite trends which are north-south, northwest to southeast and east-west. These dykes and associated quartz tourmaline veins are frequently rimmed by metasomatic reaction zones up to 5m wide that are characterized by an abundance of coarse foliated black to bronzy biotite with porphyroblasts of tourmaline or actinolite and crystals or clusters of beryl and/or emerald. These Reaction Zones may contain discontinuous pockets or disseminations of emerald. In some of the smaller prospects the pegmatite contact zones contain coarsely crystalline tourmaline while the host rocks may contain disseminated crystals of tourmaline or they are completely replaced forming a tourmalinite over a distance of 10cm to 50cm.

There are several areas of emerald mineralisation within the Kagem licence area:

- **The Fibolele-Dabwisa belt hosting the Fibolele, Dabwisa and Sandwana deposits:** This belt is aligned in a north-northeast direction and is centred on a single pegmatite body. The continuity of the TMS horizon has not yet been demonstrated between the Fibolele and the Dabwisa deposit. To the north, the belt swings into an easterly direction and here it hosts the Sandwana deposit in the extreme northeast of the licence area. All pits historically operated in this area have now ceased production and a number are now flooded;
- **The Kanchule belt** is aligned east-northeast parallel to the licence boundary in the north of the licence area where the dip of the TMS is 45° and where small pegmatite bodies are reported;
- **In the Fwaya-Fwaya belt** the TMS has a drill established strike length of 2.1km, a thickness of 5m to 44m (average 16.6m) and a dip of between 10° and 22° (average 16°) to the south swinging into an easterly direction at its northerly extremity. Five small pits cover the western portion, which were historically (2002) exploited. Three additional pits have now merged and are still in production, and cover the northeastern portion of the belt; and
- **Libwente** is a large area of TMS to the northeast of the main Fwaya-Fwaya belt but appears to have a flat northerly dip. Mining operations comprising a series of five pits which continued for a six-year period and ceased in October 2007, however potential at this pit is considered reasonable given the presence of a central thick pegmatite and evidence of intense tourmalinisation of the surrounding rocks.

The main area of emerald extraction is the Fwaya-Fwaya belt, in the south of the licence area. The 2.2km long Fwaya-Fwaya belt contains five small abandoned pits at its western end but further to the east and then northeast, a large pit exists which is the product of the merger of pit four, the Chama pit and the F10 pit into what is now referred to as the FF-F10 pit.

The upper portion of the stratigraphic sequence within the Fwaya-Fwaya belt is usually represented by quartz-muscovite-biotite schists that are cut by often heavily kaolinised (friable) quartz-feldspar pegmatite dykes. This unit passes down into an amphibolite unit characterized

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by an assemblage of hornblende, feldspar and quartz or its alteration equivalents biotite-actinolite schists and chlorite-biotite-actinolite-talc schists. This amphibolite generally ranges in thickness from a few metres to 30m but is generally in the range 8m to 15m. There is a transition into the underlying TMS over which interstitial quartz and quartz feldspar veins disappear and talc becomes increasingly common. Magnetite is also present in increasing quantities but is very fine grained and its existence is only detectable by the increase in Cr content from amphibolite values of 200ppm to 300ppm to values of in excess of 700ppm in the TMS. This transition may also contain significant quantities of disseminated tourmaline and may also contain tourmalinised Reaction Zones with emerald.

The TMS unit itself contains highly variable quantities of talc, tremolite, actinolite, biotite, magnetite and tourmaline, the latter may be disseminated in quartz veins or as tourmalinite bands. The main lithologies defined are thus TBS and TMS. The latter name is largely a mine specific term which includes rocks which vary from massive moderately coarse grained talc-actinolite rocks to massive fine grained talc-magnetite rocks and vary in thickness from 1m to in excess of 30m. The TMS and the overlying amphibolites are considered to be parts of a single differentiated mafic to ultramafic sill.

The basal contact of the TMS is relatively sharp and easily located in core where it passes down into a well foliated rock described as a quartz-muscovite or quartz-sericite-biotite (phlogopite) schist cut locally by a conformable pegmatite 1m to 10m thick. Footwall rocks often display pseudomorphs after garnet and indeed these may also occur at many other levels within the TMS or overlying amphibolite.

The strike in the FF-F10 (Figure 5.3) pit changes from north-easterly to northerly in the east towards the F10 pit, the change occurring in an area of heavy pegmatite intrusion referred to as the Chama sector of the combined pit. The strata thus dip to the southeast or to the east at a dip which averages close to 15°. Figure 5.3 also shows that most of the pegmatite dykes exposed in the pit have a roughly north-south trend but they pinch, swell and branch at random and locally form a complex of dykes isolating patches of TMS and their associated Reaction Zones. In the lower portion of the high-wall of the pit, these dykes are seen to have a sub-vertical attitude and a thickness of between 1m and 48m (in the case of dyke M1). However, as these dykes pass from the amphibolite unit up into the mica schists many show a flattening of dip to the east (40° to 55°) and a tendency to branch into several thinner more erratically orientated dykes. Thin sub-concordant off-shoots may also develop adjacent to the main dykes but are of short extent. At the northern end of the F10 pit two convergent dykes are seen cutting across the flat lying meta-sediments with an easterly dip of approximately 40°. These strike concordant dykes follow the pit bottom and eventually link up with the massive discordant dykes in the Chama sector of the pit. At the south-western end of the Fwaya-Fwaya pit the TMS is disrupted by the presence of a thick east to north-easterly dipping pegmatite dyke, however, TMS is present in its footwall and continues further to the west.

Not apparent from Figure 5.3, is the occurrence of concordant pegmatite dykes which follow the footwall contact of the TMS and are generally less than a few metres thick.

The pegmatites show fine scale crystallization banding parallel to their curvilinear contacts but after 0.5m to 1.0m they pass into either very coarsely crystalline quartz and pink feldspar, or into more aplitic material. These pegmatites may also contain coarse books of muscovite, pale green beryl or pink spessartine garnet. The dykes and adjacent rocks are cut by irregular to reticulate networks of quartz veins (sometimes smokey quartz) locally with tourmaline.

In a 325m strike length along the toe of the high-wall between dykes M1 and M3 a total dyke width of 109.5m was measured representing a 33.7% reduction of the TMS volume over this length. Similarly the percentage of dykes along the toe of the Fwaya-Fwaya pit high-wall is estimated at approximately 15%. The equivalent figure for the F10 pit is difficult to determine because of the strike concordant nature of the dykes here, however a figure of 5% would be of the right order of magnitude. Whether these percentages could be extrapolated into the adjacent un-mined areas is uncertain as there is evidence of a southward thinning of the dykes.

Though important in the localisation of pockets of emerald within marginal Reaction Zones, they also effectively cut-out large portions of the TMS unit. Localised areas of heavily altered and mineralised TMS may be found trapped within pegmatites or between branching dykes.

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Emerald and beryl occur where the TMS unit has been intersected by pegmatitic dykes (Figure 5.4) and quartz-tourmaline veins and are rarely found outside this unit. The TMS has been subjected to metasomatic addition of K, Al, Fe, Li, Rb and Be and removal of Ca, Si, and H<sub>2</sub>O. K-Ar ages of muscovite associated with emerald and beryl are close to 450Ma and thus are late Pan African and post metamorphic in age. Oxygen isotope ( $\delta^{18}\text{O}$ ) analysis on associated quartz and tourmaline indicate three main phases of mineralisation but the main phase has a temperature range of 350°C to 450°C and a pressure range of 150MPa to 450MPa. Fluid inclusions contain aqueous to aqueous-carbonic fluids with salinity up to 34wt% NaCl. During this last phase of pegmatite activity, Cr ( $\pm$ V) and Fe from the chrome magnetites of the TMS were incorporated into the crystallizing beryl to form emerald.

Experience has shown that the most favourable location for emeralds in the case of the FF-F10 pit is the triple junction between steep dipping discordant pegmatite dykes, concordant footwall dykes and the TMS unit itself. Thick pegmatite dykes are most likely to develop thick reaction zones and good quantities of emerald.

### **5.3 Mineral Resources**

Mineral Resource estimation at Kagem is largely undertaken using computerised wireframing techniques to produce geological models of the TMS to establish volumes from which manual adjustments, largely based on historical production parameters are made to determine Reaction Zone tonnages and grades for emerald and beryl separately. SRK's comments in the following sections are based on the estimate reported by the Company as at 1 January 2008 and subsequently adjusted where considered appropriate.

#### **5.3.1 Quantity and Quality of Data**

Exploration activity in the licence area has largely been via a limited amount of pitting (trial mining) or drilling, most of which has been undertaken since 1998. Table 5.2 summarise the drill holes in Gemfields' database up to September 2007 for each of the areas described above.

Prior to 1998, mining had been concentrated in the FF VI pit but, following a ground magnetometer survey, it was realised that the TMS extended further to the northeast for at least 550m. This was confirmed in June 1998 by the drilling of two holes and trenching which proved the existence of TMS, pegmatites and small emeralds. A follow-up drilling programme led to the development of the currently operating F10 and Chama pits. The economic importance of these pits is reflected in the amounts of drilling concentrated in these areas.

The holes within the FF-F10 pit area have been drilled to an average depth of approximately 61m and at spacing of 30m to 60m along lines 16m to 25m apart and with azimuths of between 83° and 110° though in the north the lines are on a bearing of 139°. Holes range in inclination from vertical to 45° to the west and their layout was largely influenced by the need to determine the continuity and thickness of the TMS formation.

The totals below include five exploration holes that were drilled with a combined depth of 786.5m further to the east and south of the FF-Chama pit in early 2007. None, however, fell to the immediate east of the F10 pit. This drilling indicated the existence of the TMS down to a footwall depth equivalent to the 1,000m RL (range of intersections 1,000.7m RL to 1,088.8m RL). These holes were too widely spaced to confirm continuity of the TMS and its thickness variations or to assess whether significant pegmatite dykes and quartz-tourmaline veins existed to encourage the belief that economic concentrations of emeralds may exist.

**Table 5.2 Kagem drill hole database as at 30 September 2007**

Prospect/Pit	Holes (No)	Drilled (m)	(m/hole)	Period
Fibolele	12	637	53	1998 to Sep 2007
Dabswina	15	1,031	69	From June 1999
Sandawana	17	935	55	2006 to 2007
Libwente	53	2,760	52	1999 to Nov 2006
Lunshingwa	4	247	62	2004
FF I	4	135	34	not available
FF II	4	236	59	1999 and 2002
FF III	18	1,058	59	1999 and 2002
FF IV	4	336	84	1998 to 1999
FF V	7	336	48	1998 to 1999
FF VI	75	5,031	67	From 1998
F10	<u>101</u>	<u>6,550</u>	<u>65</u>	From 1998
	<b><u>314</u></b>	<b><u>19,292</u></b>	<b><u>61</u></b>	

All holes aim to intersect the TMS unit at NQ size and, unlike previous holes, all are being internally surveyed using a down-hole camera at 20m to 30m intervals to track any possible unintentional deflection. Drill hole collars are surveyed using Stratus differential GPS.

Core logging procedures and log formats have been audited by African Mining Consultants (“AMC”) who are also contracted to undertake all geotechnical logging to a high standard and in great detail. All core is being photographed on a box by box basis at the drill site before transport to give a record of the quality of the core as drilled. New metal core boxes have been ordered to ensure that all new core can be stored safely and not suffer from the effects of box failure caused by handling, weather or termites. All new core and old core selected for re-logging and analysis will be stored in a new core shed that is currently nearing completion. Though the core does not need to be stored in a secure shed, the site is being surrounded by a new security fence and is also guarded by the Zambian paramilitary force contracted security guards.

Core recoveries achieved by the four rigs cannot yet be fully quantified or audited however SRK notes that core recovery information is continually being recorded for all new drill holes. Core recoveries in the first 8 holes to be completed ranged between 93.45% and 99.95% through the TMS horizon though in one hole it did drop to 79.33% due to the presence of an internal pegmatite whose friable nature resulted in heavy core loss. This is a significant aspect of any Quality Assurance and Quality Control (“QA/QC”) protocol and a detailed study will have to be made at a later date. Good core recovery in the pegmatites and TMS intersections is particularly important. In the case of old holes, core recovery data has not been routinely recorded though it is available for specific lithological units taken from randomly selected holes within the Kagem licence area. With the exception of the expected low recoveries in the soil horizon, average values range from 59% to 90% with the latter value being in the TMS/TBS lithologies. The poor recovery in the pegmatites is a concern as it makes thickness measurements difficult and also an assessment as to whether they are conformable or discordant dykes.

Examination of the drill hole database and of drill logs in the field indicated that good quality geological information is being recorded by geologists and the whole process independently audited. Summary logging of four holes by SRK revealed that lithological identifications are accurate as are depth measurements of geological formations.

Limited sampling was undertaken in the past other than for specific gravity. However, the introduction of analyses for Cr, V, FeO, Be, Mg and magnetite content in order to determine the emerald bearing potential of an intersection via the calculation of a Fertility Index, now makes this imperative.

The sampling protocol requires that sampling be controlled by lithological contacts but that within these, the samples should, as far as possible, be on one metre intervals. As well as the TMS, sampling is required to cover the immediate hangingwall and footwall formations. At the moment, core is transported to Kitwe for cutting but, as this is not a satisfactory arrangement because of the condition of the roads, a new diamond saw has been ordered for use at the mine

site. For each drill hole sample batch, a Standard and a Blank must be added to monitor analytical precision and potential contamination. The internal standards have been produced from 75kg of TMS from the pit which has been crushed, pulped and thoroughly homogenized by Alfred H Knight International Limited (Zambia) (“Alfred H Knight”) in their laboratories in Kitwe and then sent to Alex Stewart Group Limited laboratories (“Alex Stewart”) in Kalulushi where 10 separate analysis were undertaken for Cr, Fe and V. Both are internationally accredited laboratories with good reputations. The “Blanks” were obtained from fresh mica schist and treated in the same way.

Routine analysis is to be undertaken by Alfred H. Knight with low, medium and high values being selected at random for repeat analysis. After four or five holes have been analysed, 10% of the samples will be sent to Alex Stewart for referee analysis. None of the QA/QC analysis is available for review by SRK as analytical work has only just commenced.

The Company’s exploration manager is charged with the responsibility of ensuring that all quality control procedures are followed and the results regularly reviewed.

Specific gravity measurements were available for previous ‘resource’ tonnage estimates however all were from samples taken from relatively shallow depths of less than 40m. Though as yet there is no evidence for increasing densities with depth as the degree of weathering declines, sampling is currently being undertaken on new core from exploration holes as part of a quality control exercise. No information is yet available to determine whether any change is necessary to accepted density values for each rock type.

### 5.3.2 Geological modelling, grade and tonnage estimation

The geological modelling process at Kagem is largely focused on defining three dimensional solids (Figure 5.5) based on the drill hole information database using the Surpac software. Sectional interpretation is initially used to define the geological contact zones of the TMS with the current interpretation using drill hole information displayed on 11 section lines established along the strike of the current open-pit. Currently, no attempt is made to define lithologies within the TMS, specifically Reaction Zone and largely barren pegmatite material. SRK however considers that, following implementation of targeted exploration drilling, it will be possible to locate the main pegmatite bodies more precisely.

The host rock and TMS volumes are then converted to tonnage by application of the current densities of 2.20t/m<sup>3</sup> and 2.85t/m<sup>3</sup> respectively. The value ascribed to the TMS volume accounts for the percentage (20%) of pegmatite with density (2.40t/m<sup>3</sup> to 2.50t/m<sup>3</sup>) which occurs within the TMS, the density of which ranges from 2.90t/m<sup>3</sup> to 3.00t/m<sup>3</sup>.

Economic concentration of emerald and beryl is largely contained within the Reaction Zones as previously defined. Historical information in this regard is largely limited to TMS tonnage mined and Reaction Zone tonnage mined in any given reporting period. Analysis of historical results for financial years ending 31 March 2005, 2006, 2007 and the 9-month period to December 2007 yields the data as included in Table 5.3. On this basis the estimate of Reaction Zone percentage is 9.5% and the Reaction Zone grades are estimated at 24.8g/t for emerald and 67.8g/t for beryl, yielding a combined grade of 92.6g/t. SRK notes however that production in the 9-month period to 31 December 2007 was significantly impacted by the processing of ore from the historical stockpiles. Undertaking a similar analysis for the periods ending 31 March 2006 and 2007, yields a grade of 34.1g/t for emerald and 86.9g/t for beryl, yielding a combined grade of 121.1g/t.

**Table 5.3 Reaction Zone historical production statistics**

Operating Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>	Strategic Plan <sup>(2)</sup>
TMS Tonnage mined	(kt)	375	188	336	155	1,440
Reaction Zone Mined	(kt)	25	23	20	32	144
Reaction Zone Factor	(%)	6.6%	12.5%	6.0%	20.5%	10.0%
<b>Grade</b>	<b>(g/t)</b>	<b>99.99</b>	<b>120.94</b>	<b>121.18</b>	<b>47.51</b>	<b>80.0</b>
emerald	(g/t)	19.5	30.7	38.1	16.1	22.6
beryl	(g/t)	80.5	90.3	83.0	31.4	57.4

(1) 9-month period to 31 December 2007.

(2) Peak annual production rates.

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The possible grade of emerald and beryl and their relative importance, is based on the extrapolation of the recovery of these minerals from the tonnage of Reaction Zone processed during this (financial year ending 31 March 2006 and 2007) period. This includes mineral obtained from in-pit chiselling as well as that obtained from the processing plant. Accordingly given the complexity associated with estimate of individual Reaction Zone tonnage as well as the concentration of emerald and beryl within such Reaction Zones, SRK has based the current Mineral Resource estimate on what is effectively a large scale bulk sample combined with the geological interpretation of the TMS lithological unit as described above.

The parameters applied in this respect are: a Reaction Zone Factor (“RZF”) of 10.0% for conversion of TMS tonnage to Reaction Zone tonnage; an emerald grade of 22.6g/t; and a beryl grade of 57.4g/t. These are derived from the Company’s combined emerald and beryl grade estimate of 80.0g/t and historical (2006 and 2007) percentage contribution to grade with emerald at 28.2% and beryl at 71.8%.

SRK considers that, in the future, it will be possible to estimate in a semi-quantitative way the potential of this horizon to contain good quality emerald in economic concentrations by assigning point scores to a series of factors. The factors which are considered to impact on the localisation of emerald and beryl are:

- the number of pegmatite contacts within the TMS (typically less than 4);
- the percentage of the Reaction Zone material within the TMS based on intersected lengths;
- the grade of chromium subdivided into 6 classes covering the expected compositional range of this element (700ppm to 1,500ppm) within the TMS lithology;
- the presence of disseminated or vein tourmaline if no pegmatites are present (indicating the proximity of pegmatites to the drill hole) and in which case a score of 1 is assigned; and
- the presence of a footwall concordant pegmatite in which case an additional score of 1 point is assigned.

The accumulation of these scores for each drill hole intersection produces a value for the Fertility Index (the “FI”) which can be presented in contour or block model format on mine plans. Combined with similar maps of the vertical thickness of the TMS unit derived by regular slicing of the solid model of this horizon, it is then possible to provide something that is effectively equivalent to a more typical mine resource estimate. Emerald grades based on recent production history can then be assigned to ranges of FI to facilitate subdivision by grade. The grade to be assigned will eventually be based on the FIs of old drill holes within the current pit after comparison with realized grades from the areas within which they lie.

This method has not yet been applied as it is under development and requires the completion of the present drilling campaign and re-sampling and study of old holes. This will be available for the additional technical studies underway and to be completed by 30 June 2008. Its effectiveness will be dependent on management’s ability to introduce better tracking of emerald production from different areas of the pit over the next six to nine months.

### **5.3.3 Classification**

SRK notes that emerald deposits, owing to the distribution of economic concentrations of Reaction Zones are notoriously difficult to sample, estimate and classify as current drilling techniques are inappropriate to provide sufficient data density to enable direct estimation of Reaction Zone tonnage and grade. Accordingly, drilling as currently employed can only provide information to determine the volume of TMS and its location relative to other lithology and geological structures. Derivation of Mineral Resources is largely dependent on the availability of the results of bulk samples or equivalent such as historical production statistics.

There is strong evidence from the drilling that the TMS horizon was originally continuous with a uniform easterly to south-easterly dip, and that thick pegmatites have later intruded this horizon interrupting its continuity. The location of these pegmatites and their dip, strike and thickness, is not yet known with any reasonable degree of confidence. This situation may be resolved by future drilling. The discontinuous Reaction Zones lie along the contacts of the pegmatites where they cut the TMS horizon but their thickness and grade are highly variable and their exact location very difficult to predict.

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All the above uncertainties, and the use of extrapolated grade and geological information from the pit, require that only an Inferred Mineral Resource category be assigned to the resources calculated down to the 1,075m level despite a density of drilling in some areas which would normally support an Indicated Mineral Resource status. Below this level, exploration is ongoing and little information is yet available to model the TMS with any degree of confidence.

#### **5.3.4 Selective Mining Units**

Mining practice at Kagem dictates that selectivity is largely based on the dimensions of individual Reaction Zones which, based on historical performance, may range up to a maximum of about 2kt (12kt processed in a year with five to six Reaction Zones operating). Furthermore, the limited volume and the requirement for manual extraction within the Reaction Zones, largely dictates that dilution and other modifying factors are not applicable.

#### **5.3.5 Grade control and reconciliation**

Historical practice indicates that both grade control and reconciliation is poor with over-emphasis on TMS and inadequate focus on the mining process as applied on an individual Reaction Zone level. Furthermore, the historical lack of monitoring, collation and analysis of basic data in this respect substantially hinders the ability to assess the potential for the prevalence of Reaction Zones and the associated economic concentration of emerald and beryl. Accordingly the current Mineral Resource estimate has largely focused on historical production statistics as reported from the process plant and TMS tonnages as mined.

SRK notes and supports the Company's stated intention to improve substantially the process in this respect with specific focus on the routine surveying of Reaction Zones with respect to location, dimensions, volumes and tonnages, production rate, and emerald and beryl content. This, in conjunction with appropriate analysis of all available historical information, will substantially improve the understanding of the prevalence and nature of the Reaction Zones as well as assessing the potential to increase production beyond that historically achieved.

#### **5.3.6 Economic potential**

The determination of a Mineral Resource requires consideration of the principle of 'potentially economically mineable', which, in general, is reflected by application of in-situ cut-off grades which include differentiation by mining methods (open-pit vs underground) as appropriate. Accordingly such assessments must include consideration of the following:

- Long-term commodity prices and macro-economics;
- Revenue based deductions including royalties, refining charges and metallurgical recoveries;
- Operating expenditures; and
- Modifying factors to determine in-situ components.

Furthermore, SRK has demonstrated those Mineral Resources which are deemed to be economically mineable by open-pit methods by consideration of reporting within an optimised shell which is based on commodity prices which incorporate the long-term consensus forecast as well as consideration of a premium for Mineral Resource reporting.

**Long term commodity prices and macro-economics:** SRK notes that the Company's current reporting of sales revenue is derived from the auction results. The auction results report total combined emerald and beryl, and accordingly no distinction is made in respect of emerald and beryl sales separately. Analysis of historical prices received is therefore not possible for the separate gemstone categories.

Analysis of commodity prices is normally based on historical price-demand-supply assessment to establish a price relationship which in conjunction with forecast demand-supply analysis is then used to generate a price profile. The short and longer term component of this profile is then benchmarked against: the consensus market forecast sourced from the median of various research analysts; as well as the last three years' average price. In the case of gemstones, and specifically the emerald and beryl sector, historical rough prices are difficult to source.

Accordingly, SRK has largely relied on the historical prices for combined emerald and beryl sales as recorded by the Company (Table 5.4 below) and benchmarked this against the current long-term price forecast as suggested by the Company.

**Table 5.4 Kagem: historical sales data**

Statistic	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>	3-Year Average
emerald and beryl Sales	(kg)	2,280	2,740	2,983	1,398	2,366
	(Mct)	11.4	13.7	14.9	7.0	11.8
Sales Revenue	(US\$k)	6,421	9,509	12,659	8,496	9,929
Sales Price	(US\$/g)	2.82	3.47	4.24	6.08	4.20
	(US\$/ct)	0.56	0.69	0.85	1.22	0.84

(1) 9-month period to 31 December 2007.

Furthermore, SRK recognises that in respect of reporting Mineral Resources, SRK considers a 33% premium to the long term price to be appropriate which would by definition result in a reduction in an in-situ cut-off grade of 25%. Accordingly SRK notes the following:

- The sales weighted average price achieved by the Company for a three year period ending 31 December 2007 is US\$4.20/g;
- The simple month weighted average price achieved by the Company for a three year period ending 31 December 2007 is US\$4.46/g; and
- Factoring a 33% increase to the former and latter yields a range of between US\$5.58/g and US\$5.93/g.

The Company has assumed a long term emerald and beryl price of US\$5.00/g and SRK accordingly recommends using a long term emerald and beryl price of US\$6.00/g for the purpose of reporting Mineral Resources only.

Furthermore, SRK has also analysed the following historical macro-economic parameters in respect of the exchange rate of the ZMK against the US\$ and US CPI as well as ZM CPI. In the three-year period from 1 January 2005 through to 31 December 2007 inclusive the following apply:

- The exchange rate of the ZMK against the US\$ has ranged from 3,707 to 4,417, yielding an average of 4,002;
- The US CPI has ranged from 1.3% to 4.7% reported monthly on a 12-month basis, yielding an average of 3.2%; and
- The ZM CPI has ranged from 7.9% to 19.5% reported monthly on a 12-month basis yielding an average of 12.7%.

SRK notes that whilst commodity prices have increased significantly, operating costs are likely to sustain further pressure in US\$ terms due to the strengthening of the ZMK against the US\$ and increasing inflation indices.

**Revenue deductions:** Determination of recoverable revenue requires consideration of the following mineral processing recovery, royalties and selling charges. In this respect SRK notes that no deduction is made for process recovery (note that grades are based on historical production), royalties are assumed at 5% as defined in the 2008 Act, and no direct selling charges are levied in relation to commodity price. An additional 5% of sales revenue is deducted as a management fee which is payable by Kagem to the Company.

**Operating expenditures:** Historical operating expenditures as reported at Kagem are stated in Table 5.5 below, as are the parameters assumed by the Company in the Strategic Plan. SRK has considered the technical parameters as incorporated in the Strategic Plan for the purpose of determining potentially economically mineable resources. This, results in the following: mining costs are noted at US\$2.33/t mined; US\$4.88/t processed; and US\$16.25/t processed for general and administration. Assuming a RZF of 10.0% this results in costs per tonne TMS of US\$0.49/t for processing and US\$1.63/t processed for general and administration expenses.

**Table 5.5 Kagem: historical operating expenditures**

Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>	Strategic Plan <sup>(2)</sup>
Mined Tonnage	(kt)	1,290	1,684	2,705	1,684	10,800
TMS Tonnage	(kt)	375	188	336	155	1,440
RZ Mined Tonnage	(kt)	25	23	20	32	144
Waste Tonnage	(kt)	915	1,495	2,369	1,529	9,360
<b>Processed Tonnage</b>	<b>(kt)</b>	<b>17</b>	<b>13</b>	<b>19</b>	<b>40</b>	<b>144</b>
Old Plant	(kt)	17	13	12	15	0
New Plant	(kt)	0	0	6	25	144
<b>Unit Costs — Reaction Zone</b>						
Mining	(US\$/t <sub>mined</sub> )	1.31	2.02	1.36	1.98	2.33
Processing	(US\$/t <sub>processed</sub> )	146.50	213.69	161.33	88.66	4.88
General & Administration	(US\$/t <sub>processed</sub> )	<u>106.65</u>	<u>155.91</u>	<u>141.94</u>	<u>48.74</u>	<u>16.25</u>
<b>Total</b>	<b>(US\$/t<sub>processed</sub>)</b>	<b><u>351.43</u></b>	<b><u>635.46</u></b>	<b><u>498.04</u></b>	<b><u>220.66</u></b>	<b><u>196.23</u></b>
<b>Unit Costs — TMS</b>						
Mining	(US\$/t <sub>TMS</sub> )	4.49	18.10	10.92	21.55	17.51
Processing	(US\$/t <sub>TMS</sub> )	6.69	14.54	9.05	22.95	0.49
General & Administration	(US\$/t <sub>TMS</sub> )	<u>4.87</u>	<u>10.61</u>	<u>7.96</u>	<u>12.62</u>	<u>1.63</u>
<b>Total</b>	<b>(US\$/t<sub>TMS</sub>)</b>	<b><u>16.05</u></b>	<b><u>43.25</u></b>	<b><u>27.92</u></b>	<b><u>57.13</u></b>	<b><u>19.62</u></b>
<b>Operating Expenditure</b>						
Mining	( ZMKm)	7,577	10,926	15,245	12,504	96,574
Processing	(ZMKm)	11,294	8,781	12,628	13,316	2,690
General & Administration	(ZMKm)	<u>8,222</u>	<u>6,407</u>	<u>11,110</u>	<u>7,320</u>	<u>8,962</u>
<b>Total</b>	<b>(ZMKm)</b>	<b><u>27,093</u></b>	<b><u>26,114</u></b>	<b><u>38,983</u></b>	<b><u>33,140</u></b>	<b><u>65,097</u></b>
<b>Exchange Rate</b>						
	<b>(US\$:ZMK)</b>	<b>4,500</b>	<b>3,205</b>	<b>4,150</b>	<b>3,750</b>	<b>3,830</b>
Mining	(US\$m)	1.68	3.41	3.67	3.33	25.22
Processing	(US\$m)	2.51	2.74	3.04	3.55	0.70
General & Administration	(US\$m)	<u>1.83</u>	<u>2.00</u>	<u>2.68</u>	<u>1.95</u>	<u>2.34</u>
<b>Total</b>	<b>(US\$m)</b>	<b><u>6.02</u></b>	<b><u>8.15</u></b>	<b><u>9.39</u></b>	<b><u>8.84</u></b>	<b><u>28.26</u></b>

(1) 9-month period to 31 December 2007.

(2) Peak production annual operating statistics.

**Modifying factors:** No dilution or other grade adjustment factors are deemed applicable.

**Cut-off grade calculations:** Table 5.6 gives the resulting cut-off grade calculations as determined by SRK for open-pit mining methods at a range of commodity prices. The resulting cut-off grades are presented per tonne of Reaction Zone with TMS noted for comparative purposes only. SRK also notes that the unit costs assume a RZF of 10.0% and that no determinations for an appropriate cut-off grade has been determined for underground mining methods as the Company currently considers this potential to be limited. Marginal cut-off grades assume that only 50% of the general and administration costs would be applicable for a processing only operation.

**Table 5.6 Kagem: open-pit cut-off grade calculations**

Commodity Price	Units	Commodity Price cut-off grade calculations				
		2.0	3.0	5.0	6.0	7.0
emerald and beryl	(US\$/g)	2.0	3.0	5.0	6.0	7.0
	(US\$/ct)	0.4	0.6	1.0	1.2	1.4
Royalty and Management Fee	(%)	10%	10%	10%	10%	10%
Recovered Revenue	(US\$/g)	1.8	2.7	4.5	5.4	6.3
<b>Operating Expenditure</b>						
Operating	(US\$/t <sub>RZ</sub> )	23	23	23	23	23
Marginal	(US\$/t <sub>RZ</sub> )	13	13	13	13	13
<b>Cut-off-Grade (Reaction Zones)</b>						
Operating — OCOG	(g/t <sub>RZ</sub> )	13.0	8.7	5.2	4.3	3.7
Marginal — MCOG	(g/t <sub>RZ</sub> )	7.2	4.8	2.9	2.4	2.1
<b>Cut-off-Grade (TMS)</b>						
Operating — OCOG	(g/t <sub>TMS</sub> )	2.5	1.6	1.0	0.8	0.7
Marginal — MCOG	(g/t <sub>TMS</sub> )	0.7	0.5	0.3	0.2	0.2

(1) Abbreviations: OCOG (Operating cut-off grade); MCOG (Marginal cut-off grade).

**Grade-tonnage curve analysis:** Grade interpolation is limited to reliance on historical mining grades as previously described and as this is a single grade, determination of grade tonnage curves is not appropriate. Notwithstanding this limitation, SRK has undertaken a series of pit optimisations in order to ascertain that which is contained within an open-pit at the stated long-term commodity price assumptions. Table 5.7 gives the results of the pit-optimisation exercise for various long term price scenarios. In summary the results indicate that at the proposed long term price range (US\$5.0/g to US\$6.0/g) there is limited if no impact on the overall tonnage of TMS mined within the individual shells.

Figure 5.1 shows the progression of the various Whittle shells (assuming a overall slope angle of 50°) with increasing commodity price and further indicates the potential for down-dip extensions to the TMS which may further increase the currently defined Inferred Mineral Resource.

**Table 5.7 Raw Whittle shell results**

Commodity Price <sup>(1)</sup>		TMS <sup>(2)</sup>			Reaction Zone <sup>(3)</sup>			Waste Mined			Stripping Ratio	
(US\$/g)	(US\$/ct)	(Mt)	(g/t)	(Mct)	(kt)	(g/t)	(Mct)	(Mt <sub>OVb</sub> )	(Mt <sub>TMS</sub> )	(Mt <sub>Total</sub> )	(t <sub>waste</sub> :t <sub>RZ</sub> )	(t <sub>waste</sub> :t <sub>TMS</sub> )
2.50	0.50	9.50	8.0	379.8	950	80.0	379.8	21.03	8.55	29.57	31.1	2.2
3.00	0.60	11.82	8.0	472.8	1,182	80.0	472.8	32.07	10.64	42.71	36.1	2.7
3.50	0.70	13.38	8.0	535.1	1,338	80.0	535.1	41.23	12.04	53.27	39.8	3.1
4.00	0.80	13.83	8.0	553.3	1,383	80.0	553.3	44.51	12.45	56.96	41.2	3.2
4.50	0.90	14.14	8.0	565.5	1,414	80.0	565.5	46.96	12.72	59.69	42.2	3.3
5.00	1.00	14.41	8.0	576.3	1,441	80.0	576.3	49.47	12.97	62.43	43.3	3.4
5.50	1.10	14.56	8.0	582.4	1,456	80.0	582.4	51.15	13.11	64.25	44.1	3.5
<b>6.00<sup>(4)</sup></b>	<b>1.20</b>	<b>14.62</b>	<b>8.0</b>	<b>584.8</b>	<b>1,462</b>	<b>80.0</b>	<b>584.8</b>	<b>51.86</b>	<b>13.16</b>	<b>65.02</b>	<b>44.5</b>	<b>3.5</b>
6.50	1.30	14.84	8.0	593.8	1,484	80.0	593.8	54.76	13.36	68.12	45.9	3.8
7.00	1.40	15.07	8.0	602.8	1,507	80.0	602.8	57.97	13.56	71.54	47.5	3.8
7.50	1.50	15.08	8.0	603.1	1,508	80.0	603.1	58.09	13.57	71.66	47.5	3.9
8.00	1.60	15.12	8.0	604.8	1,512	80.0	604.8	58.77	13.61	72.37	47.9	3.9
8.50	1.70	15.17	8.0	606.6	1,517	80.0	606.6	59.59	13.65	73.24	48.3	3.9
9.00	1.80	15.26	8.0	610.2	1,526	80.0	610.2	61.31	13.73	75.04	49.2	4.0
9.50	1.90	15.28	8.0	611.1	1,528	80.0	611.1	61.73	13.75	75.48	49.4	4.0
10.00	2.00	15.30	8.0	612.0	1,530	80.0	612.0	62.22	13.77	75.99	49.7	4.1

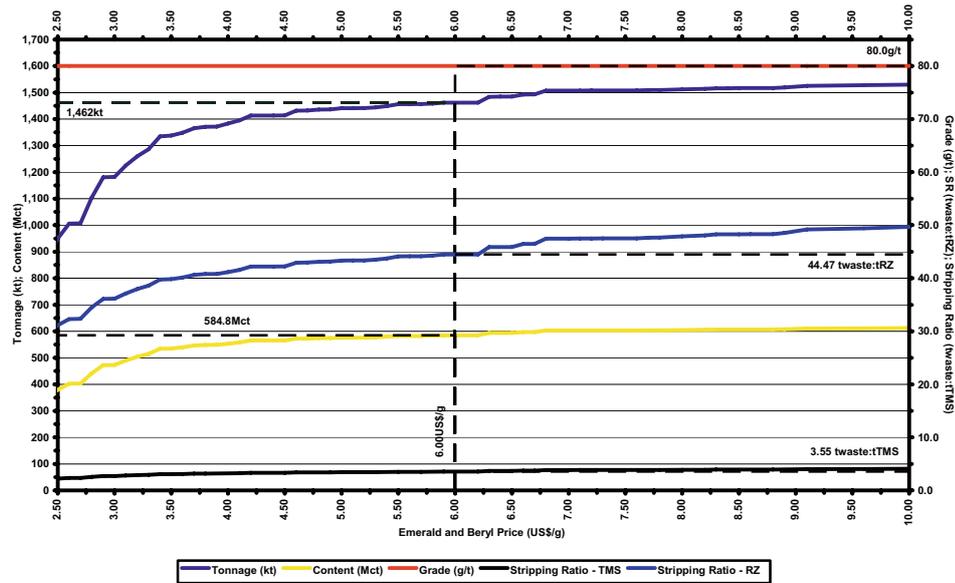
(1) Average commodity price for emerald and beryl combined.

(2) Presented only for the purpose of demonstrating block model parameters.

(3) Inferred Mineral Resources contained within raw Whittle shells corresponding to various long-term commodity prices.

(4) Long-term commodity price used to determine potentially economically mineable Mineral Resources.

**Figure 5.1 Kagem: price sensitivity of open-pittable Mineral Resources**



### 5.3.7 Mineral Resource statements

Table 5.8 presents the current Mineral Resource statement for Kagem. The Mineral Resource as presented is based on geological modelling of the TMS as undertaken by the Company, application of grade and RZFs based on historical mining performance and adjustments by SRK as deemed appropriate. SRK considers that Table 5.8 as presented is reported in accordance with the JORC Code. In presenting this Mineral Resource the following apply:

- Mineral Resources are quoted at appropriate in-situ economic cut-off grades which satisfy the requirement of ‘potentially economically mineable’ for open-pit mining. Furthermore, the commodity price incorporated into the cut-off grade calculations, for derivation of optimised shells, is US\$6.00/g (US\$1.20/ct) for emerald and beryl combined; and
- All Mineral Resources are quoted at 100%, and derivation of attributable Mineral Resources would necessitate application of the Company’s 75% equity interest.

Table 5.9 presents an indication of the Mineral Resource at various commodity prices between US\$2.5/g and US\$10.0/g.

As at 1 January 2008, SRK notes that Kagem has JORC Code compliant Mineral Resources of 1,462kt grading 22.6g/t emerald and 57.4g/t beryl and containing 164.9Mct of emerald and 419.9Mct of beryl.

**Table 5.8 Kagem: Mineral Resource statement (1 January 2008)<sup>(1)</sup>**

Mineral Resources	Tonnage ( kt )	Grade (g/t emerald)	Grade (g/t beryl)	Grade (g/t Total)	Content (Mct emerald)	Content (Mct beryl)	Content (Mct Total)
<b>Inferred</b>							
open-pit	<u>1,462</u>	<u>22.6</u>	<u>57.4</u>	<u>80.0</u>	<u>164.9</u>	<u>419.9</u>	<u>584.8</u>
<b>Subtotal</b>	<b><u>1,462</u></b>	<b><u>22.6</u></b>	<b><u>57.4</u></b>	<b><u>80.0</u></b>	<b><u>164.9</u></b>	<b><u>419.9</u></b>	<b><u>584.8</u></b>
<b>Mineral Resources</b>							
open-pit	<u>1,462</u>	<u>22.6</u>	<u>57.4</u>	<u>80.0</u>	<u>164.9</u>	<u>419.9</u>	<u>584.8</u>
<b>Total Mineral Resources</b>	<b><u>1,462</u></b>	<b><u>22.6</u></b>	<b><u>57.4</u></b>	<b><u>80.0</u></b>	<b><u>164.9</u></b>	<b><u>419.9</u></b>	<b><u>584.8</u></b>

(1) No Measured or Indicated Mineral Resources are defined at Kagem.

**Table 5.9 Kagem: Mineral Resource sensitivity (1 January 2008)**

<b>Commodity Prices</b>	<b>Units</b>							
Emeralds and Beryl	(US\$/g)	2.5	4.0	5.0	6.0	7.0	8.0	10.0
	(US\$/ct)	0.50	0.8	1.0	1.2	1.4	1.6	2.0
<b>Mineral Resources</b>								
<b>Tonnage – o/p</b>	<b>(kt)</b>	950	1,383	1,441	1,462	1,507	1,512	1,530
Grade	(g/t Total)	80.0	80.0	80.0	80.0	80.0	80.0	80.0
	(g/t emerald)	22.6	22.6	22.6	22.6	22.6	22.6	22.6
	(g/t beryl)	57.4	57.4	57.4	57.4	57.4	57.4	57.4
Content	(Mct Total)	379.8	553.3	576.3	584.8	602.8	604.8	612.0
	(Mct emerald)	107.1	156.0	162.5	164.9	170.0	170.5	172.5
	(Mct beryl)	272.8	397.3	413.8	419.9	432.9	434.3	439.4

**5.3.8 Exploration Programme and Mineral Resource potential**

The Mineral Resource potential outside of that defined by the current Mineral Resources at Kagem is focused in the following areas:

- Down dip extensions to the currently defined Inferred Mineral Resources, specifically below the currently applied limit of 1,075m RL (125m below surface) and in the vicinity of the exploration holes drilled to date; and
- Continuing exploration associated with previously identified and in certain instances mined orebodies contained within the licence area.

Table 5.10 presents the proposed exploration programme for the 15-month period ending 30 June 2009. The planned physical activities comprise 9.7km of diamond drilling, 1,800 chemical samples and 150 specific gravity samples as well as further technical studies on geotechnical aspects, environmental and hydrological studies.

**Table 5.10 Kagem: exploration programme**

<b>Statistics</b>	<b>Units</b>	<b>Total</b>	<b>Jun-2008<sup>(1)</sup></b>	<b>2009<sup>(2)</sup></b>
<b>Activities</b>				
Drilling	(m)	9,650	4,350	5,300
In-house	(m)	4,350	1,350	3,000
Contract	(m)	5,300	3,000	2,300
Chemical Analysis	(No)	1,800	600	1,200
Specific Gravity	(No)	150	25	125
<b>Expenditures</b>				
In-house Drilling	(US\$k)	261	81	180
Contract drilling	(US\$k)	901	510	391
Chemical analysis	(US\$k)	36	12	24
Specific gravity	(US\$k)	3	1	3
Geotechnical studies	(US\$k)	30	15	15
Core storage facility	(US\$k)	20	0	20
Instruments	(US\$k)	140	40	100
<b>Total</b>	<b>(US\$k)</b>	<b>1,391</b>	<b>659</b>	<b>733</b>

(1) 3-month period ending 30 June 2008.

(2) Expenditures cease in March 2009.

The metres drilled proposed in the original programme are distributed as noted below, accordingly some 4,850m of drilling has been completed from November 2007 through 31 March 2008.

- F10 extension comprising some 3,000m for resource definition;
- FF extension comprising some 5,000m for resource definition;
- FF-F10 extension comprising some 1,500m for pegmatite drilling;

- 
- Libwente comprising some 2,500m for exploration; and
  - Dabwisa comprising some 2,500 for exploration.

The FF-F10 drilling programme is largely aimed at demonstrating the eastward continuity and thickness of the TMS and assisting in assessing the Reaction Zone potential of this horizon. East-west to northwest-southwest striking drill lines have been laid out in intervals ranging between 80m and 120m and two drill sites located along each drill line (between 130m to 205m apart) whose inclination (70° to 80° west to northwest) is designed to provide a line of intersections close to the 1,150m RL: approximately 25m below the current pit floor: and a second line intersecting close to the 1,100m RL. This programme of some 24 holes has commenced using four exploration drilling rigs, two of which are contracted. In addition to these a series of inclined holes at 50° are also planned, whose target is to locate and determine the thickness and attitude of, pegmatite dykes which are considered crucial to the formation of Reaction Zones.

Completion of this drilling programme is largely focused on improving the current understanding of the Inferred Mineral Resource defined to the 1,075m RL as well as demonstrating potential extension below this depth. It will be necessary to implement a follow-up programme of in-fill drilling in selected areas to resolve uncertainties regarding geological interpretation. This aspect has been costed in the current programme and requires drilling on an intermediate grid within a 50m wide zone to the east of the current pit limit. This is particularly important east of the F10 and north of the possible extension of the M1 pegmatite dyke where few, if any, full intersections of the TMS horizon have yet been made due to truncation by the pegmatite dykes.

The airborne geophysical survey includes both radiometrics and total field magnetics and will be flown over the entire licence area to complete the coverage of the Company's combined properties. This will be a helicopter borne survey on 50m lines at a height of 25m. This survey is aimed at the location of pegmatites ( $K^{40}$  anomalies) and to investigate the continuity of the magnetic TMS horizons.

The results to 31 March 2008 (4,850m of drilling) confirm the elevation of the footwall of the TMS horizon and the continuity of this horizon to the southeast and east. In the area adjacent to the Fwaya-Fwaya VI Pit (now FF), the south-eastward dip appears to be of the order of 15°. However, as one progresses northwards adjacent to the Chama section of the pit, it flattens to 10° before changing strike to a north-northwest direction. This sudden change appears to take place along the line of a possible extension of the easterly trending sub-vertical M1 pegmatite dyke. Through this drilling has intersected some thin discordant steep dipping pegmatite dykes and north-south strikes, some of these intersections may be strike concordant, shallow dipping dykes as exposed in the F10 pit.

Three deep exploration holes in the east have intersected at least two pegmatite dykes which appear vertical and which could interrupt the continuity of the TMS to greater depth however there is some indication that the TMS may also be pinching out in this direction at a depth of 1,050m RL (150m below surface).

Examination of recent drill data indicates that within a narrow belt down to the base of the current Mineral Resource estimate (1,075m RL) from the current pit limit, the thickness of the TMS varies between 18m and 28m with the exception of the zone hosting the main pegmatite bodies between dykes M1 and M3. North of the proposed extension of the east-west pegmatite dyke M1, it would appear that the TMS is thinning as the termination of the F10 pit is reached. The presence of thin pegmatite dykes and the current lack of intersections make it difficult to determine actual thickness variations in this area. Southeast of the Inferred Mineral Resource limit there is evidence of the thinning of the TMS referred to above.

The FF-F10 pits yield large quantities of emerald from an area centred on a swarm of thick, close spaced, pegmatite dykes. The potential of the area to the east or southeast to maintain current production levels is thus dependent on the continuity of the TMS and on the presence of thick dykes. Though there is ample evidence for the former, the density and distribution of dykes still have to be determined. There is reasonable probability that the area to the south of the M2-M3 pegmatites will see the continuation of these dykes, however the area to the east still has to be investigated further. Accordingly there is a risk that emerald grades could decline and, if chromium levels in the TMS fall, the quality of emerald and beryl could also decline.

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The licence area contains a number of other TMS prospects which warrant further exploration. In particular, Libwente and Dabwisa are considered primary targets, however more precise definition of pegmatite dyke swarms is required in conjunction with investigation of the continuity of the TMS belts. The proposed airborne geophysical surveys will assist in this respect. The other smaller pits in the Fwaya-Fwaya belt (I to V) also warrant further investigation.

## 5.4 Mining Engineering

The mining operations at Kagem comprise a number of historically mined open-pits as well as the current open-pit operations situated in the Fwaya-Fwaya area. Based on the 9-month results to 31 December 2007, Kagem mines total rock at an annualised rate of 2.2Mtpa, 206kt TMS, and 42kt Reaction Zone. The associated strip ratio is estimated at  $52t_{\text{waste}} : t_{\text{Reaction Zone}}$  and  $9.88t_{\text{waste}} : t_{\text{TMS}}$  and mining operating expenditures are estimated at US\$1.98/t<sub>mined</sub>.

The mining operation to date has suffered a period of poor management, specifically in respect of maintenance of equipment and inadequate waste stripping leading to fewer Reaction Zones than planned being exposed to maintain production grades at economic levels.

Waste mining is largely mechanised and, in contrast, mining of the Reaction Zones is unavoidably manual and labour intensive. The Company has stated its intention to improve operational performance and increase mined production beyond that achieved historically, through acquisition of new equipment and implementation of appropriate management structures. Key to the success of such strategy is recognising the interdependency between waste mining to expose the shallow dipping TMS lithology and location of the relatively smaller (10.0% of TMS volume) steeply dipping Reaction Zones which contain the economic concentrations of emerald and beryl.

### 5.4.1 Mining Access and Mining Method

Current mining operations are focused on the Fwaya-Fwaya area of the deposit and the open-pit together with the adjacent F10 extension provides for 900m of strike length where the TMS lithology is exposed. The open-pit is currently 50m deep and the Inferred Mineral Resource is reported within an optimised shell to a depth of 125m below surface.

Abandoned pits situated in the licence area readily fill with water indicating a relatively shallow ground water table which is confirmed by the consideration regulatory documentation for the neighbouring Mbuva-Chibolele mine which records that the water table is between 8m and 10m below the surface.

The current pit design assumes an 8m high bench as well as 3m berms which with the incorporation of the haul road leads to an overall slope angle of 45° in the hanging wall. The footwall follows the relatively shallow dip of the TMS at some 14°, accordingly haul roads placed in the footwall do not impact significantly on the planned slope angles.

Overburden as well as internal waste mining is undertaken using conventional drill-blast-load-truck equipment where nine diesel driven hydraulic backhoe type excavators (2.0m<sup>3</sup> to 2.6m<sup>3</sup>) are used in conjunction with 15 medium sized (25t to 30t) articulated dump trucks (“ADTs”). The upper 15m to 20m of overburden is suitable for free-dig mining whilst all other waste is drilled (two 64mm units) and blasted. If blasting is required adjacent to or within the Reaction Zone areas handheld drilling is employed to limit potential damage to gemstones.

The steeply dipping Reaction Zones are mined using manual intensive methods using picks and shovels with the assistance of hydraulic excavators using close supervision. Mining of Reaction Zones is only undertaken in daylight hours under constant security supervision with material mined and loaded into trucks accompanied by additional security vehicles on their journey to the Kagem Plants. All large and high grade emerald stones that are hand sorted at the mining face are placed in a drop safe type container that is numbered, tagged and closed with security controlled locks.

The current mining fleet is supported by a wheel loader, bulldozer, grader and water cart. Due to the lack of operating equipment with only two excavators and six trucks operating, the Company has introduced a contractor for the waste stripping and during SRK’s site visit the mobile equipment was being used to advance a pushback to expose a deeper section of the TMS.

The Company has placed an order for significant spare parts that are required to repair the standing machines, however this will take a certain amount of time to be delivered and poor equipment availability is likely to continue for the most part of 2008. The workshop area is also in need of some improvement to enable appropriate maintenance standards to be achieved.

#### 5.4.2 Historical mining operating statistics

Table 5.11 presents the historical operating mining statistics for Kagem. Total tonnage mined including both waste and TMS lithologies has reduced significantly when compared with the results for the financial year ending 31 March 2007. This is largely the direct result of historical undercapitalisation and limited waste stripping which has reduced the availability of in-pit ore. Furthermore the overall and individual grades processed have similarly reduced owing to the processing of historically stockpiled lower grade material. Unit mining costs appear to vary in accordance with total tonnage mined with current (9 month period to 31 December 2007) statistics indicating US\$1.98/t. The re-handled material noted in Table 5.11 is historically mined material which has to be re-mined to enable waste and ore mining to continue.

During the site visit there were only two Reaction Zones being mined which is insufficient to support the targeted production rates. Historically some six Reaction Zone sites were operated concurrently and as well as supporting the achievement of the production targets assisted in maintaining a more even grade profile for the operation. SRK considers that attaining historical production rates achieved in 2007 will only be achieved once the current pushback has been completed to expose the necessary areal extent of TMS to enable location of more Reaction Zones. Accordingly prior to successful implementation of the proposed strategy, production and continuity of production will remain problematic in the short term.

**Table 5.11 Kagem: historical mining statistics**

Operating Statistics	Units	Mar-2002	Mar-2003	Mar-2004	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
<b>Total mined</b>	<b>(kt)</b>	<b>890</b>	<b>842</b>	<b>1,839</b>	<b>1,290</b>	<b>1,684</b>	<b>2,705</b>	<b>1,684</b>
TMS Tonnage mined	(kt)	118	251	246	375	188	336	155
Reaction Zone mined	(kt)	17	16	35	25	23	20	32
Waste Mined	(kt)	772	591	1,593	915	1,495	2,369	1,529
Re-handled Material	(kt)	86	114	138	152	61	113	23
Overall Mining grade	(g/t)	111.4	181.2	42.8	100.0	120.9	121.2	47.5
Reaction Zone Processed	(kt)	4	17	17	17	13	19	40
Old Plant	(kt)	4	17	17	17	13	12	15
New Plant	(kt)	0	0	0	0	0	6	25
Overall Process grades	(g/t total)	444.1	170.7	88.1	144.4	221.5	130.3	37.6
Stripping Ratio	( $t_{\text{waste}}:t_{\text{TMS}}$ )	6.57	2.36	6.49	2.44	7.94	7.04	9.88
	( $t_{\text{waste}}:t_{\text{Reaction Zone}}$ )	<u>51</u>	<u>51</u>	<u>51</u>	<u>51</u>	<u>71</u>	<u>132</u>	<u>52</u>
Mining Cost	(US\$/ $t_{\text{mined}}$ )	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>1.31</u>	<u>2.02</u>	<u>1.36</u>	<u>1.98</u>

(1) 9-month period to 31 December 2007.

#### 5.4.3 Mining aspects of the Strategic Plan

The current Strategic Plan as outlined by the Company requires total capital expenditure of US\$13.86m for Kagem of which US\$3.17m, US\$7.91m and US\$2.79m is to be expended in the three-month period to 30 June 2008, financial year ending June 2009 and the 9-month period to 30 June 2010 respectively (Table 5.12). To achieve the anticipated increase in total material mined, in excess of 10.8Mtpa by July 2008, the Company has assumed the acquisition of two additional hydraulic excavators (5m<sup>3</sup>) as well as six ADTs. SRK notes that in addition to the above some US\$2.30m is forecasted for the quarter ending 31 March 2008. Mining of the increased tonnage is assumed to be in place by August 2008. Total tonnage moved of 10.8Mtpa derived using overall utilisation of 65% will be subdivided between owner and contractor operations with the owner fleet mining capacity rated at 3.6Mtpa and the contractor's at 7.2Mtpa.

At maximum production total mining costs per tonne mined are assumed to average US\$2.33/t. Furthermore the Strategic Plan assumes that no further re-handling of historically mined material is required.

TMS material mined is assumed to reach 1.44Mtpa with a RZF of 10% yielding 144ktpa of fresh material for processing at a combined emerald and beryl grade of 80.0g/t to produce some 11.5t (57.6Mct) per annum.

Implementation of the above will require updating of the following as part of completing the PFS:

- Assessing the historical production rates of the Reaction Zones and undertaking the necessary technical work to demonstrate the achievability of increased production without impairing the quality of the gemstones produced. This would inevitably lead to an indication of an appropriate production rate per Reaction Zone as well as the number of Reaction Zones to be located in advance to support the planned production increase;
- Assessing the historical fertility (number of Reaction Zones) of the TMS in the previously mined areas and coupled with the Reaction Zone production analysis establishing the extent of TMS which is to be exposed to maintain the planned production increase. Initial analysis to date indicates that the full strike length of TMS amounting to some 920m will need to be exposed to achieve the planned rate of 12ktpm of Reaction Zone tonnage;
- Delineating the amount of advance waste mining that is required in order to expose the necessary TMS as previously identified;
- Based on the Inferred Mineral Resource identified within the appropriately designed ultimate pit with staged pushbacks, developing monthly/quarterly/annual production schedules for waste, TMS and Reaction Zone tonnage mined as well as the accompanying combined emerald and beryl grades;
- Location and design of waste rock dumps in order to ensure sufficient capacity for the anticipated LoMp;
- Based on the production schedules, establishing the primary and ancillary mining equipment requirements (including replacements where appropriate) in order to define the mining capital and operating expenditures; and
- Conducting all other necessary technical investigations, hydrogeological, geotechnical and environmental studies to assess the validity of the mining study and feed into the PFS document.

**Table 5.12 Kagem Strategic Plan: mining capital expenditure**

Capital Item	Units	Jun-2008 <sup>(1)</sup>	Jun-2009	Mar-2010 <sup>(2)</sup>
Hydraulic Excavators	(US\$ <u>k</u> )	0	0	1,690
Articulated Dump Trucks	(US\$ <u>k</u> )	0	1,650	1,100
Dozer	(US\$ <u>k</u> )	0	900	0
Grader	(US\$ <u>k</u> )	0	640	0
Front End Loader	(US\$ <u>k</u> )	310	0	0
Drill Machine (Balance)	(US\$ <u>k</u> )	114	190	0
Diesel Bouser	(US\$ <u>k</u> )	150	0	0
Water Sprinkler	(US\$ <u>k</u> )	617	0	0
Jeeps	(US\$ <u>k</u> )	45	0	0
Trucks	(US\$ <u>k</u> )	65	0	0
Explosives Van	(US\$ <u>k</u> )	65	0	0
Portable Mine Illumination Towers	(US\$ <u>k</u> )	160	0	0
Major Repairs to Existing Mining equipment	(US\$ <u>k</u> )	100	0	0
<b>Total</b>	<b>(US\$<u>k</u>)</b>	<b>1,626</b>	<b>3,380</b>	<b>2,790</b>

(1) Three-month period to 30 June 2008.

(2) 9-month period to 31 March 2010.

## 5.5 Mineral Processing

The processing technology at Kagem comprises a simple series of comminution, screening, washing and sorting facilities which are located close to the current mining activities in the

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Fwaya-Fwaya area. Two plants each with rated hourly capacity of 50tph (180ktpa) are currently in operation with the new Kagem Plant-2 constructed during 2006 and the older Kagem Plant-1 constructed in 1984. A further expansion of Kagem Plant-2 is planned to achieve an increased processing rate of 75tph by March 2009. Currently both fresh and stockpiled Reaction Zone material is processed through both facilities, however the current Strategic Plan assumes that in conjunction with the cessation of processing lower grade stockpile waste this will cease processing in August 2008.

### **5.5.1 Processing Facilities**

Kagem Plant-2 comprises dual primary streams each with a feed bin, primary crusher and conveyor that feed to a single double deck vibrating screen. Reaction Zone material is fed into the system using an excavator or small wheel loader. The two primary crushers reduce the RZ to -400mm and -250mm and have a nominal capacity of 30tph and 20tph respectively. At the double deck vibrating screen the +60mm oversize material is directed to a picking belt to recover large stones before proceeding to a secondary crusher and back to the primary circuit. The -2mm fines from the double deck vibrating screen are discarded. The product from the double deck vibrating screen (+2mm, -60mm) is fed via a scrubber to a hexagonal screen that separates the material into four product streams for hand picking. The four products are separated into the following size fractions: >2mm and <10mm; >10mm and <20mm; >20mm and <40mm; and >40mm, and are directed to individual picking belts. The prospective emerald and beryl stones are picked off of the belt by hand and dropped in a similar drop safe type box to that used at the mining face. The nominal capacity of the washing plant is 50tph but it is currently only operating at some 20tph to 25tph and it is clear that the double deck vibrating screen is a bottle neck. The Company considers that this limitation together with other minor teething problems experienced during commissioning can be corrected with minimal additional expenditure leading to processing at the rated 50tph capacity by July 2008.

The washing plant products together with the high quality product directly recovered from the mine is sent to the secure sort house facility known as 'D Section'. The prospective beryl and emerald stones are sorted and upgraded using manual methods. D Section is a high security area and access is controlled. The drop safe type boxes from the mine and the plant are opened and emeralds are picked out from the remaining material which is washed and tumbled. Products from this are also picked and the fines and waste separated. Where necessary the product is chipped to upgrade the stone and further lightly tumbled and cleaned. The final products from D Section are sorted in to the following four categories: high quality emerald; low grade emerald; beryl; and fines. The products comprising emerald (subdivided into P/S, emerald and low grade emerald categories) and beryl (subdivided into beryl, specimen and fines categories) are dried, dressed with oil, weighed and catalogued and stored for evaluation and subsequent export to Lusaka for auction.

### **5.5.2 Historical processing operating statistics**

Table 5.13 presents the historical operating process plant statistics for Kagem. Total Reaction Zone tonnage processed has increased significantly with the introduction of the new Kagem Plant-2 which is currently processing at an annualised rate of 33ktpa. In conjunction with the Kagem Plant-1 (annualised 20ktpa), total processing throughput has increased from 19ktpa in the year ending March 2007 to a current annualised rate of 53ktpa. As previously noted, fresh Reaction Zone tonnage from the pit has reduced somewhat due to mining limitations, and alternative sources from the lower grade stockpiles are currently being processed to maintain total production at an annualised rate of 3,300kgpa compared with the 2,840kgpa achieved in year ending March 2007. Accordingly processed grade (emerald and beryl combined) has reduced significantly from 221.5g/t in 2006 to 37.6g/t in the 9-month period to 31 December 2007.

Notwithstanding the above SRK notes the positive influence of the increased proportions (financial year ending 31 March 2006: 19.5%; 9-month period to 31 December 2007: 31.5%) of emerald and the increased (financial year ending March 2006: 21.1%; financial year ending March 2007: 27.0%) contribution of pre-select and emerald sub-categories to overall emerald production.

Unit processing costs expressed per tonne of Reaction Zone processed have in accordance with the increased throughput reduced significantly from US\$214/t in 2006 to the current US\$89/t.

**Table 5.13 Kagem: historical process plant statistics**

<b>Operating Statistics</b>	<b>Units</b>	<b>Mar-2005</b>	<b>Mar-2006</b>	<b>Mar-2007</b>	<b>Dec-2007<sup>(1)</sup></b>
Reaction Zone Processed	(kt)	17	13	19	40
Old Plant	(kt)	17	13	12	15
New Plant	(kt)	0	0	6	25
Overall Process grades	(g/t Total)	144.4	221.5	130.3	37.6
	(g/t emerald)	28.1	56.1	41.0	12.7
	(g/t beryl)	116.2	165.3	89.3	24.9
<b>Production</b>	<b>(kg)</b>	<b>1,509</b>	<b>2,473</b>	<b>2,840</b>	<b>2,458</b>
<b>Emeralds</b>	<b>(kg)</b>	<b>415</b>	<b>482</b>	<b>720</b>	<b>774</b>
P/S	(kg)	1	2	3	11
emerald	(kg)	65	100	145	197
Low Grade Emeralds	(kg)	349	380	572	565
<b>Beryl</b>	<b>(kg)</b>	<b>1,094</b>	<b>1,991</b>	<b>2,120</b>	<b>1,685</b>
beryl	(kg)	863	1,329	1,381	1,136
Specimen	(kg)	27	193	83	14
Fines	(kg)	204	469	656	535
Process Costs	<u>(US\$/t<sub>RZ</sub>)</u>	<u>146.50</u>	<u>213.69</u>	<u>161.33</u>	<u>88.66</u>

(1) 9-month period to 31 December 2007.

### 5.5.3 Mineral Processing aspects of the Strategic Plan

The current Strategic Plan as outlined by the Company requires additional process plant related expenditures of US\$4.20m, all of which is planned to be expended by June 2009. Of this some US\$3.50m is allocated for modification of Kagem Plant-2 and the additional expenditures are associated with installation of electronic security measures.

In August 2008 it is assumed that processing from the old Reaction Zone stockpiles will cease as will all processing through the older Kagem Plant-1. Annual throughput is forecasted at 180ktpa at a yield grade of 80.0g/t emerald and beryl contained. Unit process costs are assumed to further reduce to US\$4.88/t on reaching the increased throughput. This is however impacted by differing allocation of operating expenditures in the Strategic Plan compared with historical reporting. A high level correction of this, assuming that the majority of the labour is in the processing operations results in a forecasted unit processing cost of US\$31.47/t which can be compared with the unit process costs of US\$88.66/t noted for the 9-month period to 31 December 2007 (Table 5.13).

SRK notes that the higher throughput and lower unit costs have been accompanied with substantially lower grades. The ability to establish the higher production of fresh Reaction Zone material mined from the pit whilst maintaining both grade and stone quality has only been assessed at a conceptual level, accordingly improved performances need to be supported through completion of the PFS.

As at 1 January 2008 the Company estimates that Reaction Zone stockpiles comprise 225kt at Kagem Plant-2 and 52kt at Kagem Plant-1 with the majority of the stockpiled material at Plant-1 being processed as part of the Strategic Plan. The Company has estimated this material to grade some 8.0g/t (combined emerald and beryl), although no detailed reconciliation exists to confirm this.

### 5.6 Waste Rock Dumps and Tailings Storage Facilities

Waste material at Kagem comprises the waste rock from the mining process (overburden as well as TMS lithologies), the coarse (-2mm) discard discharged from the process plants and tailings in slurry from the settling ponds. Waste rock is either temporarily stored prior to backfilling on the mined out pit floor or transported to dedicated waste rock dump facilities. The coarse discard is stockpiled next to the plant prior to being disposed on the waste rock dump and the slurry from the settling ponds is mechanically recovered prior to deposition on the waste rock dumps.

Based on historical records from 2002, SRK estimates that some 10.9Mt of material has been produced and in addition there exists some 0.23Mt of stockpiled Reaction Zone material at Kagem Plant-2 which is currently not planned to be treated.

**Table 5.14 Kagem: waste material production**

Operating Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
<b>Total mined</b>	<b>(kt)</b>	<b>1,290</b>	<b>1,684</b>	<b>2,705</b>	<b>1,684</b>
<b>Reaction Zone Processed</b>	<b>(kt)</b>	<b>4</b>	<b>13</b>	<b>19</b>	<b>40</b>
<b>Production</b>	<b>(kg total)</b>	<b>1,509</b>	<b>2,473</b>	<b>2,840</b>	<b>2,458</b>
<b>Total Waste produced</b>	<b>(kt)</b>	<b>1,288</b>	<b>1,681</b>	<b>2,702</b>	<b>1,681</b>
– Rock	(kt)	1,285	1,671	2,686	1,644
– Discard	(kt)	3	10	16	38

(1) 9 month period ending 31 December 2007.

Based on the results of the pit optimisation analysis undertaken by SRK and assuming depletion of the Inferred Mineral Resources as defined, Kagem would produce additional waste of approximately 60Mt. The establishment of appropriate waste rock dump and fines discard facilities should be investigated as part of the completion of the necessary PFS.

## 5.7 Infrastructure, Overheads and Capital Expenditure

### 5.7.1 Infrastructure

The power supply system on site comprises installed diesel engine and generator sets which facilitate the supply of power to the process plants as well as the mining operations. Water supply is currently drawn from the Kafubu river and a dedicated dam is situated on the property.

Current water management is limited to the holding of water from the plant in settling dams prior to its release into the environment. The settling dams have however not been completed to specification as per the regulatory requirement and water high in suspended solids is currently discharged

Additional supporting infrastructure comprises offices, workshops and a mine camp for both management and other employees. Only the residential area office and workshop area is fenced.

The Company recognises the deficiencies associated with the historical upkeep of infrastructure and mobile equipment. Accordingly the Strategic Plan assumes additional expenditures to remedy the backlog.

### 5.7.2 Overheads

Table 5.15 presents the historical overhead operating expenditure for Kagem which reports US\$2.60m for the 9-month period ending 31 December 2007 reported on an annualised basis. These expenditures include the Company's management fee as well as certain selling expenses. In respect of the latter no definitive detail is provided on the basis of estimation and SRK has assumed that such expenses are not directly related to sales revenue. Overhead operating expenditures expressed on a monthly basis have increased, however unit costs per tonne of Reaction Zone processed have decreased in line with increasing production.

**Table 5.15 Kagem: historical overhead operating expenditure**

Overheads	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
Operating Expenditure	(US\$m)	1.83	2.00	2.68	1.95
	(US\$kp/m)	152	167	223	217
	(US\$/tRZ)	427	156	142	49

(1) 9-month period ending 31 December 2007.

The Strategic Plan assumes annual expenditures of US\$5.22m per annum on attaining full production with some US\$2.88m being directly attributable as management fees based on the current agreement of 5% of gross sales revenue which is payable to the Company.

### 5.7.3 Capital Expenditure

The Company's Strategic Plan has outlined capital expenditures (Table 5.16) of some US\$13.86m for the period commencing 1 April 2008 through 31 March 2010 inclusive for Kagem. The substantial (US\$7.80m) portion of this expenditure is directly attributable to the expansion of

the mobile mining fleet and a further US\$4.40m is for modification of Kagem Plant-2 as well as additions to the sort-house and tumbling and washing facilities as well as installation of electronic security measures. The remaining US\$1.67m is required for the following infrastructural items:

- Refurbishment of existing offices, facilities;
- New mine & pit offices;
- Workshop building;
- Workshop fittings;
- Residential buildings & magazine;
- Water treatment plant & distribution network; and
- Approach Road, Internal roads repairs.

Capital expenditure forecasted for the three-month period ending 31 March 2008 is estimated at US\$2.39m.

**Table 5.16 Kagem: capital expenditure<sup>(1)</sup>**

Capital Expenditure	Units	Total	Jun-2008 <sup>(2)</sup>	Jun-2009	Mar-2010 <sup>(3)</sup>
Mining	(US\$m)	7.80	1.63	3.38	2.79
Processing	(US\$m)	4.40	0.40	4.00	0.00
Infrastructure	(US\$m)	1.67	1.14	0.53	0.00
<b>Total</b>	<b>(US\$m)</b>	<b>13.86</b>	<b>3.17</b>	<b>7.91</b>	<b>2.79</b>

(1) Reporting periods are financial years ending 30 June.

(2) 3-month period ending 30 June.

(3) 9-month period to 31 March 2010.

In addition to the above, SRK notes that continued production beyond 2009 will require capital expenditures of a sustaining nature at some US\$3.18m per annum.

## 5.8 Human Resources

Kagem currently has TEC of 390 and operates on a two 12 hours per day shift system on a continuous basis with crews located in hostels and accommodation at site. The ‘on crew’ work an entire month before being replaced. Mining of the Reaction Zone is only undertaken in daylight hours and two 6hr shifts are employed. The process plant operates continuously and picking at night is conducted under lights. Waste stripping is being assisted by the use of a mining contractor employed on an unit mining rate.

Table 5.17 presents the historical TEC as well as productivities for tonnes processed and gemstone production. As the total complement has increased at Kagem so has the productivity specifically in respect of the tonnes processed. Gemstone production has in the main however not increased to the same extent and is largely due to the reduced process grade.

The Terminal Benefits Liability (“TBL”) at Kagem is estimated by SRK based on the statutory requirements in Zambia, the current complement and the current annualised labour costs:

- Two months salary per year of employment as well as an additional 28 months (assume employee demographics indicate three years of continuous employment on average); and
- Annual salary bill of US\$1.01m per annum for employees (110 of 390).

This results in a total TBL of US\$2.86m which is incorporated as part of the total closure liability estimate presented in Table 5.18.

**Table 5.17 Kagem: historical TEC and productivities**

Area	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
<b>Total</b>	<b>(No)</b>	<b>314</b>	<b>340</b>	<b>387</b>	<b>390</b>
<b>Productivity</b>					
Tonnes processed	(t <sub>Reaction Zone</sub> /TEC/month)	1	3	4	11
Gemstone production	(kg total/TEC/month)	401	606	611	700

(1) 9-month period to 31 December 2007.

## 5.9 Occupational Health and Safety

The Company has no formal Occupational Health and Safety policy and currently does not prescribe to follow international conventions, specifically those aligned with World Bank Policies and Guidelines, International Finance Corporation Operational Policies, the International Labour organisations and OHSAS18001.

Further comments regarding Occupational Health and Safety are included in Section 2.3.8 of this CPR.

## 5.10 Environmental

### 5.10.1 Environmental Setting

The mining licence covers an area of 43km<sup>2</sup>, of which it is reported that 1.78km<sup>2</sup> has been utilised. A portion of the northern boundary of the licence area is formed by the Chantente Stream while the Kafubu River forms the southern boundary. Both of these watercourses flow into the Kafue River which flows from the Copperbelt and is an important water resource in the region, providing Lusaka with water.

While there is little indication of non-mining related activity in the area, it is clear that there are a number of villages within the NRERA. Active artisanal mining is known to occur.

The area is predominantly under Miombo woodland with wetland areas, or Dambos, in places. Rainfall is high, generally over 1,500mm and there are distinct wet and dry seasons. Forest re-generation following disturbance appears to be rapid though species make-up is likely to be different.

The mine consists of over 20 open-pit operations of various sizes and ages, two processing plants and a camp area. The pits are grouped in areas known as Fwaya-Fwaya, Fibolele, Kanchuala, Dabwisa and Ligwente. The camp area includes senior and junior residential buildings and mess facilities, office accommodation, a core shed area, workshop and fuel storage areas and a salvage yard. There are approximately 300 people housed on this site. Processing is limited to crushing, screening, scrubbing and hand sorting on belts. No chemicals are used in the process and water used in the mechanical scrubbing process is discharged to the environment. The suspended solids content (-3 mm particles) of this water is high.

The original processing plant has a limited throughput and was designed with no apparent consideration of environmental issues. Water used in the scrubbing process is discharged directly into the surrounding land and it is reported that settlement takes place in the flow distance between the plant and the Kafubu River, some 500m away. Settling dams were incorporated into the design of Plant-2 and whilst it was commissioned in early 2007, the full set of three settling dams in series has not yet been constructed. There are currently two settling dams operating in parallel, the first stage of the proposed facility. Construction of the third facility is underway and is planned to be commissioned by May 2008. Effluent from these dams remains visually high in suspended solids.

Water is drawn from the Kafubu River for Plant-1 and from a catchment dam known as the Gate A Dam for Plant-2. There is another dam, the Fibolele Dam, in the Fibolele area which is reportedly the result of impoundment of water by the Fibolele overburden dumps.

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### 5.10.2 Compliance

The mine operates under an approved EPB for the original mining operation, a more recent EPB for Plant-2 and valid permits, which are renewable annually, for the storage of hazardous waste (used oil), the operation of waste rock and overburden dumps, and the discharge of effluent from the plants. In approving these documents the ECZ has imposed certain conditions, most of which are relatively standard for this type of operation.

Strict compliance with all of the permit conditions cannot be demonstrated, with notable issues in this respect being the spillage of oil in the workshop and salvage yard area and the quality of water discharged to the environment from the plant. In the latter case non-compliance is related primarily to suspended solids and monitoring results are inadequate to demonstrate compliance with other requirements.

Although SRK is not currently aware of any community obligations imposed on Kagem by the regulatory authorities, it is possible that such obligations may be imposed in the future.

### 5.10.3 Environmental Management

Environmental management and planning at Kagem are generally lacking. This will influence the overall environmental liability and there is scope to reduce this liability with time by implementing concurrent rehabilitation using operational costs, improving housekeeping and disposing of waste such as scrap steel which could generate revenue for the mine.

Furthermore the Company has not yet developed a Health, Safety and Environmental Policy which commits to the establishment of an environmental management system (“EMS”) as well as an OHS system.

Notwithstanding the above, SRK notes the Company’s stated intention to redress the deficiencies through:

- the establishment of a Safety, Health and Environmental department staffed by an environmental officer who will be responsible for monitoring of the Company’s performance against stipulated norms and initiate corrective actions;
- the recruitment of a senior level manager at the corporate level who will be directly responsible for establishing corporate policies in respect of Environmental and OHS as well as the development of a company wide environmental management plan; and
- the appointment of independent consultants to prepare an EPB, an environmental management plan and an environmental closure plan for the proposed Kagem Expansion. The results of these technical studies are expected in May 2008.

### 5.10.4 Key Environmental Issues

Key areas which require specific attention are as follows:

- **Water pollution:** Water discharged into the environment is very high in suspended solids and adequate settling facilities need to be commissioned. SRK understands that this is now underway and will be commissioned by May 2008;
- **Removal of scrap steel:** The salvage yard contains a significant quantity of redundant equipment which, in the absence of definitive plans for its disposal, must be treated as scrap steel in the same way as steel from demolition operations. SRK recognises that potential revenue may be generated from this waste, however this potential is not currently incorporated into the overall bio-physical closure cost assessment;
- **Rehabilitation requirements, including the low grade ore stockpiles:** Although it has been assumed that the pits will not be backfilled, considerable earthworks are likely to be required to ensure the stability of the overburden piles and for the prevention of inadvertent access to the pit areas. The most practical way to achieve the latter is deemed to be an earth berm around the pit perimeters. The sheer volume of earthworks results in significant costs and there is considerable scope to optimise this expenditure by adequate planning and reduce the overall liability by implementing the work concurrently with mining as redundant areas become available for this purpose;

- **Lack of environmental monitoring data:** Some water monitoring takes place, however SRK found this to be neither regular nor adequate. Although this is unlikely to influence the overall liability significantly adequate monitoring, and the implementation of plans to correct areas of non-compliance which are identified as a result, will facilitate responsible environmental management; and
- **Social issues:** Artisanal mining occurs in the area, although this is not seen as a material operational issue. Observations at the neighbouring Kamakanga mine indicate that following decommissioning it can be expected the pits will be exploited by artisanal miners at a significant scale. The liability associated with this relates to safety in addition to possible financial liability in the event of injuries or fatalities. There are, however, indications that the Zambian authorities will accept adequate signage indicating dangerous areas as adequate measures to address this issue. The possible quantum of any financial liability associated with this risk is unknown and has not been included in the assessment of environmental liabilities in this report.

SRK has been informed that the company also intends to address the historical backlog of remedial action required. The following activities are planned:

- Reducing the impact or airborne dust through acquisition of a new water sprinkler;
- Enhancing the processing plants to achieve zero discharge status;
- Completion of the third settling dam;
- Clean-up of oil spills;
- Provision of safety measures to identify live and decommissioned pits;
- Rehabilitation of the water erosion channels and improvement of water drainage in the immediate vicinity of the waste rock dumps; and
- Re-vegetation of waste rock dumps as appropriate.

#### 5.10.5 Environmental Liabilities

The current closure cost estimate for Kagem (Table 5.18) is estimated at US\$9.43m comprising US\$6.57m for bio-physical closure and US\$2.86m for TBL. These estimates are derived by SRK in the absence of any formal closure estimate generated by the Company.

The bio-physical component of the closure costs will be dominated by rehabilitation requirements for the various open pits, rehabilitation requirements for the low grade ore stockpiles and costs for the removal of the scrap steel in the salvage yard. There will also be costs associated with demolition, remediation of contaminated soil and the removal of the plants.

The quantitative liability assessment could change as a result of future planning or regulatory requirements. Particular considerations in this respect are:

- The mine has no mine closure plans and hence no definitive closure objectives and there is the possibility that the closure scenario used for this estimate may change significantly in the future as a result of future planning;
- Volumes used in the calculations are not measured accurately but are based on various estimates and assumptions;
- Rates used in the cost calculation are estimates; and
- It is assumed there are no social problems which will materially affect the closure liability.

The following assumptions apply:

- Pits will not be backfilled however measures will have to be put in place to prevent inadvertent access for safety reasons;
- Surface infrastructure will be demolished and the area re-vegetated; and
- Low grade stockpile areas at the two plants will be removed to the open-pits as backfill.

**Table 5.18 Kagem: environmental liability**

Environmental Liability	Closure Cost (US\$m)
Salvage yard	0.42
Residential units and associated infrastructure	0.07
Workshop area and related facilities	0.07
Roads	0.01
New plant area	0.75
Old plant area	0.42
Fwayafwaya area, including F1 and Chama	1.23
Fibolele area	1.38
Kanchuala pits	0.00
Dabwisa pit	0.27
Ligwente Pits	0.44
<b>Subtotal</b>	<b><u>5.05</u></b>
EPCM	0.51
Preliminary and General	0.25
Contingency	0.76
<b>Subtotal</b>	<b><u>1.52</u></b>
<b>Total – Bio-physical</b>	<b><u>6.57</u></b>
<b>Terminal Benefits – Social</b>	<b><u>2.86</u></b>
<b>Total – Bio-physical and Social</b>	<b><u>9.43</u></b>

SRK notes that the above closure cost estimates due to a combination of uncertainty of occurrence and the absence of detailed information upon which to determine estimates, do not take account of the possible sale value of plant, equipment and infrastructure, or of the value of saleable commodities which may be recovered during site clearance.

## 5.11 Commodity Sales

Table 5.4 has outlined the historical commodity sales for combined (emerald and beryl) gemstone production at Kagem for the past 3.75 years to 31 December 2007. In this respect the commodity price has ranged from US\$2.82/g (US\$0.56/ct) to US\$6.08/g (US\$1.22/ct). The Strategic Plan assumes that overall production will increase from the current annualised rate of 9.3Mct to in excess of 57.6Mct per annum. The gemstone price assumed by the Company is estimated at US\$5.00/g (US\$1.00/ct) which excludes any assumed uplift due to the establishment of the cutting and polishing facilities in India.

The bulk of the Kagem's historic production has been sold by auction in Lusaka, Zambia. Three additional auctions were held during 2006 and 2007 in Jaipur, with mixed results. Data in respect of the 13 Lusaka auctions held since 2002 suggests that:

- on average, more than 90% of the participants were Indian-based or Indian-linked buyers;
- on average, some 15 buyers attended each auction;
- on average, 5 buyers actually bought at each auction;
- on 3 occasions, a single buyer purchased all available emeralds; and
- the 6 largest buyers account for more than 60% of the total sales over this period.

The Company believes that revenues from sales can be increased by modifying the sales formats. Measures would include, for example:

- Increasing the number of buyers attending an auction and increasing the scope to include manufacturing jewellers also;
- Inviting buyers from a larger number of countries (e.g. Israel, Germany, Brazil and the US);
- Optimising participation by selecting the right auction location with suitable pre-auction marketing;
- Modifying the design of auction formats to minimise collusion;
- Development of quantitative techniques in order to set appropriate reserve prices for auction parcels;

- Increasing direct sales to customers dramatically, with a view to eliminating auctions altogether over time; and
- Introducing direct sales of cut and polished gemstones.

## 5.12 SRK Comments

In summary operations at Kagem have suffered from a lack of investment accompanied by a lack of formal management systems to monitor and measure operational performance and limited waste stripping. The Company is considering capital investments of US\$15.26m, of which US\$1.39m is related to exploration activity. The substantial portion of this expenditure is related to the expansion of the mobile mining fleet which will enable Kagem to address the backlog of waste stripping thus exposing the TMS horizon. Furthermore it is the Company's stated intention to substantially increase sales from the current annualised rate of 9.3Mct of gemstones to 57.6Mct of coloured gemstones.

Assuming that the mining fleet is procured in a timely manner and that the current amendments to the process plants secure a process capacity of 50tph then the key to attaining the accompanying production rate is the ability to mine Reaction Zone material at a rate of 144ktpa which can be compared with the 2007 rate of 19ktpa. The availability of Reaction Zone material is inevitably linked to the success in exposing TMS and locating sufficient Reaction Zones to enable sustainable mining throughout the year at the required rate. This is further complicated by the necessarily manual and labour intensive methods employed in mining the individual Reaction Zones. Historically Kagem has produced from five to six Reaction Zones in order to support some 12ktpa of process material, in the 9-month period to 31 December 2007 this reduced to two Reaction Zones thus hindering further the processing of fresh Reaction Zones. A further indication of the prevalence of Reaction Zones is the RZF which is a measure of Reaction Zone tonnage mined to mined tonnages of the TMS unit. Historically Reaction Zone material mined expressed as a factor of TMS has varied significantly on a month by month basis, but yielded 6.6%, 12.5%, 6.0% and 20.5% for financial years ending 31 March 2005, 2006, 2007 and the 9-month period to 31 December 2007 respectively yielding a tonnage weighted average of 9.5% from 1 April 2004 through 31 December 2007 inclusive.

Consequently the key to unlocking increased production at Kagem is the ability to locate Reaction Zones in sufficient number to sustain production at the required level through exposing appropriate strike extent of the TMS, which in turn leads to waste stripping requirements. Based on annualised results for the 9-month period ending 31 December 2007 the Company is assuming some four fold increase in Reaction Zone tonnage mined, a three fold increase in Reaction Zone tonnage processed as well as a six fold increase in coloured gemstone carats produced and sold.

SRK considers that the Company's current Strategic Plan is to be developed to a conceptual level and that the proposed expansion is not supported by a multi-disciplinary PFS which supports the technical feasibility and economic viability of the expansion. Accordingly, SRK considers that completing the following is critical to assess the achievability of an expansion:

- Assessing the historical production rates of Reaction Zones and undertaking the necessary technical work to demonstrate the achievability of increased production without impairing the quality of the gemstones produced. This would inevitably lead to an indication of an appropriate production rate per Reaction Zone as well as the number of Reaction Zones to be located in advance to support the planned production increase;
- Assessing the historical fertility (number of Reaction Zones) of the TMS in the previously mined areas and coupled with the Reaction Zone production analysis establishing the extent of TMS which is to be exposed to maintain the planned production increase. Initial analysis to date indicates that the full strike length of TMS amounting to some 920m will need to be exposed to achieve the planned rate of 12ktpm of Reaction Zone tonnage;
- Delineating the amount of advance waste mining that is required in order to expose the necessary TMS as previously identified;
- Based on the Inferred Mineral Resource identified within the appropriately designed ultimate pit with staged pushbacks, developing monthly/quarterly/annual production schedules for waste, TMS and Reaction Zone tonnage mined as well as the accompanying combined emerald and beryl grades;

- Location and design of waste rock-dumps in order to ensure sufficient capacity for the anticipated LoMp;
- Based on the production schedules, establishing the primary and ancillary mining equipment requirements (including replacements where appropriate) in order to define the mining capital and operating expenditures; and
- Conducting all other necessary technical investigations, hydrogeological, geotechnical and environmental studies to assess the validity of the mining study and feed into the PFS document.

The Company has commenced the PFS which is expected to be completed by September 2008. Notwithstanding the above, SRK recognises that in order to maintain and/or expand current production, waste mining is crucial and accordingly the Company will expand the capacity of the mining fleet through new acquisition and re-commissioning of existing equipment without the support of a completed PFS.

### 5.13 Risks and Opportunities

The principal risks at Kagem are:

- **Expansion Programme:** The current Strategic Plan assumes the achievability of significant production expansion at Kagem. The principal risks in this regard are directly related to the assumptions regarding the prevalence of Reaction Zones and the rate at which they can be practically mined without impairing the quality and quantity of marketable gemstones. SRK considers that further technical analysis in this respect is required to support at a PFS mining level (note detailed planning is not possible given the nature of the deposits) that such an increase is supportable. Accordingly the risk is that the capital expenditure required to mine the current backlog of waste and expose sufficient TMS may not necessarily enable the increase in Reaction Zone tonnages mined as envisaged; and
- **Environmental Liabilities:** The current environmental liabilities at Kagem comprising both bio-physical closure costs (US\$6.57m) and social (TBL at US\$2.86m) liabilities amount to US\$9.43m and as at 1 January 2008 remain unfunded. The majority of these liabilities are historic in nature and are unlikely to be reduced indeed should certain remedial environmental action as stated in Section 5.10 be undertaken they are likely to increase with time. Further, the liabilities as estimated by SRK in the absence of any estimate by the Company are inevitably conceptual in nature and accordingly SRK considers that further technical work is required to refine the estimates to take account of: volumetric surveys; site specific and not factored components; and local unit rates.

The principal opportunities at Kagem are:

- **Exploration Potential:** The current Exploration Programme is targeting other known occurrences in the wider licence area. Certain of these zones have been mined historically and are considered worthy of further expenditures as planned. These include the Libwente and Dabwisa prospects;
- **Mineral Resources and Ore Reserves:** The current Inferred Mineral Resource has been assessed within an economic pit which, based on current drilling has further potential to extend below the 1,075m RL. Further exploration drilling to target this area would most likely lead to an increase in the defined tonnage of TMS as well as the Inferred Mineral Resource. The potential to upgrade from the Inferred Mineral Resource category to the Indicated Mineral Resource category is largely dependent upon completion of further reconciliation exercises, the proposed exploration programme, and demonstrating the prevalence of Reaction Zones through further strike exposure. SRK notes however that stating an Inferred Mineral Resource does not necessarily impute that such upgrading will always occur, specifically given the nature of these gemstone deposits; and
- **Mine planning:** The current optimisation analysis based on the Inferred Mineral Resource indicates that a substantial portion of the TMS (90%) is exposed in an optimised shell with a stripping ratio of less than 4.0  $t_{\text{waste}}:t_{\text{TMS}}$ . Further analysis of this is warranted which in combination with appropriately designed pits and the necessary additional technical analysis may result in improvements when compared with certain mining aspects of the Strategic Plan.

Figure 5.2 Gemstone Assets: Kagem licence area geological plan

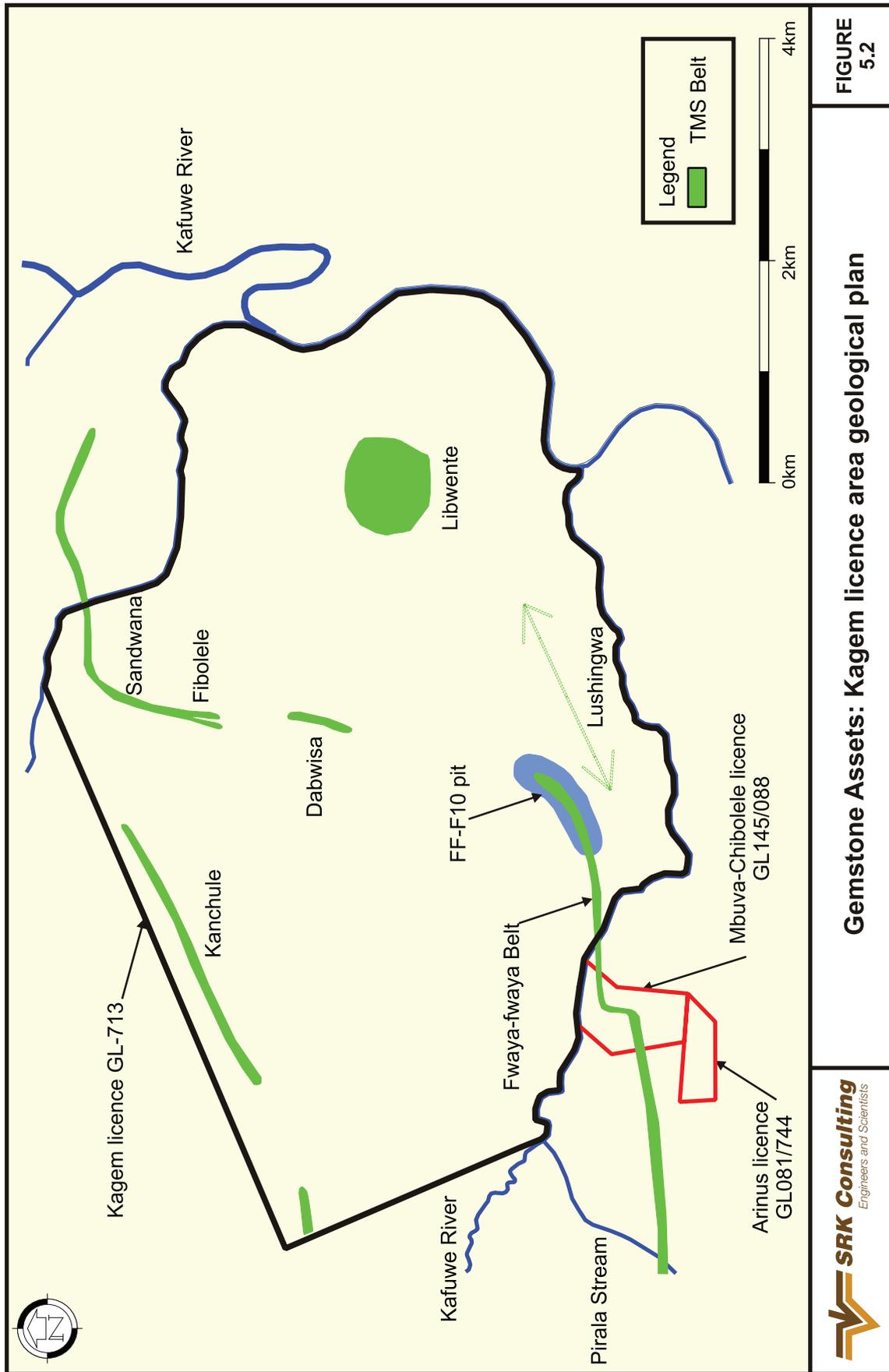


Figure 5.3 Gemstone Assets: geological plan of the Kagem FF-F10 pit area

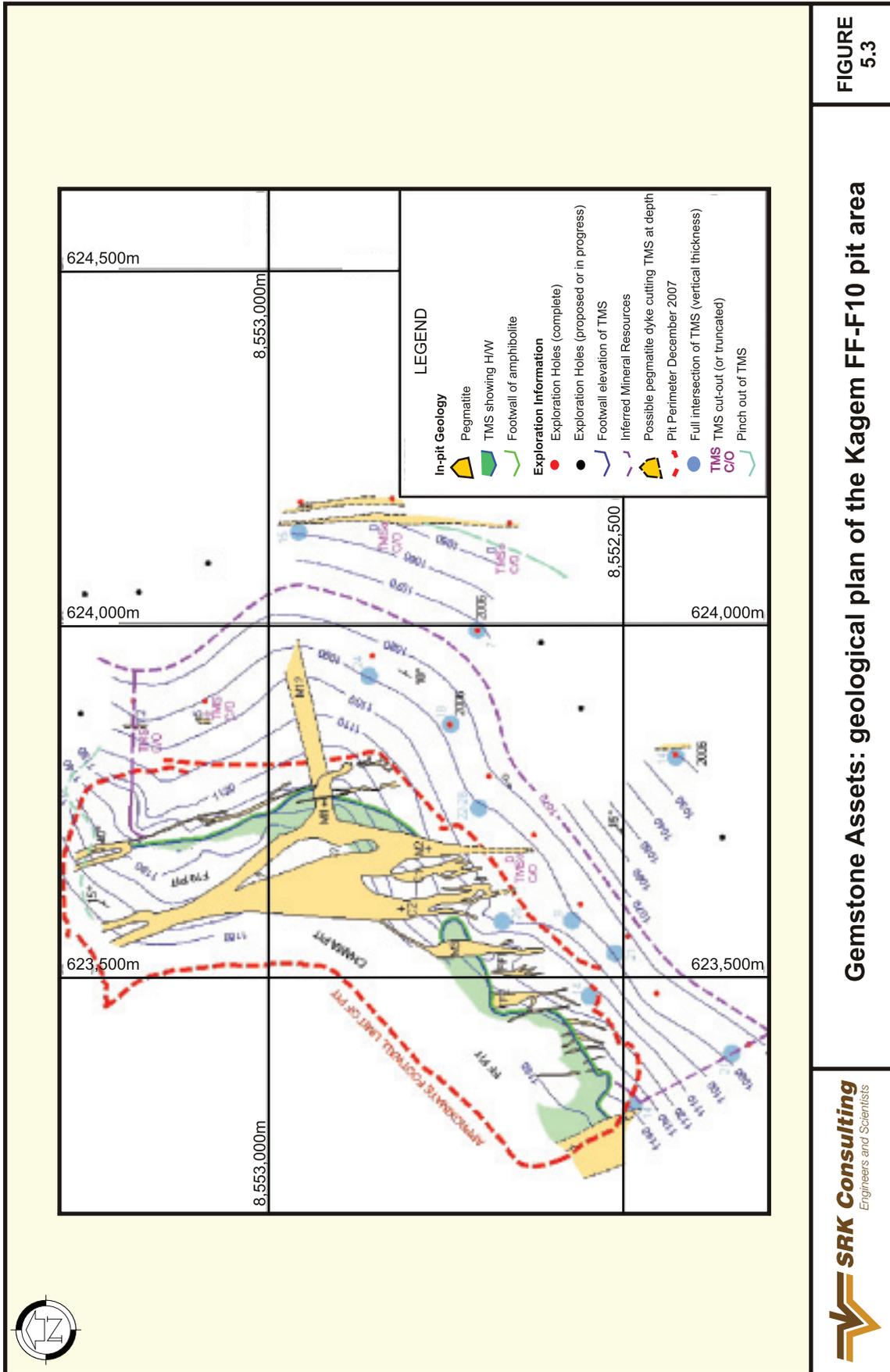


Figure 5.4 Gemstone Assets: Kagem pegmatite dykes cutting the high-wall of the FF-F10 pit

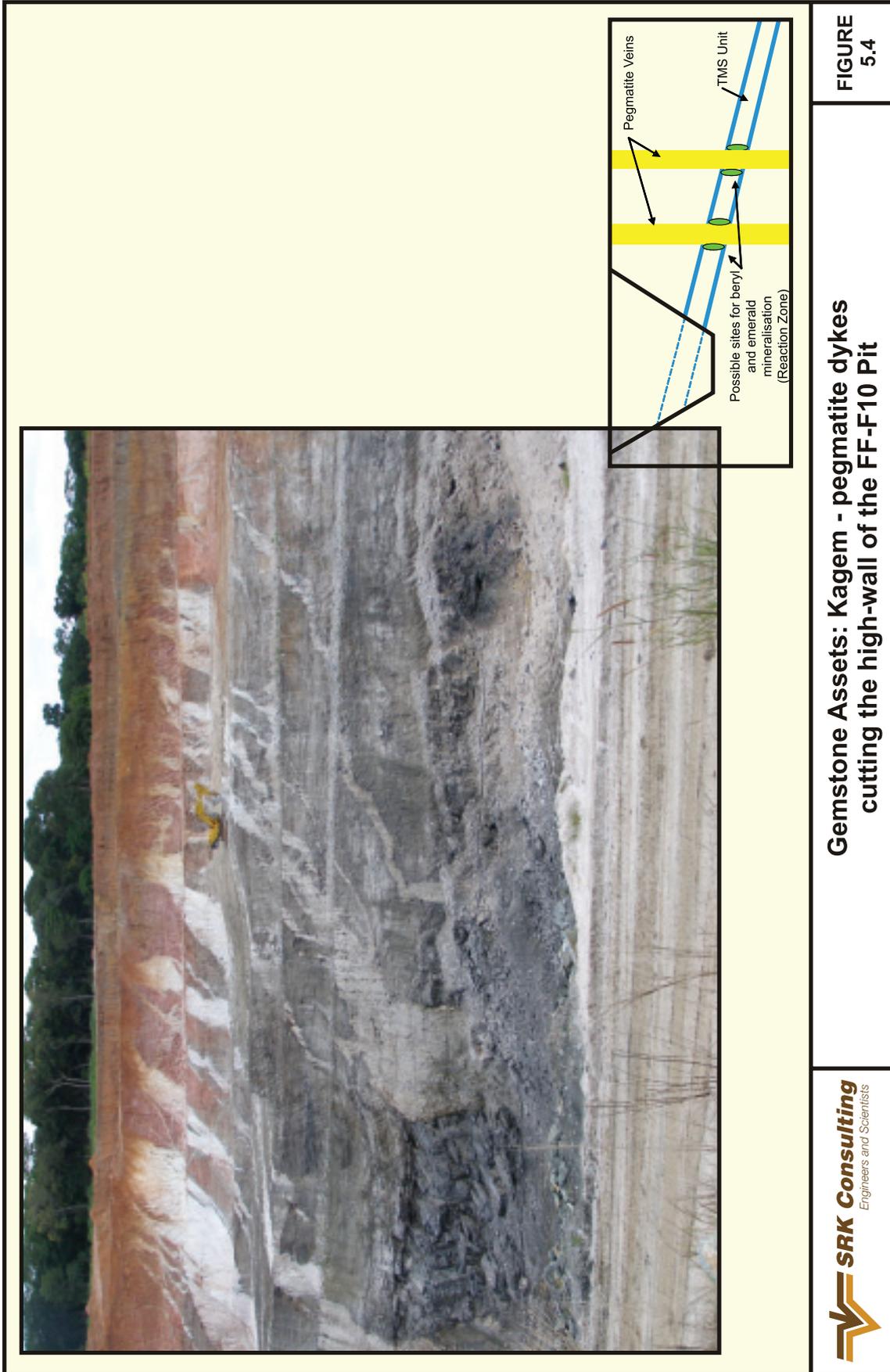
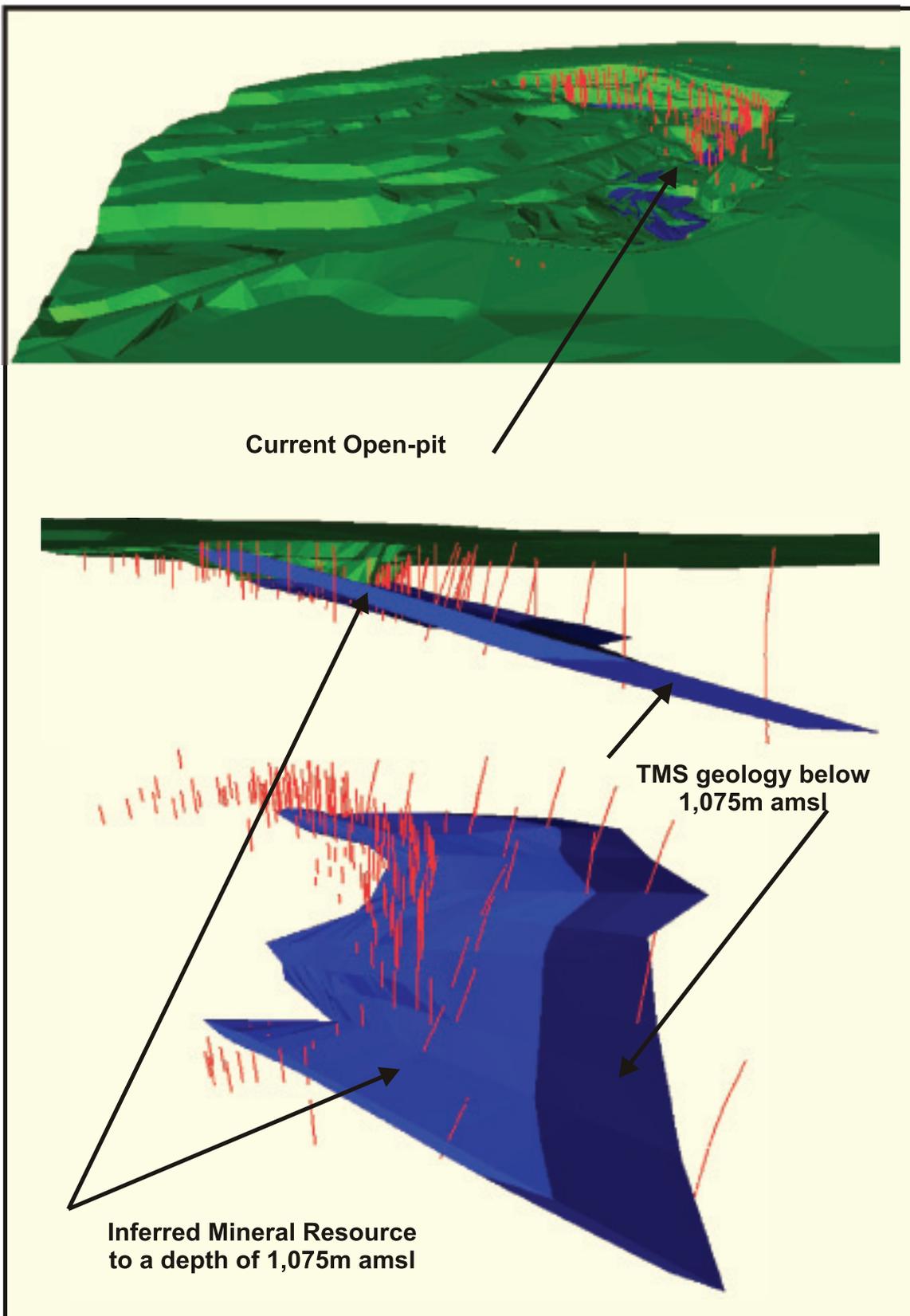


Figure 5.5 Gemstone Assets: Kagem 3D TMS geology, drillholes and topography



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## 6 KARIBA

### 6.1 Introduction

This section includes discussion and comment on the following technical aspects of the Kariba amethyst mine: geology; Mineral Resources; mining; mineral processing; waste rock dumps and discard facilities; infrastructure, overheads and capital expenditure; human resources and environmental. Historical tables are also presented to support certain assumptions regarding the declaration of Mineral Resources.

Historical sales, production and cost information as presented in this section are sourced from the Company's management accounts which are based on Kariba ML's financial year (30 June). SRK notes that due to various accounting practices these may be different to those included in the audited financial statements for either Kariba ML or the historical consolidation for the Company, accordingly historical information in this section is reported to assess the validity of various technical aspects associated with the Mineral Resource statements and historical performance only. Furthermore, SRK notes that reporting in 2005 and 2006 was based on the financial year ending 31 March and that for 2007 the financial period included the 15 months to 30 June. Notwithstanding this aspect and in order to ease comparison between periods, SRK has, based on monthly data where possible, reported all statistics with financial periods for 2005, 2006 and 2007 ending 31 March and for the 9 month period ending 31 December 2007.

The Company is currently considering an expansion of production (conceptual study dated April 2007, the Kariba Conceptual Study) at Kariba by 300% from the current (annualised 9 months to 31 December) 1,420kg of amethyst at a cash cost of US\$1.83/kg to 4,400kg of amethyst at a cash cost of US\$2.50/kg in the 5<sup>th</sup> year of the expansion. This is to be achieved by increasing ore processed from the current 32,000tpa (annualised) to 75,000tpa, total material mined from 280ktpa to 3.5Mtpa, RoM grade from 37.1kg/t to 68.1kg/t and human resources from 400 to 733. Total capital expenditure requirements in year 1 are assumed at US\$7.3m with annual sustaining capital expenditures of some US\$1.7m thereafter. This expansion scenario is also supported by an assumed increase in the sales price from the current US\$1.96/kg to US\$3.89/kg.

SRK considers that completion of a multi-disciplinary technical study undertaken to a PFS level is required to demonstrate the technical feasibility and economic viability of the proposed expansion.

Notwithstanding the above, SRK notes that, pending the agreement with the GoZ whereby the Company increases its shareholding to 76%, the Kariba expansion is currently on hold. Furthermore, given the cash operating loss position experienced since 2006, SRK notes that the Company's Strategic Plan excludes any operating forecasts for Kariba.

### 6.2 Geology

The region around Kariba is dominated by the rocks of the Palaeoproterozoic Basement Complex, which consists of mainly granites, schists, meta-igneous, and meta-sedimentary rocks. In places, the Basement Complex also contains meta-carbonates, meta-quartzites and meta-pelite units.

Kariba is underlain by alternating bands of the 1,800Ma Basement Complex, consisting of mainly gneisses, schists and marbles, intruded by igneous rocks of varying ages. The amethyst veins occur within a wide shear zone, which lies along a contact zone between marble, calc-silicates and granitic gneisses. The area has a predominantly north-easterly strike, with a regional dip of 70° towards the west. Mineralisation occurs in tension fractures, forming a large stockwork of amethyst veins within the shear zone.

Kariba is covered by two separate licences, namely GL-86 (the principal focus of Gemfields), and PLLS-300 (Kariba amethyst limited exploration work undertaken to date). The mining licence covers an area of 2.50km<sup>2</sup>, and the prospecting licence 80km<sup>2</sup>. The following section describes the geology of the Kariba amethyst mine, and the adjacent Mapatizya prospecting licence, as well as the nature of the mineralised zones which currently comprise the Mineral Resource statements.

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### **6.2.1 Lithology**

Most of the lithologies in the project area are thought to be part of the Basement Complex, and are predominantly Palaeoproterozoic (1.975Ma to 1.750Ma) in age.

The deposit area is underlain with three main lithologies, which are all part of the Basement Complex. The mineralisation is hosted by a shear zone which cuts across all three of the lithologies. To the east of the shear zone, the area is underlain by marbles, and to the west by granitic gneisses, with the shear zone exploiting an intercalated calc-silicate unit. A barren dolerite dyke cuts across the mineralisation at the southern end.

Poly-phase deformation and metamorphism have produced granulitic gneisses, which are intercalated with irregularly shaped, banded marbles, which are thought to be related to the metamorphism of carbonate rich, magmatic intrusives. Gneissic xenoliths are reported within the marble bodies. Alteration in the area is dominantly carbonatisation, and is pervasive throughout the host gneisses.

Amethyst veining is also observed in Lower-Karoo age sediments (Upper Carboniferous), and is cross cut by later dolerite dykes.

### **6.2.2 Structure**

At least two phases of deformation have been identified. The first is associated with the production of the main foliation in the schists and gneisses in the Basement Complex, and also with gently inclined to recumbent, tight to isoclinal folds, with northerly trending fold axes. This deformation phase is associated with cataclastic metamorphism, and reached granulite facies. The second phase has produced regional antiformal to synformal structures, with steeply inclined, tight folds, with north-east trending axial traces. These folds also have a slight plunge, and a boudinage lineation is developed in the gneisses. The second phase of deformation is associated with amphibolite facies metamorphism.

### **6.2.3 Mineralisation**

The mineralisation has been preliminarily dated as late to post Karoo. Amethyst veining has also been reported in Lower-Karoo sandstones in the Zambezi Valley, and is cross cut by post Karoo dolerite dykes. The amethyst in the Kariba region occurs in tension veins which cut the Basement Complex rocks, and is associated with colourless or white quartz. The tension veins occur as stockworks, and have a clear fracture filling texture. The size of the individual crystals tends to increase towards the centre of the vein.

The colour of the amethyst is also dependent on its position within the shear zone, with darker, "black amethyst" occurring in the north of the shear zone, tending to lighter amethyst in the south. The southern end of the shear zone is also richer in milky quartz. When exposed to weathering, the amethyst discolours to a light green, or colourless. The discolouration continues to approximately 3m to 5m in depth.

The highest quality amethyst mineralisation occurs in the gneisses, with lower quality occurring in the calc-silicates and marbles. The gneiss hosted mineralisation tends to produce amethyst crystals which are larger, typically up to 15cm in length, and individual mineralised vein widths of up to 115cm. In the calc-silicates, the crystals tend to be smaller, approximately 5cm in length, and the individual veins only reaching 20cm in width. The overall crystal quality is also lower in the calc-silicates than in the gneisses. The difference in quality is thought to be related to the susceptibility of the gneisses to tensile fracturing.

## **6.3 Mineral Resources**

GL-86 has been subdivided into seven primary amethyst areas, namely Francis, Curlew, Horden, Davidson, ChaCha, Snamane and Brazil (Figure 6.1). Each of the areas has been worked in the past, and the Company is currently focusing on the Francis area. At any one time, amethyst is being extracted within two to three of these areas. All of the current pits are operated within 25m of the surface.

### 6.3.1 Quantity and Quality of Data

Exploration and mining activity at Kariba is limited to the historical mining of the amethyst orebodies as well as recent (in the last two years) exploration activity undertaken by the Company. The later comprises drilling of some 14 individual holes in the Francis area resulting in a total meterage of 1,004.7m. The retained core is housed in wooden boxes, under cover. The core was logged lithologically, and the amount of amethyst mineralisation was recorded. The total stockwork width and the percentage of amethyst mineralisation intersected within the stockwork are recorded (Table 6.1), and stored in Surpac. None of the drilling data has been incorporated into the current resource estimate.

Accordingly the current resource estimate is based entirely on surface mapping within the pits, however the recent drilling improves the confidence that the amethyst mineralisation continues at depth.

Core logging is based on visual inspection and no laboratory sampling or analysis, geotechnical logging or density measurements are undertaken at Kariba.

**Table 6.1 Kariba: results of recent drilling campaigns undertaken by the Company**

Hole ID	Total Depth (m)	Stockwork Thickness (m)	% Amethyst (%)
KMD01	70.10	38.71	2.0%
KMD02	70.20	16.10	16.0%
KMD03	74.70	4.28	7.0%
KMD04	78.60	32.71	13.5%
KMD05	60.30	10.92	9.0%
KMD06	75.80	14.60	18.0%
KMD07	90.50	2.90	10.0%
KMD08	50.70	14.50	15.0%
KMD09	66.00	1.10	55.0%
KMD10	70.20	18.95	13.0%
KMD11	75.30	None	None
KMD12	70.80	1.06	20.0%
KMD13	75.50	21.13	24.0%
KMD14	76.00	9.95	4.0%
<b>Total</b>	<b><u>1,004.70</u></b>	<b><u>186.91</u></b>	<b><u>12.2%</u></b>

### 6.3.2 Geological Modelling, grade and tonnage estimation

The recent (financial year ending 31 March 2006) geological modelling undertaken by the Company was focused on two distinct areas, namely Area 1 comprising Curlew, Davidson and Horden and Area 2 comprising Francis and Snamane. Based on the resulting estimate the Company has delineated four open-pits in Area 1 and one open-pit in Area 2, all of which extend to a depth of some 50m below surface.

Geological modelling comprises manual cross-sectional interpretations at 100m spacing and guided by the current in-pit mapping. On each section the modelled width of the exposed stockwork was plotted and extended to a depth of 50m using an assumed dip of 70° towards the west as well as a pit slope angle of 50°. Where appropriate (due to no surface exposure) an average overburden thickness of 10m has been assumed to cover the amethyst veins. The reduced sectional area is then multiplied by the strike extension between sections to determine the volumes of amethyst bearing material.

Tonnage of stockwork is then estimated by application of an assumed constant density of 2.50t/m<sup>3</sup>. The tonnage of veining within the stockwork tonnage is then determined using a factor which represents the proportion of veining within the stockwork. This factor is assumed at 6.7% and is derived from the in-pit mapping. Waste rock tonnage is estimated using a density of 2.20t/m<sup>3</sup>. SRK notes that the recent drilling in the Francis area has indicated that the amethyst veins continue at depth, however the drill data has not been included in the estimate.

Economic concentration of amethyst is largely contained within the veins contained within the stockwork zone as previously defined. Historical information in this regard is largely limited to records regarding vein tonnage mined and processed as well as the production of amethyst (Table 6.2). Analysis of the historical information from 1 April 2004 through 31 December 2007 inclusive indicates an average processed grade of 37.1kg/t of amethyst comprising 0.1kg/t of high grade, 10.2kg/t of low grade and 26.7kg/t of very low grade amethyst. Production of amethyst is based on in-pit chiselling and mechanical mining which are subject to different process routes. Accordingly given the complexity associated with the estimation of individual vein tonnage as well as the concentration of amethysts within such zones, SRK has based the current resource grade on what is effectively a large scale bulk sample combined with the geological interpretations of the stockwork zones.

**Table 6.2 Kariba: historical processing statistics**

Operating Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>	Average <sup>(2)</sup>
<b>Ore Processed</b>	<b>(kt)</b>	<b>26</b>	<b>49</b>	<b>27</b>	<b>24</b>	<b>34</b>
<b>Grade</b>	<b>(kg/t)</b>	<b>42.8</b>	<b>21.7</b>	<b>53.4</b>	<b>44.1</b>	<b>37.1</b>
High Grade	(kg/t)	0.2	0.1	0.1	0.1	0.1
Low Grade	(kg/t)	12.1	5.6	15.0	12.4	10.2
Very Low Grade	(kg/t)	30.6	16.0	38.3	31.6	26.7
<b>Grade</b>	<b>(kct/t)</b>	<b>214.2</b>	<b>108.3</b>	<b>267.2</b>	<b>220.5</b>	<b>185.4</b>
High Grade	(kct/t)	0.9	0.4	0.7	0.5	0.6
Low Grade	(kct/t)	60.5	27.8	75.0	62.1	51.1
Very Low Grade	(kct/t)	152.9	80.1	191.5	157.8	133.6

(1) 9-month period ending 31 December 2007.

(2) Average annual performance.

### 6.3.3 Classification

SRK notes that amethyst deposits, owing to the distribution of economic concentrations of the veins within the stockwork zones, are notoriously difficult to sample, estimate and classify as current drilling techniques are inappropriate to provide sufficient data density to enable a direct estimation of individual vein zone tonnage and grade. Accordingly drilling as currently employed can only provide information to determine the presence of the stockwork zones and the proportion of that intersected to represent amethyst bearing veins in diamond core. Derivation of Mineral Resources, are therefore largely dependent on the availability of the results of bulk samples or equivalent such as historical production statistics.

In the current resource model, only face mapping data has been used to extrapolate the potential tonnages of stockwork mineralisation within the target areas. Confidence in this estimate has been improved through the exploration drilling, but this data has not been used to update the resource estimate.

The amethyst stockwork demonstrates reasonable continuity as a complete geological package. The geological continuity of the stockwork zones has been observed in the field, and drilling has added confidence to the continuation to a depth of 50m. Continuity of individual amethyst veins within the stockwork, however, is more uncertain. Drilling has intersected amethyst veins at depth, and therefore geological continuity of the veins is assumed to follow with the stockwork.

These uncertainties, and the use of an extrapolated grade applied to factored tonnages require that only an Inferred Mineral Resource category be assigned to the resources calculated to a maximum depth of 50m. Drilling completed since the 2006 Gemfields' resource estimate indicates that mineralisation continues to this depth, and integration of this new data into the resource estimate would provide more realistic sectional interpretations.

### 6.3.4 Selective Mining Units

Mining practice at Kariba dictates that selectivity is largely based on the dimensions of the individual vein zones which range up to 0.3m in width. Accordingly in higher grade areas manual methods are employed using picks and shovels with small hydraulic excavators only used under direct supervision. In lower grade areas extraction is principally undertaken using the hydraulic

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excavators with bucket sizes of the order of 0.8m<sup>3</sup>. Owing to the application of historical factors to derive RoM forecasts no further modifying factors are deemed necessary.

### 6.3.5 Grade control and reconciliation

Grade control is practically constrained to visual inspection. Historical and current practice in respect of reconciliation is however poor, with limited records available to enable production analysis on a mined pit by pit basis.

The Company has stated its intention to substantially improve the process in this respect with specific focus on the electronic databasing of geological information. Analysis of historical data in combination with future collation of production data per working area will substantially improve the understanding of the prevalence and nature of the stockwork zone, which in turn may enable improved geological modelling as well as resource estimation.

### 6.3.6 Economic Potential

The determination of a Mineral Resource requires consideration of the principle of ‘potentially economically mineable’, which in general is reflected by application of the in-situ cut-off grades which include differentiation by mining methods (open-pit vs underground) as appropriate. Accordingly such assessments must include consideration of the following:

- Long-term commodity prices and macro-economics;
- Revenue based deductions including royalties, process recoveries and marketing charges;
- Operating expenditures; and
- Modifying factors to determine in-situ components.

Furthermore, SRK has demonstrated those Mineral Resources which are deemed to be economically mineable by open-pit methods by consideration of reporting only those resources contained within a crude pit design which indicate a minimum profit margin of 10%. This assessment is largely based on the assumptions, including the long-term price forecast as included in the Kariba Conceptual Study.

**Long-term commodity prices and macro-economics:** Analysis of commodity prices is normally based on historical price-demand-supply assessment to establish a price relationship which in conjunction with forecast demand-supply analysis is then used to generate a price forecast. The short and longer term component of this forecast is then benchmarked against: the consensus market forecast sourced from the median of various research analysts; as well as the last three years average price. In the case of gemstones, and specifically the amethyst sector, historical rough amethyst prices are difficult to source as are historical prices for cut stones.

SRK notes that the average price recorded by the Company since 1 April 2004 through 31 December 2007 is US\$1.72/kg with the three-year time weighted average being US\$1.91/kg. Furthermore, SRK notes the substantial increase in the high grade product since 2005 and the relatively constant price of the low grade and very low grade product ranges. Furthermore whilst displaying a 100% premium to the very low grade product, the high grade range only accounts for 13.5% of sales revenue (9-month period ending 31 December 2007) with the low grade product representing 63.2% of sales revenue.

The Kariba Conceptual Study assumes real terms price increases over a five-year period as follows:

- High grade: from US\$103.5/kg to US\$197.66/kg;
- Low grade: from US\$3.84/kg to US\$6.62/kg; and
- Very low grade: from US\$0.68/kg to US\$1.26/kg.

Application of the above in combination with the production forecast as included in the Kariba Conceptual Study (5,111kt of product per annum; sales revenue of US\$20m) results in an overall amethyst price increase from US\$1.96/kg to US\$3.89/kg. This is twice the three-year average and SRK notes that no detailed market assessment has been supplied to support this assumption. Notwithstanding the above, and for the purpose of assessing the ‘potential economic viability’ of the Mineral Resource, SRK has accepted this forecast. This represents a resource price premium of 100% as opposed to the 33% applied (yielding US\$2.55/kg) elsewhere.

**Table 6.3 Kariba: historical sales data**

Statistic	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>	Average <sup>(2)</sup>
<b>Amethyst Sales</b>	<b>(t)</b>	<b>1,517</b>	<b>1,107</b>	<b>1,172</b>	<b>598</b>	<b>1,172</b>
High grade	(t)	6	6	3	2	5
Low grade	(t)	515	407	418	192	408
Very low grade	(t)	996	694	752	404	759
<b>Sales Price</b>	<b>(US\$/kg)</b>	<b>1.24</b>	<b>2.05</b>	<b>1.91</b>	<b>1.96</b>	<b>1.72</b>
High grade	(US\$/kg)	58.12	85.92	84.98	103.51	77.10
Low grade	(US\$/kg)	2.04	3.48	3.50	3.84	3.05
Very low grade	(US\$/kg)	0.46	0.44	0.71	0.68	0.55
<b>Sales Price</b>	<b>(US\$/kct)</b>	<b>0.25</b>	<b>0.41</b>	<b>0.38</b>	<b>0.39</b>	<b>0.34</b>
High grade	(US\$/kct)	11.62	17.18	17.00	20.70	15.42
Low grade	(US\$/kct)	0.41	0.70	0.70	0.77	0.61
Very low grade	(US\$/kct)	0.09	0.09	0.14	0.14	0.11

(1) 9-month period ending 31 December 2007.

(2) Averages of 2005, 2006, 2007 and the 9 month period to 31 December 2007.

In respect of macro-economics SRK notes that similar comments in respect of the ZMK exchange rate against the US\$ and CPI for Zambia and the United States equally apply to Kariba (see Section 5.3.6).

**Revenue deductions:** Determination of recoverable revenue requires consideration of the following: mineral processing recovery, royalties and selling charges. In this respect SRK notes that no deduction is made for process recovery (note that RoM grades are based on historical production), royalties are assumed at 5% as defined in the 2008 Act, and no direct selling charges are levied in relation to the commodity price.

**Operating expenditures:** Historical operating expenditures as reported at Kariba are stated in Table 6.4 below. In general, unit operating expenditures in US\$ terms have varied in accordance with tonnage, exchange rate and inflationary pressures. Unit mining costs are high due to the low tonnage mined. The current operation has reported a cash loss for all reporting periods and given the assumed increase in the throughput of the Kariba Conceptual Study SRK has accepted the forecasted operating expenditures which include: US\$1.44/t<sub>mined</sub> for a total material moved in excess of 3.5Mtpa; US\$30.91/t<sub>processed</sub> for processing at a rate of 75ktpa; and general and administration unit costs of US\$11.57/t<sub>processed</sub>.

**Table 6.4 Kariba: historical operating expenditures**

Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>	Average <sup>(2)</sup>
Ore	(kt)	49	49	13	17	34
Waste	(kt)	64	95	333	194	183
<b>Total Mined</b>	<b>(kt)</b>	<b>113</b>	<b>144</b>	<b>346</b>	<b>211</b>	<b>217</b>
<b>Processed Tonnage</b>	<b>(kt)</b>	<b>26</b>	<b>49</b>	<b>27</b>	<b>24</b>	<b>34</b>
Processed Grade	(kg/t)	42.8	21.7	53.4	44.1	37.1
	(kct/t)	214.2	108.3	267.2	220.5	185.4
<b>Unit Costs</b>						
Mining	(US\$/t <sub>mined</sub> )	5.18	6.28	2.26	4.09	3.85
Processed Tonnage	(US\$/t <sub>processed</sub> )	27.41	21.50	34.30	28.01	26.68
General & Administration	(US\$/t <sub>processed</sub> )	15.34	10.69	20.50	14.71	14.50
<b>Total</b>	<b>(US\$/t<sub>processed</sub>)</b>	<b>65.06</b>	<b>50.57</b>	<b>83.98</b>	<b>78.42</b>	<b>65.97</b>
<b>Unit Costs – Ore</b>						
Mining	(US\$/t <sub>ore</sub> )	22.30	18.37	29.18	35.70	24.78
Processed Tonnage	(US\$/t <sub>ore</sub> )	27.41	21.50	34.30	28.01	26.68
General & Administration	(US\$/t <sub>ore</sub> )	15.34	10.69	20.50	14.71	14.50
<b>Total</b>	<b>(US\$/t<sub>ore</sub>)</b>	<b>65.06</b>	<b>50.57</b>	<b>83.98</b>	<b>78.42</b>	<b>65.97</b>
<b>Operating Expenditure</b>						
Mining	(ZMKm)	2,804	3,677	3,052	3,374	3,442
Processing + Sorting	(ZMKm)	3,446	4,304	3,588	2,647	3,729
General & Administration	(ZMKm)	1,929	2,140	2,145	1,390	2,028
<b>Total</b>	<b>(ZMKm)</b>	<b>8,179</b>	<b>10,121</b>	<b>8,785</b>	<b>7,412</b>	<b>9,199</b>
<b>Exchange Rate</b>						
<b>Exchange Rate</b>	<b>(US\$:ZMK)</b>	<b>4,773</b>	<b>4,060</b>	<b>3,911</b>	<b>3,909</b>	<b>4,132</b>
Mining	(US\$m)	0.59	0.91	0.78	0.86	0.84
Processing + Sorting	(US\$m)	0.72	1.06	0.92	0.68	0.90
General & Administration	(US\$m)	0.40	0.53	0.55	0.36	0.49
<b>Total</b>	<b>(US\$m)</b>	<b>1.71</b>	<b>2.49</b>	<b>2.25</b>	<b>1.90</b>	<b>2.23</b>

(1) 9-month period ending 31 December 2007.

(2) Averages of 2005, 2006, 2007 and the 9 month period to 31 December 2007.

**Modifying factors:** No dilution or other grade adjustment factors are deemed applicable.

**Cut-off grade calculations:** Table 6.5 gives the resulting cut-off grade calculations as determined by SRK for open-pit mining methods at a range of commodity prices. The resulting cut-off grades are presented per tonne of ore (vein zone material) and do not account for any assumed stripping ratio. The marginal cut-off grade assumes that only 50% of the general and administration costs would be applicable when processing stockpiled material.

**Table 6.5 Kariba: open-pit cut-off grade calculations**

Commodity Price	Units	Commodity Price cut-off calculations				
Amethyst	(US\$/kg)	1.00	2.00	3.00	3.89	4.50
	(US\$/kct)	0.20	0.40	0.60	0.78	0.90
Royalty	(%)	5%	5%	5%	5%	5%
Recovered Revenue	(US\$/g)	1.0	1.9	2.9	3.7	4.3
<b>Operating Expenditure</b>						
Operating	(US\$/t <sub>ore</sub> )	43.92	43.92	43.92	43.92	43.92
Marginal	(US\$/t <sub>ore</sub> )	36.69	36.69	36.69	36.69	36.69
<b>Cut-off Grade</b>						
Operating	(g/t <sub>ore</sub> )	46.2	23.1	15.4	11.9	10.3
Marginal	(g/t <sub>ore</sub> )	38.6	19.3	12.9	9.9	8.6

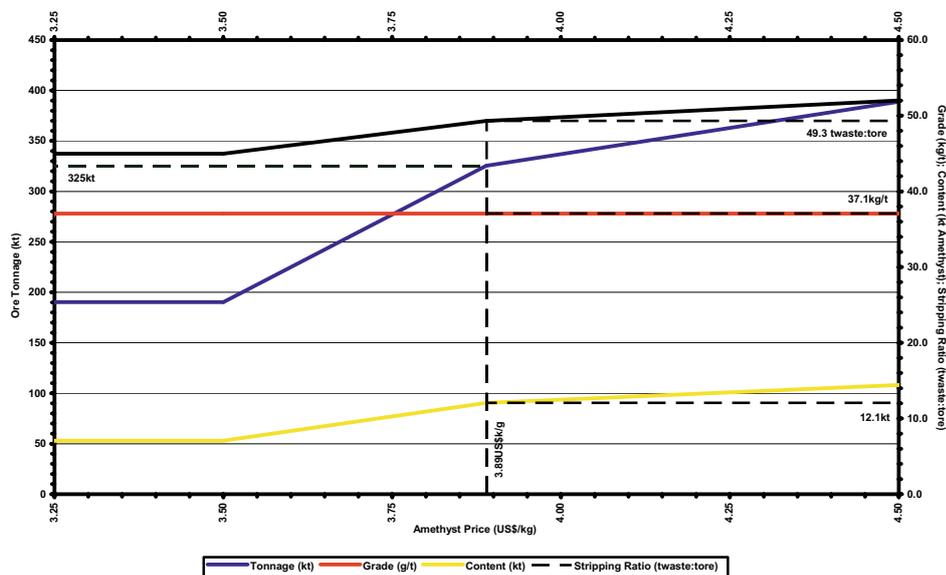
**Grade-tonnage curve analysis:** Grade interpolation is limited to reliance on historical mining grades as previously described and as this is a single grade, determination of grade-tonnage curves are not appropriate. Notwithstanding this limitation, SRK has undertaken a simplified sensitivity analysis of the resulting manual estimates for each of the un-designed open-pits as proposed in order to determine the sensitivity of the Mineral Resource to long-term commodity prices as reported within each of the individual pits. This assumes that a Mineral Resource is no longer potentially economically mineable if the overall profitability of the open-pit reduces to less than 10%. This clearly demonstrates that below an assumed price of US\$3.00/kg, the current Mineral Resource as constrained to the various pits is not deemed to satisfy the criteria.

SRK notes that this is somewhat simplified as no open-pit optimisation has been undertaken which would smooth the profile as well as indicate open-pittable resources which may extend from the current depth of 25m but less than the projected 50m below surface. Figure 6.1 is a diagrammatic representation of Table 6.6. below.

**Table 6.6 Kariba: open-pit sensitivity analysis**

Commodity Price		Ore			Waste	Stripping Ratio
( US\$/kg)	(US\$/kct)	(Mt)	(g/t)	(kt amethyst)	(kt)	(t <sub>waste</sub> :t <sub>ore</sub> )
3.00	0.60	0	0.0	0.0	0.0	0.0
3.25	0.65	190	37.1	7.1	8.6	45.0
3.50	0.70	190	37.1	7.1	8.6	45.0
3.89	0.78	325	37.1	12.1	16.1	49.3
4.50	0.90	389	37.1	14.4	20.2	52.0

**Figure 6.1 Kariba: price sensitivity of open-pittable Mineral Resources**



### 6.3.7 Mineral Resource Statements

Table 6.7 presents the current Mineral Resource statement for Kariba. The Mineral Resource as presented is based on the manual geological modelling as undertaken by the Company, application of grade based on historical mining performance and adjustments by SRK as deemed appropriate. SRK considers that Table 6.7 as presented is reported in accordance with the JORC Code. In presenting this Mineral Resource the following apply:

- Mineral Resources are quoted at appropriate in-situ economic cut-off grades which satisfy the requirement of 'potentially economically mineable' for open-pit mining. Furthermore, the commodity price incorporated into the cut-off grade calculations and derivation of 'economic' pits is US\$3.89/kg of amethyst; and
- All Mineral Resources are quoted at 100%, and derivation of attributable Mineral Resources would necessitate application of the Company's 50% equity interest.

As at 1 January 2008, SRK notes that Kariba has JORC Code compliant Mineral Resources of 325kt grading 37.1kg/t of amethyst and containing 12.1kt of amethyst.

**Table 6.7 Kariba: Mineral Resource statement (1 January 2008<sup>(1)</sup>)**

Mineral Resources	Tonnage (kt)	Grade (kg/t Amethyst)	Content (kt)
Inferred			
open-pit	325	37.1	12.1
<b>Subtotal</b>	<b><u>325</u></b>	<b><u>37.1</u></b>	<b><u>12.1</u></b>
<b>Mineral Resources</b>			
open-pit	<u>325</u>	<u>37.1</u>	<u>12.1</u>
<b>Total Mineral Resources</b>	<b><u>325</u></b>	<b><u>37.1</u></b>	<b><u>12.1</u></b>

(1) No Measured or Indicated Mineral Resources are reportable at Kariba.

**Table 6.8 Kariba: Mineral Resource sensitivity (1 January 2008)**

#### Commodity Prices

amethyst	(US\$/kg)	3.00	3.25	3.50	3.89	4.50
	(US\$/kct)	0.60	0.65	0.70	0.78	0.90

#### Mineral Resources

Tonnage – o/p	(kt)	0	190	190	325	389
Grade	(kg/t)	0.0	37.1	37.1	37.1	37.1
Content	(kt amethyst)	0.0	7.9	7.9	12.8	15.1

### 6.3.8 Mineral Resource potential and Exploration Programme

The Mineral Resource potential outside of the area defined by the current Mineral Resources at Kariba is focused on the following areas:

- Down dip and strike extensions to the currently defined Inferred Mineral Resources, specifically below the 50m depth horizon; and
- The wider prospecting licence PLLS-300 where exploration activity is at a preliminary grassroots stage. The main focus is to explore for parallel shears to the shear zone currently being exploited. Planned work includes prospect identification using Ikonos satellite imagery, which may be followed up with wide spaced airborne resistivity surveys. SRK notes that the prospecting licence expires in October 2008, and half of the held area will need to be relinquished before re-applying.

All expenditures beyond that allocated for funding of the current operating losses are largely related to implementation of the scope as outlined in the Kariba Conceptual Study, which in turn is dependent on securing the additional 25% equity interest in Kariba ML.

## 6.4 Mining Engineering

The mining operations at Kariba comprise a number of relatively small open-pits with between 2 and 3 pits operating at any one time and have now extended to some 25m below surface. The majority of ore mining operations are undertaken manually. Based on the 9-month period to 31 December 2007 results, Kariba mines total rock at an annualised rate of 281ktpa comprising 23ktpa of ore and 258ktpa of waste yielding a stripping ratio of  $11.4t_{\text{waste}}:t_{\text{ore}}$ . The current operations are, largely due to scale of operations, uneconomic, and require implementation of the expansion as envisaged in the Kariba Conceptual Study to establish profitable large scale mining.

The Company has recently increased the amount of mechanisation used at the mine, which in 2007 resulted in a 140% increase in total material mined.

### 6.4.1 Mining Access and Mining Method

Mining operations comprise a number of shallow open-pits of up to some 25m in depth that have been excavated across the property and have principally followed the surface outcrop of the amethyst concentrated stockworks. In high grade areas more selective and gentler manual methods are employed using picks and shovels with small hydraulic excavators assisting only under direct supervision. The large and high grade amethyst stones are hand sorted from the face where possible and bagged under supervision from security. In lower grade areas the hydraulic excavators are used to excavate the ore into trailers that are transported to the washing and sorting plant.

The waste rock was historically bulldozed away from the current working area but as mining has progressed deeper this has become ineffective. The Company has introduced excavators and articulated dump trucks for waste stripping as well as a more organised approach to the pit layout, benches and planning typical for open-pit mining with overall slope angles of  $50^\circ$ . During the site visit mining was being conducted at the Francis, Horden and Curlew pits. Both ore and waste are currently free-dig and the water table has not been intersected, however some of the older worked out pits have been flooded.

Table 6.9 presents the current mining fleet at Kariba which comprises hydraulic excavators, articulated dump trucks, wheel loaders and support equipment.

**Table 6.9 Kariba: open-pit equipment**

Description	Size	Number
Hydraulic excavator	$0.8m^3$ to $2.5m^3$	3
Dump truck	25t	2
Wheel loader	5t	1
Tractor	10t	3
Bulldozer	40t	<u>1</u>
<b>Total</b>		<b><u>10</u></b>

### 6.4.2 Historical mining operating statistics

Table 6.10 presents the historical operating mining statistics for Kariba. Total tonnage mined has increased significantly since 2005 to the current annualised 280ktpa. This is largely attributable to the increase in waste stripping, whilst ore tonnage mined has reduced significantly and is less than 50% of that mined in 2006. Processed grades have ranged between 42.8kg/t and 53.4kg/t with the exception of 2006 where grades reduced to 21.7kg/t. As the average operating depth has increased and new pits developed, the annual stripping ratio has increased significantly and is currently reported at  $11.4t_{\text{waste}}:t_{\text{ore}}$ . For 2007 and 2008 this is further impacted by a change in reporting associated with the use of excavators and trucks as opposed to bulldozers historically. Mining costs remain relatively high due to the overall low tonnages mined.

**Table 6.10 Kariba: historical operating mining statistics**

Operating Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
<b>Total mined</b>	<b>(kt)</b>	<b>113</b>	<b>144</b>	<b>346</b>	<b>211</b>
Ore Mined	(kt)	49	49	13	17
Waste Mined	(kt)	64	95	333	194
Tonnage Processed	(kt)	26	49	27	24
Overall Process grades	(kg/t)	42.8	21.7	53.4	44.1
Stripping Ratio	( $t_{\text{waste}}:t_{\text{ore}}$ )	1.31	1.92	25.75	11.44
Mining Cost	(US\$/ $t_{\text{mined}}$ )	5.18	6.28	2.26	4.09

(1) 9-month period ending 31 December 2007.

### 6.4.3 Mining aspects of the Kariba Conceptual Study

The current Kariba Conceptual Study assumes increasing total material mined to in excess of 3.5Mtpa with an associated stripping ratio of  $47t_{\text{waste}}:t_{\text{ore}}$  by development of five larger and separate open-pits. The enlarged pit approach is focused in the area of the current Francis and Curlew pits. A higher stripping ratio will be required for the expansion project to expose ore at depth and compensate for the historical under-stripping as well as the removal of historical waste dumped within the mineralised zone.

Ore mining is planned to increase from the current 23ktpa to 75ktpa over a five-year period and the ore processed grade is assumed to increase from the current 44.1kg/t to 68.1kg/t. In respect of the latter, the Kariba Conceptual Study does not highlight how this is to be achieved nor how this relates to the current Inferred Mineral Resource statement. Of the US\$7.5m of start-up capital forecasted, some 80% (US\$5.6m) is associated with new plant and machinery, 40% of which is attributable to expanding the current mining fleet.

Notwithstanding the above, SRK notes that prior to implementation of the Kariba Conceptual Study, completion of the following tasks are prudent:

- Additional exploration to establish a sufficient Mineral Resource base to support the projections as included in the Kariba Conceptual Study;
- Computerisation of the geological model, inclusion of the latest drilling results, and updating of the in-situ resource estimates;
- Assessing the historical production rates of the vein zones and undertaking the necessary technical work to demonstrate the achievability of increased production without impairing the quality of the gemstones currently mined by manual methods;
- Open-pit optimisation analysis to enable determination of:
  - ultimate shells based on the assumed operating parameters as indicated in the Kariba Conceptual Study,
  - the sequence of mining the various open-pits,
  - engineered pit designs incorporating the necessary access and final slope configurations,
  - the necessary waste stripping to demonstrate the achievability of the planned waste increase to 3.5Mtpa and ore build up to the projected 75ktpa,
  - monthly, quarterly and annual production schedules, and
  - location and design of waste rock dumps in order to ensure sufficient capacity for the anticipated LoMp;
- Based on the production schedules, establishing the primary and ancillary mining equipment requirements (including replacements where appropriate) in order to define the mining capital and operating expenditures; and
- Conducting all other necessary technical investigations, hydrogeological, geotechnical, environmental and marketing studies to assess the validity of the mining study and feed into a PFS document.

### 6.5 Mineral Processing

The processing technology at Kariba combines both manual and mechanical processes which include a simple series of washing, screening, crushing and sorting to produce a marketable

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product comprising high grade; low grade; and very low grade amethyst, representing 0.2%, 28.2% and 71.6% of the total marketable product respectively. The current plant capacity is rated at 20tph which has resulted in a maximum annual vein zone throughput of 49kt in 2006.

The processing of the ore from the mine is undertaken at a small central facility that also employs manual methods of identifying and selecting the gemstone material. The product from this stage is then upgraded through chipping away poorer quality parts of the stone (knocking), cutting, sorting and classification. The various products are currently exported through the Company's central facility based in Lusaka where additional sorting and classification is carried out.

The existing washing plant, as a result of its age, experiences frequent breakdowns and the Kariba Conceptual Study assumes an increase in washing plant capacity to 100tph to enable annual throughput of 75kt.

The production of saleable rough amethyst at Kariba consists of four key stages:

- RoM amethyst ore, containing crystals of rough amethyst, is mined along with associated host rock, from pits using manual methods and excavators and loaded into dump trucks for transport to the washing plant;
- RoM is treated at the washing plant and amethyst is hand picked from conveyor belts in three size fractions namely: big crystals (>100mm); small crystals (>10mm and <100mm); very small crystals (>4mm and <10mm);
- The big crystals and very small crystals are sent to sort house where stones are classified as medium grade and low grade; and
- The high grade and low grade stones with bigger crystals are sent to the knocking shed where amethyst is manually broken to reject the unwanted portions. The very small crystals are sent for sawing and the stones are upgraded by "pre – forming". After knocking and sawing, amethyst is graded into marketable categories.

### **6.5.1 Processing facilities**

The process plant comprises washing, screening, crushing and sorting and is located close to the current mining activities and within the mineralised zone. Ore from the pits is brought in trailers to the head of the plant and is stockpiled. An excavator feeds ore into a head feed bin fitted with a grizzly to remove larger rocks, which then feeds onto an inclined conveyor belt. At the top of the conveyor the ore is discharged onto a screen where the undersize (<4mm) is discarded as waste. The product from the screens is divided into the three size fractions. These size fractions are delivered to separate picking belts where prospective amethyst is hand picked from the conveyors. The >100mm rejects are crushed and re-circulated into the plant feed. The nominal capacity of the washing plant is 20tph and currently some 2.7ktpm is processed.

The washing plant product together with the high quality product directly recovered from the pit is sent to the beneficiation section of the operation where the prospective stones are sorted and upgraded using labour intensive methods. Some 20% of the raw material from the washing plant is subjected to upgrading (knocking) to remove low value parts of the crystal. A variety of products are graded according to various qualities of colour, clarity and size with an increase in security and skills focused on the high value product. The mine operates on a three shift per day system although hand picking in the open-pits is only conducted during daylight hours.

The final mine product is transported to Kariba ML's facilities located at Lusaka for sale and export. There is some further sorting and upgrading undertaken at Lusaka although the Company is currently considering the relocation of this to the mine.

### **6.5.2 Historical processing operating statistics**

Table 6.11 presents the historical operating processing plant statistics for Kariba. Total tonnage processed has since 2006 declined significantly to the current annualised rate of 32ktpa. The impact on annual production of amethyst has however in part been offset by the increased grade resulting in the current annualised production of 1,400t of rough amethyst. The reduction in process throughput is largely attributable to low availability due to the undercapitalisation resulting from low maintenance and replacement expenditure. Unit operating expenditures have increased with the lower throughput and the impact of inflation as well as exchange rate strengthening.

The distribution of marketable products has however remained relatively constant, although the contribution from high grade rough amethyst has reduced from 0.4% in 2005 to 0.2% in the 9-month period to 31 December 2007.

**Table 6.11 Kariba: historical processing operating statistics**

Operating Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
Tonnage processed	(kt)	26	49	27	24
Overall Process grades	(kg/t amethyst)	42.8	21.7	53.4	44.1
<b>Production</b>	<b>(t)</b>	<b>1,129</b>	<b>1,068</b>	<b>1,429</b>	<b>1,066</b>
High grade	(t)	5	4	4	2
Low grade	(t)	319	274	401	301
Very low grade	(t)	805	790	1,024	763
Process Costs	(US\$/t)	27.41	21.50	34.30	28.01

(1) 9-month period ending 31 December 2007.

### 6.5.3 Mineral Processing aspects of the Kariba Conceptual Study

The Kariba Conceptual Study assumes expanding the process capacity from the current 20tph to 100tph resulting in an annual throughput of 75kt of ore. A new facility will be established at a capital cost of US\$2.2m located outside of the delineated mineralised zone. SRK notes that the assumed process expenditures will increase from the current US\$28.01/t to US\$30.91/t and that the average RoM grade is assumed to improve from the current 44.1kg/t to 68.1kg/t.

The Company is investigating optical sorting of amethyst crystals, and samples of the common material types have been sent to the manufacturer for test work. This would lead to a reduction in the quantity of hand sorting in the process as well as improved security.

### 6.6 Waste Rock Dumps and Tailings Storage Facilities

Waste material at Kariba comprises the waste rock from the mining activity and the coarse <4mm rejects discharged from the washing plant. Waste rock material is currently stored in waste rock dump facilities and the coarse discard is placed in separate facilities close to the current processing plant.

**Table 6.12 Kariba: historical production of waste material**

Operating Statistics	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
Total Mined	(kt)	113	144	346	211
Total Processed	(kt)	26	49	27	24
Production	(kt)	1	1	1	1
Total Waste Produced	(kt)	112	143	344	210
– Rock	(kt)	87	95	319	187
– Discard	(kt)	25	48	25	23

(1) 9-month period ending 31 December 2007.

### 6.7 Infrastructure, Overheads and Capital Expenditure

#### 6.7.1 Infrastructure

The power supply system on-site comprises installed diesel engine and generator sets which facilitate the supply of power to the processing plant. Water supply is largely from nearby boreholes and all dirty water is recycled via three concrete settling dams.

Additional supporting infrastructure comprises offices, workshops and a mine camp comprising 35 residential units which are interspersed with traditional dwellings. The majority of the on-site structures are associated with gemstone storage and sorting. Medical services on-site are limited to first aid facilities.

The Kariba Conceptual Study indicates requirements for substantial upgrading of the current mine infrastructure specifically in respect of land and site development; residential infrastructure; mine de-watering pumps; water supply and power generation.

## 6.7.2 Overheads

Table 6.13 presents the historical overhead operating expenditure for Kariba which reports US\$0.47mpa for the 9-month period ending 31 December 2007 reported on an annualised basis. These expenditures include both marketing expenses associated with operations in Lusaka as well as the on-mine and off-mine general and administration expenses. SRK has assumed that expenses which are related to sales volume are not to be considered as a percentage charge against sales revenue. Overhead operating expenditures expressed on a monthly basis have remained relative constant since 2006 with the unit costs per tonne processed varying broadly in line with throughput.

**Table 6.13 Kariba: historical overhead operating expenditures**

Overheads	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
Operating Expenditure	(US\$m)	0.40	0.53	0.55	0.36
	(US\$kpm)	34	44	46	40
	(US\$/t <sub>processed</sub> )	15	11	21	15

(1) 9-month period ending 31 December 2007.

The Kariba Conceptual Study as outlined by the Company assumes that the annual operating expenditures will increase to US\$0.9m reflecting a monthly rate of US\$72k.

## 6.7.3 Capital Expenditure

Table 6.14 presents the historical capital expenditure for Kariba which has largely been limited to relatively minor maintenance costs. The Kariba Conceptual Study as outlined by the Company assumes total capital investment of US\$7.3m (dated April 2007) which includes expenditures for:

- land and site development;
- detailed exploration;
- new plant and machinery;
- infrastructure and miscellaneous fixed assets;
- rehabilitation of existing plant and machines;
- social welfare;
- environmental related costs;
- pre-stripping of waste; and
- others.

In addition to the above the Company has assumed additional sustaining expenditures of US\$1.65mpa.

**Table 6.14 Kariba: historical capital expenditure**

Capital Expenditure	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
<b>Total</b>	<b>(US\$k)</b>	<b><u>56</u></b>	<b><u>43</u></b>	<b><u>83</u></b>	<b><u>5</u></b>

(1) 9-month period ending 31 December 2007.

## 6.8 Human Resources

Kariba currently has TEC of 424 and operates on a two 12hr shift per day system on a continuous basis. The on-crew work an entire month before being replaced. Mining of the ore is only undertaken in daylight hours and two 6hr shifts are employed. The process plant also operates continuously and picking at night is conducted under lights.

Table 6.15 presents the historical TEC as well as productivities for tonnes processed and gemstone production. Productivity has improved since 2005 however the increased grade has assisted in maintaining amethyst productivity despite the reduction in throughput.

The Kariba Conceptual Study assumes an increase in the TEC to 733 on reaching maximum ore processing throughput of 75ktpa: mining (138); processing (513); and general and administration (82).

**Table 6.15 Kariba: historical TEC and productivities**

Area	Units	Mar-2005	Mar-2006	Mar-2007	Dec-2007 <sup>(1)</sup>
Mining	(No)	100	99	84	101
Processing	(No)	263	261	221	252
General and Administration	(No)	<u>76</u>	<u>75</u>	<u>64</u>	<u>71</u>
<b>Total</b>	<b>(No)</b>	<b><u>439</u></b>	<b><u>435</u></b>	<b><u>369</u></b>	<b><u>424</u></b>
<b>Productivity</b>					
Processing	(t <sub>Processed</sub> /TEC/month)	5	9	6	6
	(kg amethyst/TEC/month)	214	205	323	279

(1) 9-month period ending 31 December 2007.

The TBL at Kariba is estimated by SRK based on the statutory requirements in Zambia, the current complement and the current annualised labour costs:

- 2 months salary per year of employment as well as an additional 28 months (assumed employee demographics indicates three years of continuous employment on average); and
- Annual salary bill of US\$0.83m per annum for employees (267 of 424).

This results in a total TBL of US\$2.35m which is incorporated as part of the total closure liability estimate presented in Table 6.16.

## 6.9 Occupational Health and Safety

The Company has no formal Occupational Health and Safety policy and currently does not prescribe to follow international conventions, specifically those aligned with World Bank Policies and Guidelines, International Finance Corporation Operational Policies, the International Labour organisations and OHSAS18001.

Further comments regarding Occupational Health and Safety are included in Section 2.3.8 of this CPR. The Kariba Conceptual Study however indicates certain financial commitments (>US\$150k) targeting social welfare issues.

## 6.10 Environmental

### 6.10.1 Environmental Setting

Kariba is located in the catchment of Zambezi River some 30km from the Kariba dam basin on the border between Zambia and Zimbabwe. The mining licence covers an area of 2.5km<sup>2</sup>. Access to the mine is via a 100km long dirt road, branching off from the main road between Livingstone and Lusaka, which is in very poor condition. Settlements in the immediate area consist of many traditional dwellings integrated with the 35 houses built by the Company. Along the access road there are villages and other infrastructure, and fairly extensive agriculture. The mine obtains process water from two boreholes, one at the mine site and one at the plant site. A settlement consisting of a number of trading establishments, a school and other infrastructure has developed along the access road some 1.5km from the mine site.

Mining activity to date comprises a number of open-pits, including 100 exploration pits, which are planned to be consolidated into five operational pits. The most significant operational pits are: Francis; Davidson; and Curlew.

### 6.10.2 Compliance

The current EPB is outdated and there is no EPB which addresses the current operation in any adequate detail. Contact with the regulatory authorities has been limited although it is reported that the recent establishment of an office of the ECZ in Livingstone has resulted in increased awareness of the mine by the authorities. Against this background there is no documentation against which to assess compliance. It was reported that compilation of a project brief has commenced.

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### 6.10.3 Environmental Management

SRK notes that the Company has no substantive EMS or OHS at Kariba. This limitation in conjunction with the outdated status of regulatory documentation confirms the Company's current inability to appropriately identify and manage environmental issues, specifically bio-physical and social impacts arising from the current and historical mining activity.

### 6.10.4 Key Environmental Issues

Key areas which require specific attention are as follows:

- **Water pollution:** Water is obtained from boreholes and recycled at the plant through a series of three concrete settling dams. The dams were all full at the time of the site visit and spillage is a possibility but this must be seen in the context of the location of the dams away from any potential receiving water body;
- **Rehabilitation requirements, including waste rock dumps:** Although it has been assumed that the open-pits will not be backfilled, considerable earthworks are likely to be required to ensure the stability of the waste dumps and for the prevention of inadvertent access to the pit areas. The most practical way to achieve the latter is deemed to be by building an earth berm around the pit perimeters. The sheer volume of earthworks results in significant costs and there is considerable scope to optimise this expenditure by adequate planning and reduce the overall liability by implementing the work concurrently with mining as redundant areas become available for this purpose;
- **Lack of environmental monitoring data:** No monitoring programme is in place at Kariba. Although this is unlikely to influence the overall liability significantly, adequate monitoring, and the implementation of plans to correct areas of non-compliance which are yet to be identified, will facilitate responsible environmental management; and
- **Social issues:** Kariba employees live within the local community, with 90% of the approximately 424 employees being local residents. The mine maintains a security presence to control artisanal mining and potential problems in this respect must exist but these are unlikely to affect liabilities materially.

### 6.10.5 Environmental Liabilities

The current closure cost estimate for Kariba (Table 6.16) is estimated at US\$3.75m, comprising US\$1.41m for bio-physical closure and US\$2.35m for TBL. These estimates are derived by SRK in the absence of any formal closure estimate generated by the Company.

The bio-physical component of the closure costs will be dominated by rehabilitation requirements for the various open-pits. There will also be costs associated with demolition, remediation of contaminated soil and the removal of the plant. The extent to which mine housing is integrated with traditional housing indicates that it is unlikely that such housing will be demolished, however in order to maintain consistency a small provision has been included by SRK.

The quantitative liability assessment could change as a result of future planning or regulatory requirements. Particular considerations in this respect are:

- The mine has no mine closure plans and hence no definitive closure objectives and there is the possibility that the closure scenario used for this estimate may change significantly in the future as a result of future planning;
- Volumes used in the calculations are not measured accurately but are based on various estimates and assumptions;
- Rates used in the cost calculation are estimates; and
- It is assumed that there are no social problems which will materially affect the closure liability.

The following assumptions apply:

- Pits will not be backfilled however measures will have to be put in place to prevent inadvertent access for safety reasons; and
- Surface infrastructure will be demolished and the area re-vegetated.

**Table 6.16 Kariba: environmental liability**

Environmental Liability	Closure Cost (US\$m)
Office, workshop, knocking shop etc	0.04
Residential units	0.01
Plant are including plant workshop	0.02
Roads	0.00
Pit areas	1.00
<b>Subtotal</b>	<b><u>1.08</u></b>
EPCM	0.11
Preliminary and General	0.05
Contingency	0.16
<b>Subtotal</b>	<b><u>0.32</u></b>
<b>Total – Bio-physical</b>	<b><u>1.41</u></b>
<b>Terminal Benefits – Social</b>	<b><u>2.35</u></b>
<b>Total – Bio-physical and Social</b>	<b><u>3.75</u></b>

SRK notes that the above closure cost estimates, due to a combination of uncertainty of occurrence and the absence of detailed information upon which to determine estimates, do not take account of the possible sale value of plant, equipment and infrastructure, or of the value of saleable commodities which may be recovered during site clearance.

### 6.11 Commodity Sales

Table 6.3 has outlined the historical commodity sales for rough amethyst production at Kariba from 1 April 2004 through 31 December 2007 inclusive. In this respect the overall price received, whilst increasing from 2005 through 2006, has reduced from a high of US\$2.05/kg to US\$1.72/kg. This is accompanied by a marked reduction in sales since 2005 (1,517t) to an annualised 800t of rough amethyst in the 9-month period to 31 December 2007.

The Kariba Conceptual Study assumes a long term price of US\$3.89/kg and a marked increase in sales to match production at some 5,100tpa of rough amethyst. SRK has not been provided with any detailed marketing plan which:

- demonstrates that the marked increase in sales due to prevailing market share will not negatively impact on current or projected prices; and
- supports the assumed price increase of some 125% from US\$1.72/kg to US\$3.89/kg.

### 6.12 SRK Comments

In summary the operations at Kariba have suffered from a lack of investment accompanied by a lack of a formal management system to monitor and measure operational performance and limited waste stripping. The Company in its Kariba Conceptual Study is considering capital investments of US\$7.3m to enable significant (four times) expansion of rough amethyst production to in excess of 5,100t per annum. Key to the financial viability of the proposed expansion is the following:

- The assumption of increased RoM grade from 44.1kg/t (9-month period to 31 December 2007) to 68.1kg/t;
- The stated increase in assumed price received (from US\$1.72/kg to US\$3.89/kg); and
- The requirement to at least double the current Inferred Mineral Resource base to support a 10 year LoMp.

SRK considers that completion of the further exploration and concurrently a multi-disciplinary PFS which demonstrates the technical feasibility and economic viability of the expansion is necessary prior to execution of the scope as envisaged in the Kariba Conceptual Study. In respect of the PFS this would specifically include:

- Geological/resource modelling including computerisation of the current geological information including the results of recent drilling, surface topography, development of stockwork wireframes and a block model. Specifically this should address the reasonableness of the assumed increase in RoM grade;

- 
- Mining studies to establish ultimate pits based on optimised shells for the various open-pits. Following appropriate engineering designs, mining production schedules for both waste and ore on a monthly/quarterly basis until full production is reached and annually thereafter. This would also include the location and design of all waste rock dump facilities in order to ensure sufficient capacity for the anticipated LoMp;
  - A key factor in substantiating the increased ore production rate is the extent to which multiple pits need to be operating simultaneously, the number of ore faces operating at any given time and the assumed production rates for the manual and mechanised mining methods separately. This will in turn govern the build-up as well as the waste stripping profile including the advanced waste to be mined prior to establishing full production;
  - Hydrogeological and geotechnical studies to ensure that slope stability and pit operations are not impaired by the ingress of water and weak ground;
  - Mineral processing studies to further the engineering designs for the plant and associated infrastructure;
  - Infrastructure studies to refine the requirements in respect of water, power and other services to support the expanded operation and the Company's stated intent to relocate the current services provided by Lusaka to the mine site. In addition focus should include the associated services needed to support the significant increase in labour;
  - Refining the operating expenditures based on the mining and processing production schedules including activity and element costing analysis for both the mining, processing and general/administration expenditures;
  - Refining the capital expenditure for both the initial expansion capital and the sustaining capital thereafter, following development of appropriate engineering designs and equipment selection and scheduling;
  - Environmental studies addressing both bio-physical and social aspects of the expanded scenario as well as addressing current deficiencies in respect of environmental management, monitoring and closure costs;
  - Market studies to demonstrate that the projected increase in rough amethyst production as well as rough amethyst price is supportable in respect of current market share and assumed supply demand analysis; and
  - Financial modelling to encompass all technical and financial elements and demonstrate the economic viability of the proposed expansion.

### 6.13 Risks and Opportunities

The principal **risks** at Kariba are:

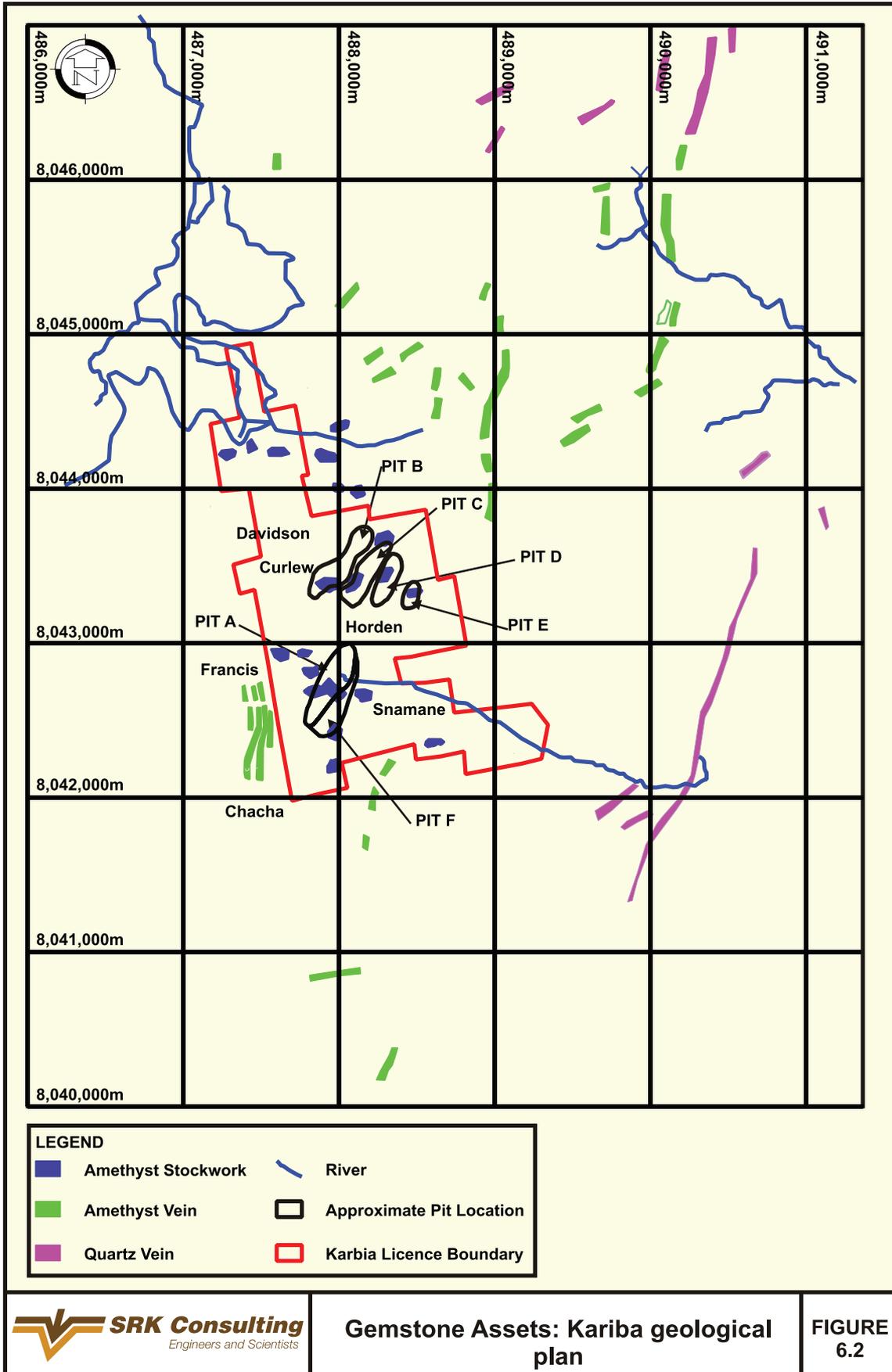
- **Expansion Programme:** The current Kariba Conceptual Study assumes significant (>300%) increases in rough amethyst production arising from increased ore processing and higher RoM grades. The economic performance is further enhanced by the assumed (125%) increase in the average price received as well as the assumed increase (100%) in total Mineral Resources to support a 10 year life. The current combination of assumed production increases, successful exploration as well as the potential impacts in respect of the rough amethyst market issues indicate an elevated level of risk. This risk can only be addressed by the completion of appropriate technical and marketing studies, preferably resulting in a PFS; and
- **Environmental Liabilities:** The current environmental liabilities at Kariba comprising both bio-physical closure costs (US\$1.41m) and social (TBL — US\$2.35m) liabilities amount to US\$3.75m and as at 1 January 2008 remain unfunded. The majority of these liabilities are historic in nature and are unlikely to be reduced, indeed should certain environmental action as stated in Section 6.10 not be implemented they are likely to increase with time. Further, the liabilities as estimated by SRK in the absence of any estimate by the Company are inevitably conceptual in nature and accordingly SRK considers that further technical work is required to refine the estimates to take account of: volumetric surveys; site specific and not factored components; and locally benchmarked unit rates.

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The principal **opportunities** at Kariba are to some degree already factored into the Kariba Conceptual Study and given the interdependency are in essence risks. Notwithstanding this aspect, SRK notes that the principal opportunity is in respect of the exploration potential.

The current exploration programme assumes further expenditures of US\$1.00m to be expended from 1 April 2008 through 30 June 2009 inclusive. This is largely focused on both the down dip and strike extensions to the currently defined Inferred Mineral Resources, specifically below the 50m depth horizon. In the wider prospecting licence PLLS-300 where exploration is at a preliminary grassroots stage and SRK considers there to be further potential to explore for parallel shears to the shear zones currently being exploited.

Figure 6.2 Gemstone Assets: Kariba geological plan



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## 7 MBUVA-CHIBOLELE

### 7.1 Introduction

This section includes discussion and comment on the following technical aspects of the Mbuva-Chibolele emerald mine: geology; Mineral Resources; mining; mineral processing; waste rock dumps and discard facilities; infrastructure, overheads and capital expenditure; human resources and environmental considerations. Historical tables are also presented to support certain assumptions regarding the declaration of Mineral Resources.

Historical sales, production and cost information as presented in this section are sourced from the Company's management accounts which are based on GHZL's financial year (ending 30 June). SRK notes that due to various accounting practices these may be different to those included in the audited financial statements for either GHZL or the historical consolidation for the Company, accordingly historical information in this section is reported to assess the validity of various technical aspects associated with the Mineral Resource statements and historical performance only. Furthermore, SRK notes that mining and processing production records on a monthly basis were not available from the Company and accordingly certain assumptions have been necessary to establish statistics per reporting period.

Based on operating losses to date and limited sales (2007 only) the Company has ceased mining operations and Mbuva-Chibolele is currently operating on a care and maintenance basis. From 1 July 2005 to 31 December 2007, Mbuva-Chibolele has produced 290kg of emerald and 2,887kg of beryl at a combined emerald and beryl cash operating cost of US\$4.4/g and invested some US\$13.1m. During this period (specifically November 2006 and February 2007) total sales amounted to 443kg of emerald and beryl combined which realised some US\$1.80m of sales revenue and an average price of US\$4.1/g. Total ore (Reaction Zone) processed to 31 December 2007 amounts to 65kt which in 2007 achieved an average monthly rate of 3ktpm. Total material mined to 31 December 2007 is 7.7Mt of which 6.9Mt is classified as primary waste and 0.8Mt is classified as TMS material at a stripping ratio of  $8.71t_{\text{waste}}:t_{\text{TMS}}$ . Total ore (Reaction Zone) mined is 90kt at a stripping ratio of  $76.50t_{\text{waste}}:t_{\text{Reaction Zone}}$  with the balance of 26kt stockpiled.

Other than the forecasted care and maintenance costs, the Company has not developed any plan to re-establish mining operations or implement a formal closure plan at Mbuva-Chibolele, accordingly SRK's comments are limited to the current Mineral Resource statement as provided and all associated environmental liabilities.

As at 1 January 2008, Mbuva-Chibolele has:

- no JORC Code compliant Mineral Resource; and
- environmental (US\$1.46m of bio-physical closure and US\$0.00m of social) liabilities of US\$1.46m.

### 7.2 Geology

The main area of gemstone extraction at Mbuva-Chibolele is the Fwaya-Fwaya belt, which cuts across the centre of the licence area, with a variable strike. As with Kagem emeralds are found at the intersection of the TMS unit and cross-cutting pegmatites. The 1km long TMS outcrop on the property is a south-western continuation of the TMS outcropping in the Kagem Fwaya-Fwaya pits located some 2.5km to the north-northeast.

Mbuva-Chibolele is covered by three separate licences covering an area of 1.15km<sup>2</sup>: namely GL-145 (Mbuva-0.4km<sup>2</sup>), GL-288 (Chibolele-0.40km<sup>2</sup>) and GL-081/744 (Arinus-0.35km<sup>2</sup>). Mining activity has been limited to GL-288. The following section describes the geology of the Mbuva-Chibolele mine as well as the nature of the mineralised zones which currently comprise the Mineral Resource statements.

#### 7.2.1 Lithology

The strike of the TMS unit is 250° in the western section and changing to 000° in the central areas and curving back to 250° in the east. The outcrop is generally no more than 10m wide and in the western and central parts of the outcrop there are two units separated by some 50m to 80m. The TMS dips at approximately 25° to the south. Weathering has affected the rockmass down to a depth of approximately 20m.

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The TMS unit itself contains highly variable quantities of talc, tremolite, actinolite, biotite, magnetite and tourmaline, the latter may be disseminated or in quartz veins or as tourmalinite bands. The term “TMS” is largely a mine term which includes rocks which vary from massive moderately coarse grained talc-actinolite rocks to massive fine grained talc-magnetite rocks. The TMS at the Chibolele pit is inter-layered with amphibolite; together these constitute a package termed the “Basic Unit”. A number of layers or lenses of quartz-muscovite schist are found within the package, one of which persists near surface. At depth, there are several drill hole intersections which show the basic package to be continuous but with a variable occurrence of quartz-muscovite schist and variable ratios of TMS to amphibolite; the basic unit appears to increase in thickness with depth eventually exceeding 100m and there is an indication in three drill holes that a second TMS unit occurs some 60m beneath the TMS mapped at surface. The ratio of TMS to amphibolite tends to improve east of the Chibolele pit with TMS packages exceeding 40m thickness.

Three tourmaliniferous sub-vertical and north-south striking pegmatites (M1, M2, M3) are noted in the Chibolele pit and there is also a thin bedding-parallel pegmatite on the hangingwall of the basic unit and there are some areas where a footwall pegmatite is also noted. However the drilling is not sufficient to quantify the number and thickness of cross cutting pegmatites in the deeper and eastern extensions of the basic package. SRK notes that dedicated drilling is required to assess the pegmatite frequency in these areas before assessing the merit of extending the existing pit further.

### **7.2.2 Mineralisation**

Emerald and beryl mineralisation is located in the Reaction Zones, which occur at the intersections of the TMS and pegmatite lithologies. The Reaction Zones are marked by a sharp increase in biotite alteration, which varies in thickness, and can extend for several metres into the unaltered TMS wall rocks. Reaction Zones also develop around thin, centimetre scale pegmatites, which may be off shoots, or running parallel to the major pegmatite veins. Emerald mineralisation is often concentrated at the three way intersection of TMS, cross-cutting pegmatite, and the thin, hangingwall pegmatite. The three pegmatite veins which cut through the Chibolele pit have a varying thickness. The central pegmatite, which is the thinnest, has a high proportion of tourmaline, and has been associated with good quantities of emerald in the past.

### **7.3 Mineral Resources**

Historical mining has been limited to the Chibolele licence which to date has resulted in the extraction of some 0.8Mt of TMS material from which 90kt and 65kt of Reaction Zone material has been mined and processed respectively.

#### **7.3.1 Quantity and Quality of Data**

The Company has completed a total of 51 drill holes at Mbuva-Chibolele for a total of 4,600m. The majority of core was drilled at NQ, with only 100m of BQ. All of the drilling was completed in 2004, and holes are spaced on 50m to 100m section lines, over a 1,000m strike length. The holes have been drilled to a maximum vertical depth of 250m, and vary in inclination from vertical to 45°. The drill hole layout is largely influenced by the need to determine the continuity and thickness of the TMS formation. Core recovery is reported by the Company to be good, being generally higher than 95%. Losses do occur in areas of high biotite alteration, which is unfortunate, but not unexpected.

Core is housed on site, and is logged lithologically. The drilling intersects the Reaction Zone itself very infrequently and even then, it is very unlikely to find an emerald in drill core. All drill hole data including the summarised logs has been computerised and included in an electronic database. Geotechnical logging is also undertaken and geotechnical studies have been completed by external consultants.

Some chromium assay results are available for a selection of TMS samples, and values range from 0.01%Cr to 0.45%Cr which suggests that the TMS unit as logged by the geologists has a very variable chromium grade which affects the likelihood of emerald versus beryl forming in the mineralising process. All drill core in the basic unit should be sampled and assayed for chromium in order to more positively assess the emerald producing potential and therefore improve the definition of emerald bearing potential.

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SRK notes the absence of quality assurance and quality control protocols for core logging, sampling and analysis. Notwithstanding the above, external consultants reviewed the logging process in 2005 which concluded that the overall process was “generally acceptable”.

### **7.3.2 Geological Modelling, grade and tonnage estimation**

The recent geological modelling (2005) undertaken by the Company focused solely on the Chibolele orebody, and was largely based on the 4,600m of drilling described previously and was undertaken using the Surpac software. Sectional interpretation is initially used to define the Basic Unit as well as the internal waste representing the quartz muscovite schist lenses (Figure 7.1). Currently no attempt is made to define sectional interpretations for:

- the amphibolite which together with the TMS comprises the Basic Unit; and
- the Reaction Zones which contain the economic concentrations of emerald and beryl.

Accordingly the current approach is to establish the continuity of the Basic Unit and the internal waste zones. The resulting sections are then used to delineate 3D wireframes of the Basic Unit and the internal waste.

TMS and amphibolites could not be modelled separately with available data. Improved drilling coverage and chemical analysis is required to provide better confidence in the continuity of the internal quartz-muscovite lenses and to enable separate modelling of these units. SRK notes that the Company has made no attempt to model the TMS separately from the amphibolite and improved drilling coverage would be required in order to achieve this and provide better confidence in the continuity of the internal quartz-muscovite lenses. Investigations into differentiating between TMS and amphibolite in the core would also aid in distinguishing between the two rock types and so improve 3D modelling of the pegmatites based on drill intersections and face mapping would significantly improve confidence in quantifying the amount of Reaction Zone present within the TMS. SRK considers that the Basic Unit is modelled with reasonable confidence however there has been no attempt to interpret and model the remaining discordant pegmatites in three dimensions which results in a very low confidence in any attempt to quantify the amount of Reaction Zone that might be encountered within the TMS. SRK however recognises that modelling of historically mined areas included the delineation of such pegmatites. This in conjunction with additional drilling would also assist in assessing the frequency and number of cross cutting pegmatites in order to assess emerald forming potential with improved confidence.

The host rock and Basic Unit volumes are then converted to tonnage by application of densities of 2.20t/m<sup>3</sup> and 2.85t/m<sup>3</sup> respectively as derived from core sampling and measured at external laboratories. SRK notes however that the apparent lower prevalence of pegmatites at Mbuva-Chibolele compared with Kagem may present a risk and warrant consideration of lower densities for the Basic Unit.

Estimation of the proportion of the Basic Unit that is classifiable as TMS is, given in the geological modelling approach defined above, dependent upon sectional interpretation of the drilling data. Accordingly, SRK has determined an average percentage of TMS, based on drill hole intersection, of 33.6%. This is based on 11 sections with values ranging from a low of 5% to a high of 80%. This can be compared with that originally estimated by the Company at 58% TMS and 42% amphibolite.

Economic concentrations of emerald and beryl are only contained within the Reaction Zones. Historical information in this regard is largely limited to TMS tonnage mined, Reaction Zone tonnage mined and Reaction Zone tonnage processed including the associated gemstone grades. Analysis of the historical results for the financial years ending 30 June 2006, 2007 and the 6-month period to December 2007 is presented in Table 7.1. On this basis SRK notes that Reaction Zone tonnage constitutes 11.4% of the TMS tonnage mined and that some 71.5% of Reaction Zone tonnage mined is actually processed with the remainder stockpiled. Despite this, SRK notes that, as for Kagem, the mining process results in the majority of the economic gemstones being reported to total production and that the stockpiled material generally constitutes a minor proportion (<15%) of economic gemstones. Consequently the aggregate proportion of the Basic Unit modelled which reports as Reaction Zone tonnage is estimated at 3.8%. The historical grades of Reaction Zone tonnage mined is estimated at 35.2g/t combined emerald and beryl comprising 3.2g/t emerald and 32.0g/t beryl.

**Table 7.1 Mbuva-Chibolele: historical production records<sup>(1)</sup>**

<b>Operating Statistics</b>	<b>Units</b>	<b>Jun-2006<sup>(2)</sup></b>	<b>Jun-2007</b>	<b>Dec-2007<sup>(3)</sup></b>	<b>Total</b>	<b>Average<sup>(4)</sup></b>
TMS Mined	(kt)	207	414	172	793	<b>397</b>
Reaction Zone Mined	(kt)	24	47	20	90	<b>45</b>
Total grade	(g/t)	35.7	38.6	26.2	35.2	35.2
Emerald	(g/t)	0.9	3.8	4.6	3.2	3.2
Beryl	(g/t)	34.8	34.9	21.6	32.0	32.0
<b>Factors</b>						
RZMined/TMSMined	(%)	11.4%	11.4%	11.4%	11.4%	11.4%
RZProcessed/RZMined	(%)	71.5%	71.5%	71.5%	71.5%	71.5%
<b>Processing</b>						
<b>Ore Processed (Reaction Zone)</b>	<b>(kt)</b>	<b>17</b>	<b>34</b>	<b>14</b>	<b>65</b>	<b>32</b>
Total grade	(g/t)	50.0	54.1	36.7	49.2	49.2
Emerald	(g/t)	1.3	5.3	6.4	4.5	4.5
Beryl	(g/t)	48.7	48.8	30.3	44.7	44.7

(1) Monthly data for the period reported is limited and as a result production statistics have been compiled from variable time-lines. Accordingly in respect of production data reliance should necessarily only be placed in the 'Total' column as reported.

(2) Six-month period to 30 June 2006.

(3) Six-month period to 31 December 2007.

(4) Annual averages derived from monthly average statistics.

SRK notes that the volume from the Basic Unit wireframe is considered to be accurate, and the proportion of TMS in the basic package can be estimated with reasonable confidence from the drilling data. In SRK's opinion, however, the subsequent factors which are based on production records from the Mbuva-Chibolele Pit are known to be highly variable resulting in a low degree of confidence in and predicted Reaction Zone tonnages and emerald and beryl grades.

### 7.3.3 Classification

Emerald deposits, owing to the distribution of economic concentrations of Reaction Zones are notoriously difficult to sample, estimate and classify as current drilling techniques are inappropriate to provide sufficient data density to enable direct estimation of Reaction Zone tonnage and grade. Accordingly drilling as currently employed can only provide information to determine the volume of the Basic Unit and its location relative to other lithology and geological structures.

Developing a better understanding of how the TMS and amphibolite lithologies interact in the Basic Unit will also improve 3D modelling. Modelling of the discordant pegmatite dykes, from drill intersections, and in-pit face mapping would also improve confidence in the geological model. Additional drilling may enable direct modelling of the TMS as currently undertaken at Kagem, however it is likely that the estimation of Reaction Zone tonnage and grades and reporting of Mineral Resources will remain largely dependent on the availability of the results of bulk samples or equivalent, such as historical production statistics.

Furthermore there is certain evidence which suggests that the degree of variability experienced to date at Mbuva-Chibolele is relatively higher than that experienced at Kagem. This applies to both the prevalence of Reaction Zones, estimated tonnages thereof and associated grades, which accordingly results in a low degree of confidence in the estimation of such parameters.

All of the above, uncertainties, and the use of the extrapolated grade and geological information from historical mining, requires that only an Inferred Mineral Resource category be assigned to any potentially economically mineable mineral resources limited down to the 1,020m or 150m vertical depth.

### 7.3.4 Selective Mining Units

Mining practice at Mbuva-Chibolele dictates that selectivity is largely based on the dimensions of individual Reaction Zones which based on historical performance may range up to a maximum of 4kt (34kt processed in a year with 6 to 10 operating). Furthermore, the limited volume and the requirement for manual extraction within the Reaction Zones, largely dictates that dilution and other modifying factors are not applicable.

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### 7.3.5 Grade control and reconciliation

The data gathering process at Mbuva-Chibolele comprises daily reports which are then compiled on a weekly and monthly basis. Records of mining statistics include TMS, Reaction Zones, amphibolite and waste. These tonnages are then reconciled against surveyed volumes using general mining and geological software modelling packages. Due to the nature of the mineralisation, grade monitoring is however largely dependent upon historical plant performance with certain assumptions made in respect of the contribution from historical stockpiles. The historical process in place at Mbuva-Chibolele is to be implemented at Kagem, to improve the monitoring, collation and analysis of basic data in this regard specifically to assess potential for the prevalence of Reaction Zones and the associated economic concentration of emerald and beryl.

### 7.3.6 Economic Potential

The determination of a Mineral Resource requires consideration of the principle of 'potentially economically mineable', which in general is reflected by the application of in-situ cut-off grades which include differentiation by mining methods (open-pit vs underground) as appropriate. Accordingly such assessments must include consideration of the following:

- Long-term commodity prices and macro-economics;
- Revenue based deductions including royalties, refining charges and metallurgical recoveries;
- Operating expenditures; and
- Modifying factors to determine in-situ components.

Furthermore, SRK has where appropriate demonstrated those Mineral Resources which are deemed to be economically mineable by open-pit methods by consideration of reporting within an optimised shell which is based on commodity prices which incorporates the long-term consensus forecast as well as consideration of a premium for Mineral Resource reporting.

**Long-term commodity prices and macro-economics:** SRK notes that the Company's current reporting of sales revenue is derived from only two auction results: November 2006 and February 2007. The auction results report separately for emerald and beryl as well as the combined invoice, and it is notable (Table 7.2) that:

- overall sales (443kg) are substantially less than total production (3,177kg), largely owing to the decision by the Company to suspend sales given the low price received at auctions;
- of the overall sales, 120kg comprise emeralds graded in the A-F category and 280kg (low grade emeralds) graded in the G-H category; and
- the overall price received was US\$4.1/g which can be compared with the US\$6.1/g reported by Kagem ML for the 9-month period ending 31 December 2007.

In the November auction some 225kg was classed as beryl and was withdrawn due to the limited response to the sales price assumed by the Company of US\$0.07/g.

**Table 7.2 Mbuva-Chibolele: historical sales data**

Grade	Sales — Volume			Sales — Value			Sales — Unit Value		
	11-2006 (kg)	02-2007 (kg)	Total (kg)	11-2006 (US\$K)	02-2007 (US\$K)	Total (US\$K)	11-2006 (US\$/g)	02-2007 (US\$/g)	Total (US\$/g)
A	2	2	4	227	125	352	113.3	75.0	95.9
B	0	6	6	52	252	304	117.9	44.7	50.0
BA	1		1	31		31	54.7	0.0	54.7
C	4	8	12	72	242	313	17.9	32.0	27.1
D	7	18	25	142	226	367	19.1	12.5	14.4
E	21	20	40	102	76	177	4.9	3.8	4.4
F	22	11	33	102	22	123	4.6	2.0	3.7
<b>Emeralds (A-F)</b>	<b>57</b>	<b>63</b>	<b>120</b>	<b>727</b>	<b>941</b>	<b>1,668</b>	<b>12.7</b>	<b>14.8</b>	<b>13.8</b>
G	29	14	42	26	26	51	0.9	1.9	1.2
H	36	244	280	16	62	77	0.4	0.3	0.3
<b>Low Grade Emeralds (G-H)</b>	<b>65</b>	<b>258</b>	<b>322</b>	<b>42</b>	<b>87</b>	<b>129</b>	<b>0.6</b>	<b>0.3</b>	<b>0.4</b>
<b>Total Emerald</b>	<b>122</b>	<b>321</b>	<b>443</b>	<b>768</b>	<b>1,028</b>	<b>1,796</b>	<b>6.3</b>	<b>3.2</b>	<b>4.1</b>
<b>Total Beryl</b>	<b>225</b>	<b>0</b>	<b>225</b>	<b>17</b>	<b>0</b>	<b>17</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>
<b>Total Gemstones</b>	<b>346</b>	<b>321</b>	<b>668</b>	<b>785</b>	<b>1,028</b>	<b>1,813</b>	<b>2.3</b>	<b>3.2</b>	<b>2.7</b>

Analysis of commodity prices is normally based on historical price-demand-supply assessment to establish a price relationship which in conjunction with forecast demand-supply analysis is then used to generate a price profile. The short and longer term component of this profile is then benchmarked against: the consensus market forecast sourced from the median of various research analysts; as well as the last three-year average price. In the case of gemstones, and specifically the emerald and beryl sector historical rough prices are difficult to source as historical prices for cut emeralds.

Accordingly SRK has largely relied on the historical prices for combined emerald and beryl sales as recorded by the Company (Table 7.2 above) and benchmarked these against the current long-term price forecast as suggested by the Company for Kagem (US\$5.0/g) as well as consideration of the differential in emerald contribution to total gemstones at Kagem (28%) and Mbuva Chibolele (9%).

Furthermore, SRK recognises that in respect of reporting Mineral Resources, SRK considers a 33% premium to the long-term price to be appropriate which would by definition result in a reduction in the in-situ cut-off grade of 25%.

Based on the above SRK notes the following:

- The assumed long-term price used for determining potentially economically mineable resources at Kagem is US\$6.0/g; and
- Based on historical results the contribution of emeralds to total gemstones is three times less at Mbuva-Chibolele than at Kagem.

Accordingly one could assume that the overall price appropriate for Mbuva-Chibolele to be a third of that considered for Kagem i.e. US\$2.0/g. This is however optimistic given that:

- the unit price per individual grade category achieved at auction for grades 'A' through 'C' are some 50% less at Mbuva-Chibolele when compared to that achieved at auction at Kagem; and
- assuming that the prices achieved for emerald at auction and that proposed at auction for beryl were applicable to the entire production, this would result in an average price of US\$0.63/g (443kg sold at US\$4.1/g and 2,887kg at US\$0.07/g).

Furthermore even if the proposed price at auction (November 2006) for both emerald and beryl had been achieved this would only increase the average price to US\$1.01/g (443kg sold at US\$6.8/g and 2,887kg sold at US\$0.07/g).

Notwithstanding the above, SRK notes the Company's view that emerald quality appeared to be improving with depth as well as the contribution of emeralds to the total gemstone concentration.

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To date this is however not supported by any substantive body of evidence and SRK accordingly cannot present a 'potentially economically mineable' Mineral Resource' for Mbuva-Chibolele. Instead SRK has presented a sensitivity table which indicates the average price required to establish Mineral Resources which would satisfy such criteria and hence be reportable in accordance with the JORC Code (Table 7.5).

Furthermore, SRK has also analysed the following historical macro-economic parameters in respect of the exchange rate of the ZMK against the US\$ and US CPI as well as ZM CPI. In the three year period from 1 January 2005 through to 31 December 2007 inclusive the following apply:

- The exchange rate of the ZMK against the US\$ has ranged from 3,707 to 4,417, yielding an average of 4,002;
- The US CPI has ranged from 1.3% to 4.7% reported monthly on a 12-month basis, yielding an average of 3.2%; and
- The ZM CPI has ranged from 7.9% to 19.5% reported monthly on a 12-month basis yielding an average of 12.7%.

SRK notes that whilst commodity prices have increased significantly, operating costs are likely to sustain further pressure in US\$ terms due to the strengthening of the ZMK against the US\$ and increasing inflation indices.

**Revenue deductions:** Determination of recoverable revenue requires consideration of the mineral processing recovery, royalties and selling charges. In this respect SRK notes that no deduction is made for process recovery (note that grades are based on historical production), royalties are assumed at 5% as defined in the 2008 Act, and no direct selling charges are levied in relation to commodity price.

**Operating Expenditures:** Historical operating expenditures as reported at Mbuva-Chibolele are stated in Table 7.3 below and indicate that unit costs have fluctuated significantly over the reported periods. This may however reflect the build-up profile as well as the lack of monthly data for certain of the reporting periods. Notwithstanding this limitation, SRK notes that, despite the impact of differential stripping ratios, the total unit costs per tonne processed are not too dissimilar to those noted for Kagem. To assess the potential for reporting potentially economically mineable Mineral Resources, SRK has assumed the operating performance in 2007 to be reasonable for determining unit operating expenditures. This results in the following: mining costs of US\$1.75/t<sub>mined</sub>; US\$16.71/t<sub>processed</sub>; and US\$52.45/t<sub>processed</sub> for general and administration. This equates to unit costs for TMS of US\$1.36/t<sub>processed</sub> for processing and US\$4.27/t<sub>processed</sub> for general and administration expenses.

**Table 7.3 Mbuva-Chibolele: historical operating expenditure<sup>(1)</sup>**

Statistics	Units	Jun-2005	Jun-2006 <sup>(2)</sup>	Jun-2007	Dec-2007 <sup>(3)</sup>	Total	Average <sup>(4)</sup>
<b>TMS – Mined</b>	<b>(kt)</b>	<b>0</b>	<b>207</b>	<b>414</b>	<b>172</b>	<b>793</b>	<b>397</b>
Ore – Reaction Zone	(kt)	0	24	47	20	90	45
Waste	(kt)	0	1,985	3,970	1,654	7,610	3,805
<b>Total Mined</b>	<b>(kt)</b>	<b>0</b>	<b>2,009</b>	<b>4,017</b>	<b>1,674</b>	<b>7,700</b>	<b>3,850</b>
<b>Processed Tonnage</b>	<b>(kt)</b>	<b>0</b>	<b>17</b>	<b>34</b>	<b>14</b>	<b>65</b>	<b>32</b>
Processed Grade	(g/t)	0.0	35.7	38.6	26.2	35.2	35.2
	(ct/t)	0.0	178.7	193.2	131.2	175.9	175.9
<b>Unit Costs</b>							
Mining	(US\$/t <sub>mined</sub> )	0.00	0.00	1.75	1.49	1.23	1.07
Processed Tonnage	(US\$/t <sub>processed</sub> )	0.00	0.00	16.71	3.61	9.50	9.11
General & Administration	(US\$/t <sub>processed</sub> )	0.00	63.30	52.45	57.75	69.26	41.90
<b>Total</b>	<b>(US\$/t<sub>processed</sub>)</b>	<b>0.00</b>	<b>63.30</b>	<b>277.41</b>	<b>239.11</b>	<b>226.06</b>	<b>178.98</b>
<b>Unit Costs – Ore</b>							
Mining	( US\$/t <sub>ore</sub> )	0.00	0.00	148.81	127.02	105.25	91.45
Processed Tonnage	(US\$/t <sub>ore</sub> )	0.00	0.00	11.94	2.58	6.79	6.51
General & Administration	(US\$/t <sub>ore</sub> )	0.00	45.24	37.48	41.26	49.49	29.94
<b>Total</b>	<b>(US\$/t<sub>ore</sub>)</b>	<b>0.00</b>	<b>45.24</b>	<b>198.23</b>	<b>170.86</b>	<b>161.54</b>	<b>127.90</b>
<b>Unit Costs – TMS</b>							
Mining	( US\$/t <sub>TMS</sub> )	0.00	0.00	16.94	14.46	11.98	10.41
Processed Tonnage	(US\$/t <sub>TMS</sub> )	0.00	0.00	1.36	0.29	0.77	0.74
General & Administration	(US\$/t <sub>TMS</sub> )	0.00	5.15	4.27	4.70	5.64	3.41
<b>Total</b>	<b>(US\$/t<sub>TMS</sub>)</b>	<b>0.00</b>	<b>5.15</b>	<b>22.57</b>	<b>19.45</b>	<b>18.39</b>	<b>14.56</b>
<b>Operating Expenditure</b>							
Mining	(US\$m)	0.00	0.00	7.01	2.49	9.50	4.13
Processing	(US\$m)	0.00	0.00	0.56	0.05	0.61	0.29
General & Administration	(US\$m)	0.83	1.07	1.77	0.81	4.47	1.35
<b>Total</b>	<b>(US\$m)</b>	<b>0.83</b>	<b>1.07</b>	<b>9.34</b>	<b>3.35</b>	<b>14.59</b>	<b>5.77</b>

(1) Monthly data for the period reported is limited and as a result production statistics have been compiled from variable time-lines. Accordingly in respect of production data reliance should necessarily only be placed in the Totals as reported.

(2) Six-month period to 30 June 2006.

(3) Six-month period to 31 December 2007.

(4) Annual averages derived from monthly average statistics.

**Modifying Factors:** No dilution or other grade adjustment factors are deemed applicable.

**Cut-off grade Calculations:** Table 7.4 gives the resulting cut-off grade calculations as determined by SRK for open-pit mining methods at a range of commodity prices. The resulting cut-off grades are presented per tonne of Reaction Zone with TMS noted for comparative purposes only. SRK also notes that the unit costs assume a RZF of 11.4% and that no determinations for an appropriate cut-off grade have been determined for underground mining methods as the Company currently considers this potential to be limited.

**Table 7.4 Mbuva-Chibolele: open-pit cut-off grade calculations**

Commodity Price	Units	Commodity Price cut-off grade calculations						
Emerald + Beryl	(US\$/g)	2.00	3.00	4.00	5.00	6.00	7.00	
	(US\$/ct)	0.40	0.60	0.80	1.00	1.20	1.40	
Royalty	(%)	5%	5%	5%	5%	5%	5%	
Recovered Revenue	(US\$/g)	1.9	2.9	3.8	4.8	5.7	6.7	
<b>Operating Expenditure</b>								
Operating	(US\$/t <sub>ore</sub> )	70.90	70.90	70.90	70.90	70.90	70.90	
Marginal	(US\$/t <sub>ore</sub> )	42.94	42.94	42.94	42.94	42.94	42.94	
<b>Cut-off-Grade (Reaction Zone)</b>								
Operating	(g/t <sub>ore</sub> )	37.3	24.9	18.7	14.9	12.4	10.7	
Marginal	(g/t <sub>ore</sub> )	22.6	15.1	11.3	9.0	7.5	6.5	
<b>Cut-off-Grade (TMS)</b>								
Operating	(g/t <sub>TMS</sub> )	3.9	2.6	1.9	1.6	1.3	1.1	
Marginal	(g/t <sub>TMS</sub> )	1.8	1.2	0.9	0.7	0.6	0.5	

(1) Abbreviations: OCOG (Operating cut-off grade); MCOG (Marginal cut-off grade).

**Grade-tonnage curve analysis:** Grade interpolation is limited to reliance on historical mining grades as previously described and as this is a single grade, determination of grade-tonnage curves is not appropriate. Notwithstanding this limitation, SRK has undertaken a series of pit optimisations in order to ascertain the mineable Mineral Resource which is contained within an open-pit at the stated long-term commodity price assumptions. Table 7.5 gives the results of the pit optimisation exercise for various long-term price scenarios. Figure 7.1 is a diagrammatic representation of Table 7.5 below.

**Table 7.5 Raw Whittle shell results**

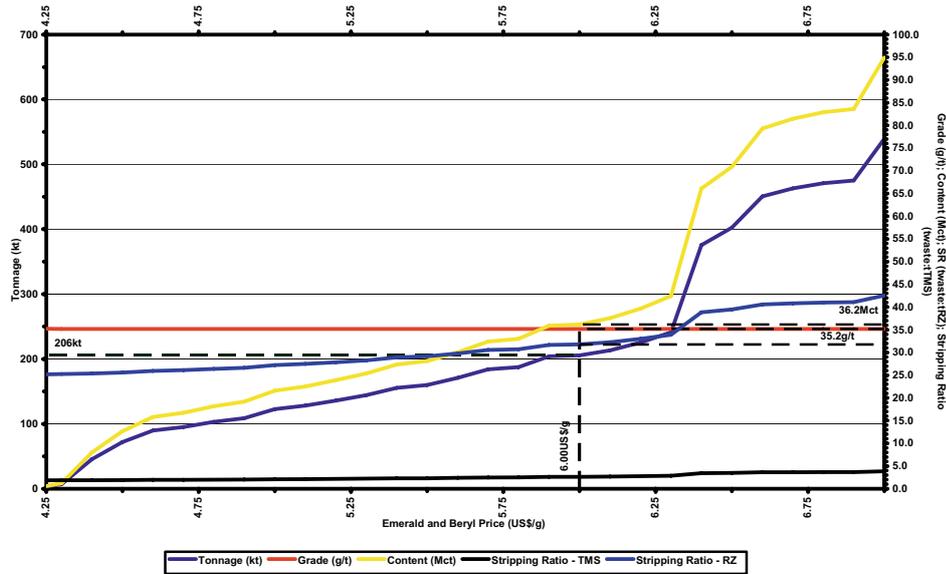
Commodity Price <sup>(1)</sup>		TMS <sup>(2)</sup>		Reaction Zone <sup>(3)</sup>				Waste Mined			Stripping Ratio	
(US\$/g)	(US\$/ct)	(Mt)	(g/t)	(Mct)	(kt)	(g/t)	(Mct)	(Mt <sub>OVb</sub> )	(Mt <sub>TMS</sub> )	(Mt <sub>Total</sub> )	(twaste:t <sub>RZ</sub> )	(twaste:t <sub>TMS</sub> )
4.20	0.84	0.00	4.0	0.0	0	35.3	0.0	0.00	0.00	0.00	25.1	1.9
4.50	0.90	0.63	4.0	12.7	72	35.2	12.7	0.04	1.81	1.85	25.6	1.9
5.00	1.00	1.08	4.0	21.6	123	35.2	21.6	0.26	3.08	3.34	27.2	2.1
5.50	1.10	1.40	4.0	28.1	160	35.2	28.1	0.64	4.01	4.66	29.1	2.3
6.00	1.20	1.81	4.0	36.2	206	35.2	36.2	1.37	5.16	6.53	31.8	2.6
6.50	1.30	3.54	4.0	70.9	403	35.2	70.9	5.80	10.11	15.91	39.5	3.5
7.00	1.40	4.74	4.0	94.9	539	35.2	94.9	9.42	13.55	22.97	42.6	3.8

(1) Average commodity price for emerald and beryl combined.

(2) Presented only for the purpose of demonstrating block model parameters.

(3) Inferred Mineral Resources contained within raw whittle shells corresponding to various long term commodity prices.

**Figure 7.1 Mbuva-Chibolele: raw open-pit shell results**



**7.3.7 Mineral Resource statements**

In order to report a potentially economically mineable Mineral Resource, the long-term commodity price for both emerald and beryl combined as applicable to Mbuva-Chibolele must increase from the current US\$1.00/g to in excess of US\$4.25/g. Accordingly as no demonstrable base case has been defined at an appropriate long-term commodity price greater than US\$2.00/g, SRK cannot report a JORC Code compliant Mineral Resource for Mbuva-Chibolele.

**7.3.8 Exploration Programme and Mineral Resource potential**

The Mineral Resource potential at Mbuva-Chibolele is largely dependent on the ability of further exploration inclusive of bulk sampling to demonstrate the presence of mineralised material in which:

- the ratio of emerald to beryl is increased significantly; and
- the likely realised auction price for higher grade emeralds is demonstrable through improved quality.

Drill data indicates that the TMS unit is likely to continue to the south of the current open-pit, however the presence of pegmatites is less well defined. There is a high probability that pegmatites will continue to be present in this area, but it is still yet to be fully investigated. If the amount of pegmatite material does decline, the amount of reaction zone would also reduce, therefore decreasing the amount of emeralds within the TMS. There is also a risk that if chromium levels in the TMS fall the quality of individual stones could also decline.

As the Chibolele pit has been working the relatively deep weathering zone, there is a possibility that the quality of the individual stones will increase. Emeralds within the weathering zone have been reported as being relatively friable, which may be a result of the weathering processes. Moving out of the weathering zone, which is currently observed to 20m below topography, may decrease the weathering on the stones, and therefore increase the quality.

No exploration related expenditures are planned by the Company for GL-288 or the wider areas of GL-145 (Mbuva) and GL-081/744 (Arinus).

**7.4 Mining Engineering**

Mining operations at Mbuva-Chibolele comprised open-pit mining at the Mbuva pit and Chibolele (A and B) pit which operated to the west-southwest of the main Fwaya-Fwaya belt. Mining operations during the site visit were conducted only at the Chibolele open-pit at a depth of some 30m below surface. All mining operations have now ceased and the entire operation is currently operating on a care and maintenance with only limited mining of exposed ore and processing of historically stockpiled material. All mining equipment from the site has been re-directed to Kagem to assist with the proposed build up in accordance with the Company’s Strategic Plan.

#### 7.4.1 Mining Access and Mining Method

A total of three open-pits have been developed at Mbuva-Chibolele comprising the Mbuva pit, Chibolele A and Chibolele B. These open-pits were developed to expose the prospective TMS along strike where the TMS is intersected by steeply dipping pegmatites and the Reaction Zone areas containing the emerald and beryl stones are developed. Mineralisation at the Chibolele pits is also associated with contiguous hangingwall and footwall pegmatites.

Waste mining was conducted using excavators and articulated dump trucks from commencement of operations. The excavation is well laid out with an appropriate approach taken in terms of the pit layout, which incorporates benches of 5m in height and overall slope angles of 50°. At the time of the site visit ore mining was only being conducted at the Chibolele B open-pit which focused on extracting the remaining exposed ore.

Ore mining is by manual methods using picks and shovels with the assistance of a hydraulic excavator under close supervision. Emerald and beryl are actively recovered at the mine face and placed in drop safe type boxes for security. Ore that is loaded into trucks and trailers is transported to the washing plant for processing.

#### 7.4.2 Historical mining operating statistics

Table 7.6 presents the historical operating mining statistics for Mbuva-Chibolele. Total tonnage mined from 2005 to 31 December 2007 amounts to 7.7Mt of which 0.8Mt is classified as TMS from which 90kt was mined as Reaction Zone material yielding an average stripping ratio of 76.50 ( $t_{\text{waste}}:t_{\text{Reaction Zone}}$ ). The average grade mined over the period is recorded as 35.2g/t combined emerald and beryl and the average mining cost is estimated at US\$1.23/ $t_{\text{mined}}$ .

**Table 7.6 Mbuva-Chibolele: historical mining statistics<sup>(1)</sup>**

Operating Statistics	Units	Jun-2006 <sup>(2)</sup>	Jun-2007	Dec-2007 <sup>(3)</sup>	Total	Average <sup>(4)</sup>
Total mined	(kt)	2,009	4,017	1,674	7,700	3,850
TMS Mined	(kt)	207	414	172	793	397
Waste Mined	(kt)	1,802	3,604	1,502	6,907	3,453
Ore Mined	(kt)	24	47	20	90	45
	(g/t total)	35.7	38.6	26.2	35.2	35.2
Stripping Ratio	( $t_{\text{waste}}:t_{\text{TMS}}$ )	8.71	8.71	8.71	8.71	8.71
	( $t_{\text{waste}}:t_{\text{RZ}}$ )	76.50	76.50	76.50	76.50	76.50
Mining Cost	(US\$/ $t_{\text{mined}}$ )	0.00	1.75	1.49	1.23	1.23

(1) Monthly data for the period reported is limited and as a result production statistics have been compiled from variable time-lines. Accordingly in respect of production data reliance should necessarily only be placed in the 'Total' column as reported.

(2) Six-month period to 30 June 2006.

(3) Six-month period to 31 December 2007.

(4) Annual averages derived from monthly average statistics.

#### 7.5 Mineral Processing

The processing plant at Mbuva-Chibolele comprises a simple series of comminution, screening, washing and sorting facilities which are located close to the current mining activities and within a secure fenced area. The plant has a rated capacity of 20tph and achieved an annualised rate of 34ktpa in 2007. Currently the process plant is processing historical stockpiles and limited ore remaining within the open-pit.

##### 7.5.1 Processing Facilities

Ore (Reaction Zone) from the pits is brought in trailers to the head of the plant and stockpiled. An excavator feeds ore into a head feed bin fitted with a grizzly to remove larger rocks and loads onto an inclined conveyor belt. The conveyor discharges onto a screen where the undersize (<3mm) is discarded as waste. The product from the screens is divided into three size fractions comprising: >3mm and <8mm, >8mm and <25mm and >25mm. These size fractions are delivered to separate picking belts where prospective emerald and beryl are hand picked from the conveyors. The >25mm rejects are crushed and re-circulated into the plant feed. The nominal capacity of the washing plant is 20tph and processed at an annualised rate of 32ktpa during the six-month period ending 31 December 2007.

The prospective beryl and emerald stones are sorted and upgraded at a secure facility adjacent to the washing plant using manual methods. The drop safe type boxes from the mine and plant are opened and emerald is picked out from the remaining material which is washed and tumbled. Products from this are also picked and the fines and waste separated. Where necessary the product is chipped to upgrade the stone and further lightly tumbled and cleaned. The final products are sorted into the following five categories: high quality emerald; low grade emerald; beryl; specimen and fines. The products are dried, dressed with oil, weighed, catalogued and stored for evaluation and subsequent transport to Lusaka for auction.

### 7.5.2 Historical processing operating statistics

Table 7.7 presents the historical operating process plant statistics for Mbuva-Chibolele. Total Reaction Zone tonnage processed reached a maximum of 34ktpa in financial year ending 31 March 2007 and indicated an average annualised rate of 32ktpa over the operating period with RoM grades of 49.2g/t combined emerald and beryl. Total gemstone production is estimated at 3,177kg with only 9% classified as emerald. Unit operating expenditures average some US\$16.71/t for 2007 and in total average US\$9.50/t over the period.

**Table 7.7 Mbuva-Chibolele: historical process plant statistics<sup>(1)</sup>**

Operating Statistics	Units	Jun-2006 <sup>(2)</sup>	Jun-2007	Dec-2007 <sup>(3)</sup>	Total	Average <sup>(4)</sup>
Tonnage processed	(kt)	17	34	14	65	32
Overall Process grades	(g/t total)	50.0	54.1	36.7	49.2	49.2
	(g/t emerald)	1.3	5.3	6.4	4.5	4.5
	(g/t beryl)	48.7	48.8	30.3	44.7	44.7
<b>Production</b>	<b>(kg)</b>	<b>842</b>	<b>1,820</b>	<b>515</b>	<b>3,177</b>	<b>1,589</b>
Emerald (A-F)	(kg)	15	93	90	199	99
Low Grade Emerald (G-H)	(kg)	7	84	0	91	46
<b>Total Emeralds</b>	<b>(kg)</b>	<b>22</b>	<b>178</b>	<b>90</b>	<b>290</b>	<b>145</b>
Beryl	(kg)	815	1,631	425	2,871	1,436
Specimen	(kg)	2	4	0	6	3
Fines	(kg)	3	7	0	10	5
<b>Total Beryl</b>	<b>(kg)</b>	<b>820</b>	<b>1,643</b>	<b>425</b>	<b>2,887</b>	<b>1,444</b>
Process Costs	(US\$/t)	0.00	16.71	3.61	9.5	9.5

(1) Monthly data for the period reported is limited and as a result production statistics have been compiled from variable time-lines. Accordingly in respect of production data reliance should necessarily only be placed in the 'Total' column as reported.

(2) Six month period to 30 June 2006.

(3) Six month period to 31 December 2007.

(4) Annual averages derived from monthly average statistics.

### 7.6 Waste Rock Dump and Tailings Storage Facilities

Waste material at Mbuva-Chibolele comprises the waste rock from the mining process (overburden as well as TMS lithologies), the coarse (>100mm) discard from the process plants and fines from the water effluent from the plant. Waste rock is stored in dedicated waste rock dump facilities. The coarse discard is stockpiled next to the plant prior to being disposed on the waste rock dump.

Based on historical records from 1 January 2006, SRK estimates that some 7Mt of material has been produced and in addition there is some 25kt of stockpiled Reaction Zone material which is currently being treated.

**Table 7.8 Mbuva-Chibolele: waste material production**

<b>Operating Statistics</b>	<b>Units</b>	<b>Jun-2006<sup>(1)</sup></b>	<b>Jun-2007</b>	<b>Dec-2007<sup>(2)</sup></b>
Primary Waste Mined	(kt)	1,802	3,604	1,502
TMS waste mined	(kt)	207	414	172
Total Processed	(kt)	17	34	14
Production	(t)	<u>1</u>	<u>2</u>	<u>1</u>
<b>Total Waste Produced</b>	<b>(kt)</b>	<b><u>2,026</u></b>	<b><u>4,051</u></b>	<b><u>1,688</u></b>
– Rock	(kt)	2,009	4,017	1,674
– Discard	(kt)	17	34	14

(1) Six-month period to 30 June 2006.

(2) Six-month period to 31 December 2007.

## 7.7 Infrastructure, Overheads and Capital Expenditure

### 7.7.1 Infrastructure

The power supply on-site comprises two installed diesel engine and generator sets which facilitate the supply of power to the process plants as well as the mining operations. Water supply is sourced from water made in the open-pits and water from the plant is discharged to a settling dam in the old Mbuva open-pit prior to re-cycling back to the plant. The system is reportedly designed to ensure that there is no discharge out of the cycle but the settling facility was overflowing.

Office space is provided in Park Home type accommodation. There is a small workshop area on the mine and the EPB provides for the utilisation of the old workshop at the discontinued Kamakanga Mine by Mbuva-Chibolele.

Management reside at the old Kamakanga residential area, some distance from the mine, two very small camps housing labour and security staff is located nearby. Primary medical facilities are limited to first aid.

### 7.7.2 Overheads

Table 7.9 presents the historical overhead operating expenditure for Mbuva-Chibolele which reports US\$US\$1.79m per annum on an annualised basis. These expenditures include the Company's management fee as well as certain historical selling expenses. In respect of the latter no definitive detail is provided on the basis of estimation and SRK has assumed that such expenses are not directly related to sales revenue. Overhead operating expenditures have however reduced on a monthly basis and ranged between US\$52/t and US\$63/t.

**Table 7.9 Mbuva-Chibolele: historical overhead operating expenditures**

<b>Overheads</b>	<b>Units</b>	<b>Jun-2005</b>	<b>Jun-2006</b>	<b>Jun-2007</b>	<b>Dec-2007<sup>(1)</sup></b>	<b>Total</b>	<b>Average<sup>(2)</sup></b>
Operating Expenditure	(US\$m)	0.83	1.07	1.77	0.81	4.47	1.79
	(US\$ <i>kpm</i> )	138	178	147	135	149	149
	(US\$/ <i>t<sub>processed</sub></i> )	0.00	63.30	52.45	57.75	69.26	69.26

(1) Six-month period to 31 December 2007.

(2) Annual averages derived from monthly average statistics.

### 7.7.3 Capital Expenditure

No significant capital expenditure has been scheduled for Mbuva-Chibolele.

## 7.8 Human Resources

Mbuva-Chibolele historically had TEC of 172 employees and operating on a two 12 hour shift system on a continuous basis with crews located in hostels and accommodation on site. Mining of the Reaction Zone is only undertaken in daylight hours and two 6 hour shifts are employed. The process plant operated continuously and picking at night is conducted under lights.

Table 7.10 presents the historical TEC as well as productivities for tonnes processed and gemstone production.

**Table 7.10 Mbuva-Chibolele: Historical TEC and productivities**

Area	Units	Jun-2005	Jun-2006	Jun-2007	Dec-2007
<b>Total</b>	<b>(No)</b>	<b>20</b>	<b>300</b>	<b>300</b>	<b>172</b>
<b>Productivity</b>					
Processing	(t <sub>processed</sub> /TEC/month)	0	9	9	14
	(g total/TEC/month)	0	468	506	499

As there are no employees at Mbuva-Chibolele and all TEC are engaged as contractors there is no TBL.

## 7.9 Occupational Health and Safety

The Company has no formal Occupational Health and Safety policy and currently does not prescribe to follow international conventions, specifically those aligned with World Bank Policies and Guidelines, International Finance Corporation Operational Policies, the International Labour organisations and OHSAS18001.

Further comments regarding Occupational Health and Safety are included in Section 2.3.8 of this CPR.

## 7.10 Environmental

### 7.10.1 Environmental Setting

The entire operation is within a fenced area approximately 1.5km long and just under 1km wide at its widest point. The northern portion of the boundary of the licence area is formed by the Kafubu River which flows into the Kafue River. The Kafue River is an important water resource in the region, providing Lusaka with water.

While there is little indication of non-mining related activity in the area, it is clear that there are a number of villages within the NRERA. Active artisanal mining is known to occur but the mine has constructed a security fence around its operational area and reports that there are no problems with artisanal miners within this area.

The area is predominantly under Miombo woodland with wetland areas, or Dambos, in places. Rainfall is high, generally over 1,500mm and there are distinct wet and dry seasons. Forest re-generation following disturbance appears to be rapid though species make up is likely to be different.

The mine consisted of an operational open-pit currently approximately 50m deep, which exploits 500m of the 1km strike length and the associated overburden piles, a processing plant, a settling facility established in an old pit, the Mbuva pit, offices and supporting infrastructure. The mine also utilises certain infrastructure which is remote from the operational area as follows:

- Accommodation facilities for senior personnel comprising several substantial buildings built for the neighbouring Kamakanga mine;
- The explosives magazine; and
- The Kamakanga workshop, for which provision is made in the mine's EPB, to be used by Chibolele.

Ore processing is limited to crushing, screening, scrubbing and hand sorting on belts. No chemicals are used in the process and water used in the mechanical scrubbing process is discharged to the settling facility in the old Mbuva pit which is immediately adjacent to the Kafubu River. The suspended solids content (-3 mm particles) of this water is high and at the time of the site visit the settling facility was spilling into the Kafubu River although the mine reports that planning is for zero discharge, with water from the pit and from the settling facility pumped to a settling tank before being re-used in the plant. Make up water is drawn from the Kafubu River.

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### 7.10.2 Compliance

The mine operated under an approved EPB and valid permits, which are renewable annually, for the storage of hazardous waste (used oil), the operation of waste rock and overburden dumps, and the discharge of effluent from the plants. In approving these documents the ECZ has imposed certain conditions, most of which are relatively standard for this type of operation.

Strict compliance with all of the permit conditions can not be demonstrated, with notable issues in this respect being the spillage of oil in the Kamakanga workshop and the workshop area in the mine's operational area and the quality of water discharged to the environment from the plant. In the latter case non-compliance is related primarily to suspended solids in water spilled from the settling facility but monitoring results are inadequate to demonstrate compliance with other requirements.

Although SRK is not currently aware of any community obligations imposed on Mbuva-Chibolele by the regulatory authorities, it is possible that such obligations may be imposed in the future.

### 7.10.3 Environmental Management

Environmental management could be improved although there is a general awareness of environmental concerns. The EPB, compiled by external consultants, reflects a good assessment of baseline conditions. There is scope to reduce the environmental liability with time by implementing concurrent rehabilitation using operational costs, improving housekeeping and disposing of waste such as scrap steel which could generate revenue for the mine.

### 7.10.4 Key Environmental Issues

Key areas which require specific attention are as follows:

- **Water pollution:** Water discharged into the environment is very high in suspended solids and additional settling facilities may be required. It was reported that spillage from the existing facility did not occur under normal circumstances but SRK was unable to verify this statement;
- **Lack of environmental monitoring data:** The Company has subsequently informed SRK that water monitoring takes place on a quarterly basis and reports are sent to the regulatory authorities as defined in the EPB. Based on the evidence provided during the site visit SRK found this to be neither regular nor adequate in practice. Although this is unlikely to influence the overall liability significantly, adequate monitoring, and the implementation of plans to correct areas of non-compliance which are identified as a result, will enhance the reputation of the mine in terms of responsible environmental management;
- **Rehabilitation requirements:** Although it has been assumed that the pit will not be backfilled, considerable earth works are likely to be required to ensure the stability of the overburden pile and for the prevention of inadvertent access to the pit areas. The most practical way to achieve the latter is deemed to be an earth berm around the pit perimeters and such a berm has already been put in place although it will have to be upgraded and extended to cover the entire pit perimeter when the pit is decommissioned. The sheer volume of earth works result in significant costs and there is considerable scope to optimise this expenditure by adequate planning and reduce the overall liability by implementing the work concurrently with mining as redundant areas become available for this purpose should normal production resume; and
- **Social Issues:** It is known that there is artisanal mining in the area, although this is not seen as a material operational issue. Observations at the neighbouring Kamakanga mine indicate that following decommissioning it can be expected the pits will be exploited by artisanal miners at a significant scale. The liability associated with this relates to safety and possible reputation risks, in addition to possible financial liability in the event of injuries or fatalities. There are, however, indications that the Zambian authorities will accept adequate signage indicating dangerous areas as adequate measures to address this issue. The possible quantum of any financial liability associated with this risk is unknown and has not been included in the assessment of environmental liabilities in this report.

### 7.10.5 Environmental Liabilities

The current closure cost estimate for Mbuva-Chibolele (Table 7.11) is estimated at US\$1.46m comprising US\$1.46m for bio-physical closure and US\$0.00m for TBL. These estimates are derived by SRK in the absence of any formal closure estimate generated by the Company.

The bio-physical component of the closure costs will be dominated by rehabilitation requirements for the various open pits. There will also be costs associated with demolition, remediation of contaminated soil and the removal of the plant. The extent to which mine housing is integrated with traditional housing indicates that is unlikely that such housing will be demolished, however in order to maintain consistency a small provision has been included by SRK.

The quantitative liability assessment could change as a result of future planning or regulatory requirements. Particular considerations in this respect are:

- The mine has no mine closure plans and hence no definitive closure objectives and there is the possibility that the closure scenario used for this estimate may change significantly in the future as a result of future planning;
- Volumes used in the calculations are not measured accurately but are based on various estimates and assumptions;
- Rates used in the cost calculation are estimates; and
- It is assumed there are no social problems which will materially affect the closure liability.

The following assumptions apply:

- Pits will not be backfilled however measures will have to be put in place to prevent inadvertent access for safety reasons; and
- Surface infrastructure will be demolished and the area re-vegetated.

**Table 7.11 Mbuva-Chibolele: environmental liability**

<b>Environmental Liability</b>	<b>Closure Cost (US\$m)</b>
Office area	0.00
Core shed and magazine	0.00
Old Kamakanga residential area	0.05
Plant and surrounding area	0.33
Workshop area and related facilities	0.09
Roads	0.00
Staff quarters	0.00
Kamakanga workshop	0.08
Pit area	<u>0.56</u>
<b>Subtotal</b>	<b><u>1.13</u></b>
EPCM	0.11
Preliminary and General	0.06
Contingency	<u>0.17</u>
<b>Subtotal</b>	<b><u>0.34</u></b>
<b>Total – Bio-physical</b>	<b><u>1.46</u></b>
<b>Terminal Benefits – Social</b>	<b><u>0.00</u></b>
<b>Total – Bio-physical and Social</b>	<b><u>1.46</u></b>

SRK notes that the above closure cost estimates due to a combination of uncertainty of occurrence and the absence of detailed information upon which to determine estimates, do not take account of the possible sale value of plant, equipment and infrastructure, or of the value of saleable commodities which may be recovered during site clearance.

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## 7.11 Commodity Sales

Table 7.2 has outlined the historical commodity sales for rough emerald and beryl production at Mbuva-Chibolele during 2007. These sales are limited to two auctions and are notable by the relatively (to Kagem) low emerald price received as well as the withdrawal of beryl sales in the February 2007 auction following limited response at the asking price. Whilst the Company continued operating until 31 December 2007, no further sales were made. As at 31 December 2007 the product stockpile comprises 2,392kg of emerald and beryl combined and the Company has not outlined in its Strategic Plan its intention for disposal of these through the current auction process.

The overall price received for all auctions was US\$4.1/g, 99% of which is derived from emerald sales alone due to the decision to withdraw beryl sales. This is notably lower than the price received by Kagem ML especially given that the US\$6.1/g is the average including beryl sales. Assuming that the proposed auction price for beryl (US\$0.07/g) had been achieved and applying this as well as the received emerald price to the total production the average realised price can be estimated to have been US\$1.01/g.

Notwithstanding the above, SRK notes that future sales may benefit from any assumed uplift due to the establishment of the cutting and polishing facilities in Kitwe and India as well as possible increases in the quality of stones as mining production is sourced from the down-dip un-weathered zone.

## 7.12 SRK Comments

In summary the operations at Mbuva-Chibolele have historically been loss making due to the inherent assumption that mined grades and more importantly the proportional contribution of emerald and beryl would be similar to that from a nearby mining operation, Kamakanga mine. The overall grade achieved at Mbuva-Chibolele of 35.2g/t<sub>Reaction Zone</sub> (emerald and beryl) or 4.0g/t<sub>TMS</sub> (emerald and beryl) was similar, however the emerald to beryl ratio was three times less than that experienced at Kagem. This situation was further compounded by the lower (-50% compared with Kagem) than expected price received for emerald as well as the inability to sell the beryl at the proposed auction price. This may be a direct result of the lower quality of stones as mined in the weathered zone. Accordingly the Company decided to cease further auctions since February 2007 and in conjunction with the limited volume (only 25%) sold remained loss making on a cash basis since commencement of operations.

SRK has assessed all available historical technical and economic data at Mbuva-Chibolele and concludes the following:

- Reporting of a potentially economically mineable mineral resource which is compliant with the JORC Code is dependent upon an increase in the average combined (emerald and beryl) realised price to in excess of US\$6.0/g. This is largely dependent on demonstrating the potential for a three fold increase in the ratio of emerald to beryl and an improvement in the quality of the higher grade stones as mining progresses deeper; and
- The total environmental liability at Mbuva-Chibolele is estimated at US\$1.46m comprising bio-physical closure costs of US\$1.46 and TBL of US\$0.00.

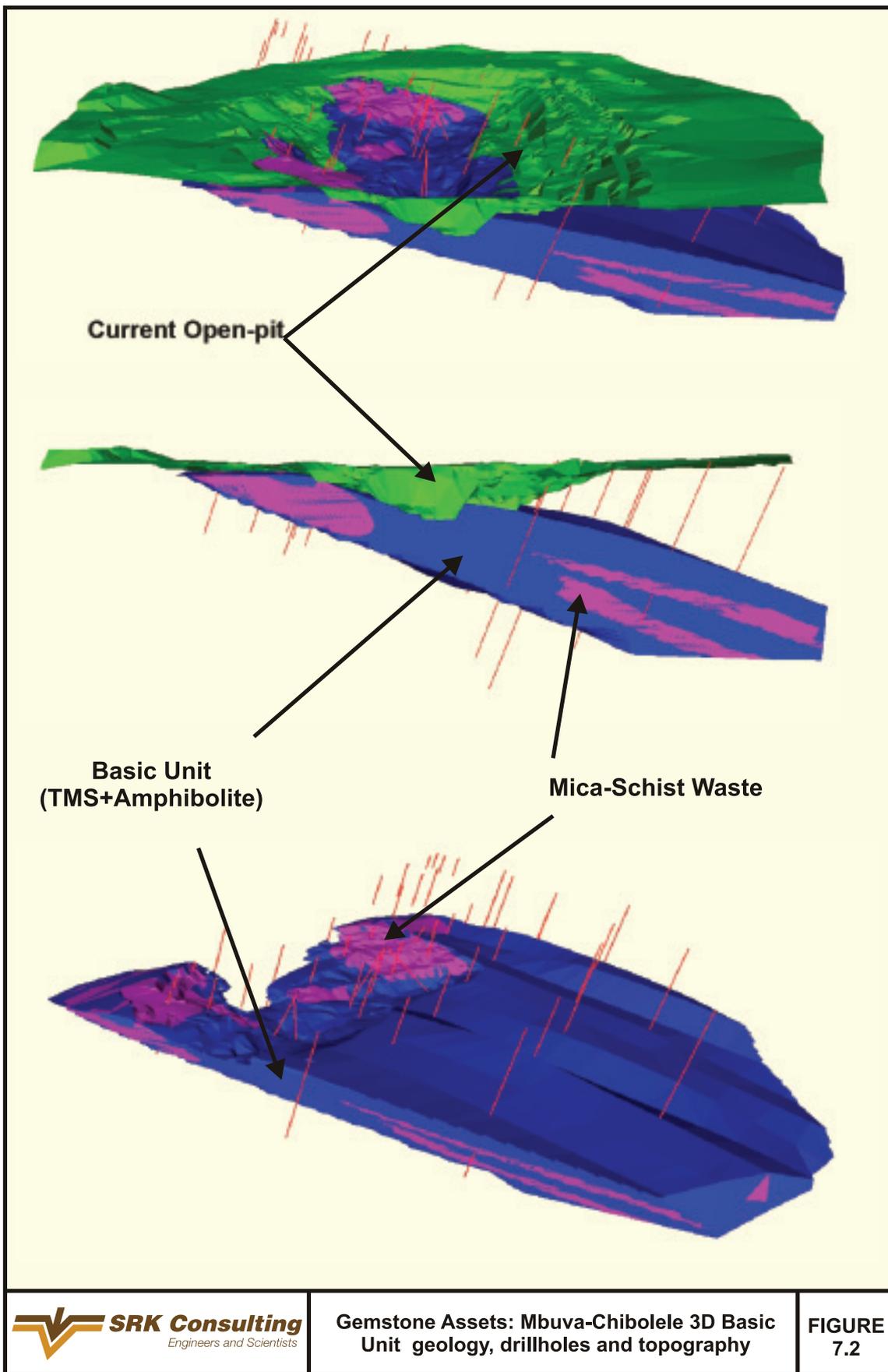
## 7.13 Risks and Opportunities

The principal **risks** at Mbuva-Chibolele are largely related to the cessation of care and maintenance operations and the implementation of a formal mine closure process. In this respect the opportunities to limit the impact of this, risks are largely related to limiting the total bio-physical liabilities as estimated. The opportunity is the sale of assets including the current stockpile of unsold gemstones.

The principal opportunities are largely related to further exploration, specifically:

- In the wider licence areas of GL-145, GL-288 and GL-081/744; and
- The potential for improved quality of gemstones down dip from the currently mined pits.

**Figure 7.2 Gemstone Assets: Mbuva-Chibolele 3D Basic Unit geology, drillholes and topography**



## 8 OTHER EXPLORATION PROPERTIES AND EXPLORATION PROSPECTS

### 8.1 Introduction

The following section includes discussion and comment on the Company's other Exploration Properties, Exploration Prospects and acquisition targets/options. SRK notes however that it did not undertake site visits to the Gemstone Assets which are the subject of various options located in Madagascar. Accordingly all technical information presented herein is done so for completeness and does not imply sign-off by SRK.

### 8.2 Exploration Properties, Exploration Prospects and Options

In addition to the Advanced Exploration Properties, the Company has some 7.25km<sup>2</sup> of Exploration Properties and 1,291.42km<sup>2</sup> of Exploration Prospects the majority of which (Kafubu excepted) are the subject of application for renewal and/or conversion to LSML or Gemstone Licences. All licences in this respect are located in Zambia and are wholly owned and directly held by GHZL. The principal focus of these is emerald and beryl with the exception of PLLS-262 and PLLS-300 which target pink tourmaline and amethyst respectively.

**Table 8.1 Gemfields: Exploration Properties and Exploration Prospects<sup>(1)</sup>**

Gemstone Assets	Licence No	Country	Subsidiary	Ownership	Expiry	Area (km <sup>2</sup> )
<b>Exploration Properties</b>						
Mbuva	GL-145	Zambia	GHZL	100.0%	Sep-2007	0.40
Chibolele	GL-288	Zambia	GHZL	100.0%	Sep-2007	0.40
Arinus	GL-081/744	Zambia	GHZL	100.0%	Feb-2016	0.35
Kamakanga	GL-002	Zambia	GHZL	100.0%	Nov-2006	2.35
Pamodzi	GL-078	Zambia	GHZL	100.0%	Apr-2007	0.85
Kafubu	GL-757	Zambia	GHZL	100.0%	Mar-2017	2.90
<b>Subtotal</b>						<b>7.25</b>
<b>Exploration Prospects</b>						
Miputu	PLLS-14	Zambia	GHZL	100.0%	Mar-2008	290.00
Mitondo North	PLLS-29	Zambia	GHZL	100.0%	Feb-2007	31.07
NR South	PLLS-34	Zambia	GHZL	100.0%	Feb-2007	51.20
Mitondo West	PLLS-124	Zambia	GHZL	100.0%	Feb-2007	5.50
Mitondo East	PLLS-126	Zambia	GHZL	100.0%	Jul-2008	4.60
Nkabashila East	PLLS-136	Zambia	GHZL	100.0%	Jul-2006	9.10
Nkabashila West	PLLS-137	Zambia	GHZL	100.0%	Feb-2007	9.95
Mkushi pink tourmaline	PLLS 262	Zambia	GHZL	100.0%	Mar-2010	810.00
Kariba amethyst	PLLS-300	Zambia	GHZL	100.0%	Oct-2008	80.00
<b>Subtotal</b>						<b>1,291.42</b>
<b>Total</b>						<b>1,298.67</b>

(1) For all licences which have expired as of 31 December 2007 or are due to expire in calendar 2008, SRK has been informed that the necessary applications for renewal have been lodged with the regulatory authorities. For Miputu, Mitondo North, NR South, Mitondo South, Mitondo East, Nkabashila East applications have been made for conversion to Large Scale Mining Licences. For Nkabashila West application has been made for conversion to a Gemstone Licence.

In addition to the above the Company has a put and call option to acquire various exploration prospects in Madagascar from Oriental Mining (for the consideration of GBP1.00) comprising 15 gemstone licences with a combined area of 125.00km<sup>2</sup>. No additional technical information is currently available.

In total the Company has outlined some US\$4.43m of which US\$2.33m is for direct exploration and US\$2.10m is allocated for unspecified targets.

#### 8.2.1 Exploration Properties

The exploration properties (excluding Mbuva, Chibolele and Arinus – see Section 7.0) include GL-002 (2.35km<sup>2</sup>) and GL-078 (0.85km<sup>2</sup>), otherwise known as Kamakanga and Pamodzi respectively. These extend over a total of some 3.20km<sup>2</sup>. Within the Kamakanga licence

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historical mining was undertaken from 1975 to 2005 with at least five emerald open-pits developed over a strike length of 500m, specifically: Jai Ambe, Old Kamakanga or Kamakanga Main Pit, Edinburgh, Chamuva and Geneva.

Historically, Kamakanga mine was one of the earliest emerald operations with production commencing in the early 1970s. Due to limited capital injection, production was not considered significant and in the late 1990s second hand equipment was procured to increase the overall mining and processing rates. Based on survey data and historical records the Company estimated that some 2.77Mt of rock comprising 1.92Mt of waste and 0.85Mt of TMS material was mined from the Kamakanga Main Pit and the Jai Ambe pit. Of this only some 0.58Mt of ore is assumed to directly relate to the sales data recorded between October 1992 and December 2003. Total rough sales (US\$15.9m) recorded comprise 1.7t of emerald at an average unit price of US\$8.4/g and 8.0t of beryl at an average unit price of US\$0.1/g. Accordingly the average grade was estimated at 3.0g/t emerald and 13.9g/t beryl. The Company however notes that during this period operations did not benefit from a processing plant until 1998 and that assumed theft is likely to have understated the recorded production.

Following acquisition in 2005, the Company undertook various exploration activity including, magnetic surveys, geological mapping, trenching and limited first phase drilling (500m of NQ wireline core drilling in 6 holes). All activity has now however ceased and expenditures are limited to that required to satisfy the requirements of the licence conditions.

The TMS is believed to vary from 2m to 3m thick in the southeast in the Geneva pit area, to 20m thick in the northwest in the Jai Ambe pit area. However, the mapped horizontal width and an average dip of 35° (ranging from 29° to 40°) indicate a reasonably consistent true thickness of 20m and is enclosed by hangingwall and footwall quartz mica schists dipping generally to the northeast.

All the rocks are cut by favourable concordant and discordant pegmatites of quartz-tourmaline composition. One west-northwest trending, discordant, 1m to 2m thick, quartz-phlogopite-muscovite-feldspar pegmatite is mapped over 550m through the Old Kamakanga to Geneva pit areas. The deepest and presumably, therefore, most productive part of the Jai Ambe zone appears to be at an antiformal flexure in the Kamakanga TMS, which may have produced dilatant structures suitable for the deposition of pegmatitic minerals including beryl, in a chrome bearing host rock suitable for the formation of large emerald crystals.

The present outcrop of the favourable Kamakanga TMS horizon is sub-parallel to and dips towards the northeast boundary of the licence which is a minimum of 135m distant in the Jai Ambe zone. Despite the fact that the mined deposits are open down-dip, in order to save on haulage costs, the previous operators have dumped waste all along the northeast, hangingwall side of the continuous Kamakanga-Jai Ambe structure, up to the licence boundary on the northeast side. Furthermore, the richest part of the Jai Ambe pit has even been backfilled with waste which would need to be removed as part of any waste stripping programme to develop the substantial open-pit potential down-dip.

To the southwest of the Kamakanga excavation area, the Kamakanga licence appears to be very poorly mapped and continuation of the TMS for a potential further 2,300m on the property has not been tested. An assessment of historical geological data by the Company indicates a mined and trenched strike length of some 630m of favourable TMS, possibly open along strike in both directions and down-dip to the northeast. The possible strike length within the boundary of the licence area is about 2,300m accordingly some 1,670m of strike length are apparently not adequately mapped: 600m to the east-southeast of Geneva pit and 1,070m to the west-northwest of the Jai Ambe pit.

## **8.2.2 Exploration Prospects**

The Exploration Prospects (excluding PLLS-262 and PLLS-300, described elsewhere) extend over some 404.32km<sup>2</sup> in the NRERA area and include 8 separate PLLS type licences all of which (Kafubu excepted) are currently the subject of an application for renewal. The Company has outlined exploration expenditure of some US\$0.84m for early stage exploration activities which is the minimum required in accordance with the current licence conditions.

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### 8.2.3 Mkushi

Mkushi (PLLS-262, 810km<sup>2</sup>) is valid until March 2010. The Mkushi project area is hosted by rocks of the Mesoproterozoic Irumide Orogenic Belt. This orogenic belt includes the Lufubu Metamorphic Complex, which is a Paleoproterozoic (2,050Ma to 1,850Ma) magmatic arc which extends from northern Namibia, through northern Zambia and into the Democratic Republic of Congo. The Basement Complex consists of predominantly gneiss and granitoid lithologies. The next unit, the Manshya River Group consists of pelites and quartzites, grading to gneisses and migmatites at the boundary with the Mkushi Basement Complex. The area has been intruded by the Mtuga Aplites, and syntectonic biotite granites and gneisses. Associated with these intrusions are pegmatite veins, which cut across the region. The pink tourmaline mineralisation is hosted within cross cutting pegmatite veins, associated with the Mtuga Aplites.

The area has been subjected to several previous periods of copper mining, including underground mining at Mtuga to the south, and open-pit mining at Munshiwemba between 1968 and 1975. The area adjacent to the Mkushi licence area is currently being further explored for copper. The Company notes that the sales price of pink tourmaline has increased many fold over the past five years and it continues to remain in short supply.

### 8.3 SRK Comments

The Company's Strategic Plan assumes expenditure of some US\$4.43m from 1 April 2008 through 31 March 2010 inclusive of which US\$1.39m, US\$0.10m, US\$0.84m and US\$2.10m are allocated as direct exploration expenditures for Kagem, Kamakanga, the NRERA licences and unspecified targets respectively. Given the Company's current focus on the proposed Kagem Expansion, the expenditures allocated for Kamakanga and the NRERA licences are largely allocated on the basis of compliance with the current licence conditions.

Notwithstanding the above SRK notes that a number of the licences have expired and are the subject of an application for renewal by the Company. Furthermore, it is evident that certain of the licence conditions require relinquishment of some 50% of the current area and in this respect maintaining focus on the objectives as defined in the Strategic Plan is crucial.

### 8.4 Risks and Opportunities

Other than the normal exploration risks associated with exploration activity, the principal **risks** are directly related to the success of the renewal process and the requirement for relinquishment of licence areas at defined periods.

The principal **opportunities**, other than those defined previously for Kagem, Kariba and Mbuva-Chibolele are:

- The opportunity to execute the various option agreements specifically in respect of the Madagascar gemstone licences; and
- The opportunity to explore for strike extensions of the TMS in respect of the Kamakanga and Pamodzi licences.

## 9 HEAD OFFICE AND OTHER OPERATING COMPANIES

### 9.1 Introduction

The following section presents discussion and comment on the head office services as provided by the Company. Historical statistics as presented are largely derived from the Company's financial statements. In presenting such statistics, SRK has relied on the Company's following statements:

- That negligible overhead (operating and capital) expenditures are related to the historical operations of the various companies comprising the Rox group structure, specifically above Kagem ML;
- That negligible historical capital expenditures were recorded in respect of Gemfields' group structure; and
- That limited management fees were historically paid by the operating entities of Gemfields.

## 9.2 Services

Services currently provided, and which are proposed to remain to support the Company's operating activities, include management services to each of the operating mines including: sales and marketing; finance; legal; and technical support. Other administrative and regulatory aspects will also be provided in respect of co-ordinating group operating companies as well as public domain reporting.

Historically the costs for services provided have been partly funded through application of a management fee as opposed to the reallocation of corporate expenses to the operating units. These have either been levied as a fixed monthly charge or a percentage of sales revenue. The current strategic plan assumes that all future management fees, specifically in respect of Kagem ML will be levied at some 5% of sales revenue and be considered as a tax deductible item.

## 9.3 Human Resources

SRK has not been provided with a historical or future breakdown of the human resources which are not included in the operating Gemstone Assets. Notwithstanding this, SRK highlights that the notes accompanying Gemfields' financial statements indicate some 35 persons, 3 of which are reported as "administration company" and 32 of which are reported as "administration group". No detailed information is available in respect of the Rox structure, however SRK has been informed that the Company's overall overhead compliment will be approximately 35 TEC for the three-month period ending 30 June 2008.

## 9.4 Historical Operating statistics

Table 9.1 presents the Company's historical operating overhead expenditure. This has been sourced from the Gemfields' historical financial statements, specifically from the Company's segmented profit and loss analysis. Accordingly, SRK assumes that as the individual segmented results do not report any sales revenue, then the loss as reported is in effect the operating expense associated with operating such a structure. During this period, SRK also notes that Kagem ML reported management fees of US\$0.4m, US\$0.5m; US\$0.5m and US\$0.6m for the periods ending 30 June 2005, 2006, 2007 and the six-month period ending 31 December 2007. These amounts are not included in Table 9.1 below.

**Table 9.1 Gemfields: historical operating overhead expenditure**

Period Operating Segment	Jun-2005 (US\$m)	Jun-2006 (US\$m)	Jun-2007 (US\$m)	Dec-2007 <sup>(1)</sup> (US\$m)
United Kingdom	2.42	1.52	0.67	0.34
BVI	0.53	0.88	0.72	0.36
India	0.27	0.14	0.19	0.10
<b>Total</b>	<b>3.23</b>	<b>2.54</b>	<b>1.58</b>	<b>0.79</b>

(1) Six-month period to 31 December 2007.

## 9.5 Strategic Plan

The Company's Strategic Plan assumes annual operating expenditures for Company overheads amounting to US\$3.77m, some 50% of which are directly attributable to salaries comprising non-executive directors, directors and employees in London and the BVI registered companies. The forecast capital expenditures are estimated to total US\$3.70m, US\$3.66m of which is directly attributable to the re-admission of the Company.

**Table 9.2 Gemfields: forecast operating and capital expenditure<sup>(1)</sup>**

<b>Expenditure</b>	<b>Total (US\$<b>k</b>)</b>	<b>Jun-2008<sup>(2)</sup> (US\$<b>k</b>)</b>	<b>Jun-2009 (US\$<b>k</b>)</b>	<b>Mar-2010<sup>(3)</sup> (US\$<b>k</b>)</b>
Operating	7.55	0.85	3.77	2.92
Capital	<u>3.70</u>	<u>3.66</u>	<u>0.04</u>	<u>0.00</u>
<b>Total</b>	<b><u>11.24</u></b>	<b><u>4.51</u></b>	<b><u>3.81</u></b>	<b><u>2.92</u></b>

(1) Financial years ending 30 June.

(2) Three-month period ending 30 June 2008.

(3) 9-month period ending 31 March 2010.

## 9.6 SRK Comments

SRK considers that the expenditures as proposed by the Company for overhead operating and capital items to be reasonable compared with the historical basis and planned increase in production as noted in the Strategic Plan.

The operating performance assumed for the Company's polishing and cutting facilities to be established in India has not been reviewed by SRK and accordingly no specific comment is offered in this regard.

Notwithstanding the above, SRK notes that the Company's current Strategic Plan does not explicitly cater for the establishment of a formal technical services/advisory group at the head office or locally in Zambia. In this respect SRK notes that certain of the deficiencies highlighted in respect of technical processes and planning activities may be addressed by such consideration.

## 9.7 Risks and Opportunities

Based on the above, SRK considers that the principal risks associated are:

- The Company's current limited resources in respect of technical project planning and associated support for the operating entities; and
- The establishment of the cutting and polishing facilities in India. This consideration is dependent upon the projected increase in production at Kagem as well as the assumed uplift in cut prices over rough supply prices.

## 10 EXPENDITURE PROGRAMME

### 10.1 Introduction

This section describes the operating and capital expenditure programme as included in the Company's Strategic Plan. The supporting detail for Kagem, Mbuva-Chibolele and head office expenditures have been provided in the preceding sections and are not discussed further.

Further, SRK notes that given the Company's current focus on Kagem and that apportioned for future acquisitions the planned expenditures associated with the non-operating Gemstone Assets are limited to that deemed necessary to maintain current licence commitments.

Furthermore, SRK has not reviewed any of the aspects relating to the Company's downstream cutting and polishing (specifically India) as reflected in the Strategic Plan. Accordingly all future associated operating and capital expenditures in this respect are reported solely for the purpose of completeness and have not been subject to a similar review and assessment as undertaken for the Gemstone Assets.

### 10.2 Expenditure Programme

In its Strategic Plan the Company has outlined an Expenditure Programme with expenditures totalling US\$33.04m to be expended from 1 April 2008 through 31 March 2010 over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$0.21m for care and maintenance costs at Mbuva-Chibolele; US\$1.00m for funding of loss position at Kariba; US\$7.55m for corporate operating expenses; and US\$19.84m for capital expenditures (Kagem Expansion, Indian polishing and cutting facilities and transaction costs).

Some US\$15.26m representing 46.2% of the total is allocated to the expansion programme at Kagem, of which US\$13.86m is classified as capital expenditure and US\$1.39m as exploration expenditure. The remaining capital items are largely related to the establishment of the cutting and polishing centres in India at US\$2.29m and the transaction costs of US\$3.70m to be incurred in the three-month period ending 30 June 2008.

Excluding that budgeted for Kagem, the principal components of the planned operating expenditures include:

- US\$4.43m of direct exploration expenditures associated with Kagem (US\$1.39m), Kamakanga (US\$0.10m), NRERA licences (US\$0.84), and unspecified targets (US\$2.10m);
- US\$0.21m for care and maintenance costs at Mbuva-Chibolele;
- US\$1.00m for funding of the loss position at Kariba for one year; and
- US\$7.55m of head office corporate operating costs.

In contrast to the detail provided for Kagem, the supporting detail for the above exploration expenditures are limited and are only developed to a conceptual level.

**Table 10.1 Gemfields: expenditure programme<sup>(1), (2)</sup>**

Item	Type	Asset	Total (US\$m)	Jun-2008 <sup>(3)</sup> (US\$m)	Jun-2009 (US\$m)	Mar-2010 <sup>(4)</sup> (US\$m)
<b>Operating Expenditure</b>	Exploration	Kagem	1.39	0.66	0.73	0.00
		Kamakanga	0.10	0.00	0.10	0.00
		NRERA Licences	0.84	0.11	0.42	0.32
		Unspecified	2.10	0.45	1.65	0.00
	<b>Subtotal</b>		<b>4.43</b>	<b>1.21</b>	<b>2.90</b>	<b>0.32</b>
	GZHL	Mbuva-Chibolele	0.21	0.07	0.08	0.06
	Kariba ML	Kariba Amethyst Mine	1.00	0.30	0.70	0.00
	Corporate	Head Office	<u>7.55</u>	<u>0.85</u>	<u>3.77</u>	<u>2.92</u>
<b>Total</b>			<b><u>13.19</u></b>	<b><u>2.44</u></b>	<b><u>7.45</u></b>	<b><u>3.30</u></b>
Capital Expenditure	Kagem ML	Kagem	13.86	3.17	7.91	2.79
	India	Mumbai, Jaipur	2.29	0.19	2.10	0.00
	Corporate		<u>3.70</u>	<u>3.66</u>	<u>0.04</u>	<u>0.00</u>
<b>Total</b>			<b><u>19.84</u></b>	<b><u>7.01</u></b>	<b><u>10.05</u></b>	<b><u>2.79</u></b>
<b>Total Expenditure</b>			<b><u>33.04</u></b>	<b><u>9.45</u></b>	<b><u>17.50</u></b>	<b><u>6.09</u></b>

(1) Financial years ending 30 June.

(2) Planned operating expenditures associated with revenue generating activities at Kagem, Kariba and the Indian polishing and cutting are not included.

(3) Three-month period ending 30 June 2008.

(4) 9-month period ending 31 March 2010.

### 10.3 Lapidary Initiative

In addition to the above, the Company is seeking to establish polishing and cutting facilities in India, specifically at Mumbai and Jaipur. The total capital requirement forecast to date is some US\$2.29m and annual operating expenditures of US\$17.60m of which US\$10.50m is assumed to cover the purchase of rough emerald. The assumed annual sales revenue is forecasted by the Company at US\$30.00m which implies a 2.9 times uplift in the price over rough gemstone excluding any material loss in the polishing and cutting process.

The real value of a rough gemstone is only revealed when it has been cut and polished. Accordingly, the pricing for rough gemstones includes an inherent discount to account for this uncertainty. To date, production from the Kagem emerald mine has only been sold on a rough basis, without any value addition. Selling a material proportion of production on a cut and polished basis could enhance profits materially. Many trade experts would agree that cutting and polishing, combined with suitable marketing and branding, can increase the value of a rough gemstone by 2 to 6 fold.

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Accordingly, the Company considers that significant scope exists for increasing the value of sales by creating the capacity to add value to, and then sell, cut and polished gemstones. This would form a key strategy for 2008 and the board would hope to be cutting and polishing more than one third of Kagem's emerald production by value by the end of the year.

The value addition chain typically involves multiple steps:

- Sorting and grading, whereby the rough stones are graded according to size, colour and quality;
- Marking, whereby rough stones are marked by an expert depending on its natural shape and in accordance with its cleavage in order to maximise yield and account for inclusions and other imperfections;
- Cleaving, whereby rough stones are split, often along a prevailing grain, to eliminate obvious inclusions or defects;
- Cutting or sawing, whereby the stones are cut to the desired size, typically on a circular saw, and based on the markings applied to the stone by a supervisor in order to approximate the final shape, but without actual facets;
- Pre-forming, whereby the final shape of the stone is created using an abrasive disk;
- Dopping, calibrating and faceting, whereby the stone is affixed to a pen-like "dop-stick" using wax or cement to facilitate girdling and faceting; and
- Polishing, whereby the cut stone is polished to a fine finish.

The Company will headquarter its processing, cutting and polishing operations in Jaipur, India and has commenced the establishment of an interim Jaipur-based cutting and polishing facility, possibly in rented premises. This facility is planned to be operational in the third quarter of 2008, and will house the Company's existing 12 automated, Israeli-made faceting and polishing machines, together with 5 sawing, calibrating and pre-forming machines. The bulk of this equipment was purchased in 1997. It would employ some 40 persons and produce in excess of 15,000ct of large cut and polished gemstones per month (consuming more than US\$2.00m per month of rough material and producing roughly 3,000 pieces per month).

The Company is also presently negotiating the purchase of two larger properties in Jaipur for the establishment of a state-of-the-art, permanent and world-class cutting and polishing plant. The facility would employ more than 100 people and take the Company's total Jaipur-based floor space to over 12,000 square feet. The Company expects it to be fully operational by the third quarter of 2009 in return for an investment of some US\$4.00m.

Cutting and polishing of the highest value stones, and in particular those bearing the Fabergé name, would be undertaken by one of the world-leading cutters and polishers, depending on the type of gemstone in question.

The development of special cuts, unique to coloured gemstones, or to specific gemstone types, could further enhance value and branding potential.

#### **10.4 SRK Comments**

The Company has outlined a total expenditure requirement of US\$33.04m with some 73.2% being directly allocated to the Kagem Expansion and two years of corporate operating expenditures.

The accuracy of the planned expenditures at Kagem largely reflect the conceptual level of technical work undertaken to date. The direct exploration expenditures, other than for Kagem, only assume one successive phase of work and are generally limited to that required for maintaining current licence commitments.

In the context of the above limitations, SRK considers the components of the Expenditure Programme as they relate to the Gemstone Assets and have been developed for the 24-month period commencing 1 April 2008, to be appropriately defined and warranted given the Mineral Resources delineated to date and the potential in the immediate areas associated with the defined orebodies and the other targets situated within the various licence areas.

Consequently SRK concludes that the character of the Gemstone Assets is of sufficient merit to justify the direct exploration expenditures allocated for the 24-month period commencing 1 April 2008.

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SRK notes that no specific expenditures have been planned beyond this period other than that assumed for sustaining capital requirements for Kagem.

## 10.5 Risks and Opportunities

The principal **risks** in respect of the planned Expenditure Programme are largely related to the success of the Kagem Expansion. Accordingly the majority of the capital commitment as planned in respect of Kagem and the polishing and cutting centres in India should be assessed against such risks. Notwithstanding the above, SRK notes that further risks exist in that the environmental liabilities remain largely unfunded and should any of the assets close prematurely (specifically Kariba and Mbuva-Chibolele due to continued operating losses) the expenditure programme would need to be significantly increased.

Other risks are considered minor and are routine in respect of general exploration risk.

The principal **opportunities** in respect of the planned expenditure are limited and accordingly do not warrant further consideration.

## 11 RISKS AND OPPORTUNITIES

### 11.1 Introduction

The following section includes a summary of the principal risks and opportunities as they may relate to the Gemstone Assets. Both general country and economic risk items are identified in addition to those which are specific to the Gemstone Assets.

### 11.2 General Risks and Opportunities

The Gemstone Assets are subject to certain inherent risks and opportunities, which apply to some degree to all participants of the international precious metals mining industry. These include:

- **Commodity Price Fluctuations:** These may be influenced, *inter alia*, by commodity demand-supply balances for gemstones, specifically rough and cut emerald, beryl and amethyst. In all cases these are critically dependent on the demand in the primary sales markets in which cut gemstones are consumed, an indication of which is the disposable income as generally reflected by the projected growth in GDP. Furthermore, the sales price varies significantly between both rough and cut gemstones and within the specific grade categories. Historical prices as recorded for the Gemstone Assets are largely based on a weighted average price received and do not necessarily distinguish between emerald and beryl as in the case of Kagem. Accordingly SRK notes the following:
  - At Kagem the historical time weighted average (simple month) price received for rough emerald and beryl over a three year period ending 31 December 2007 is US\$4.5/g and for the 9-month period ending 31 December 2007 was US\$6.1/g. Based on the annual results for the financial periods ending 31 March 2005, 2006, 2007 and for the 9-month period ending 31 December 2007 the sales price received ranged between US\$2.8/g and US\$6.1/g,
  - At Kariba the historical time weighted average (simple month) price received for rough amethyst over a three-year period ending 31 December 2007 is US\$1.91/kg and for the 9-month period ending 31 December 2007 is US\$1.96/kg. Based on the annual results for the financial periods ending 31 March 2005, 2006, 2007 and the 9-month period ending 31 December 2007 the sales price received ranged between US\$1.24/kg and US\$2.05/kg,
  - At Mbuva-Chibolele the limited rough emerald only historical sales yielded a weighted average of US\$4.1/k. Assuming that the sales of all emerald and beryl produced achieved the intended auction price (November 2006) the average price would be US\$1.01/g;
- **Exchange Rate Fluctuations:** Specifically related to the related strength of the US\$, the currency in which commodity prices are generally quoted. In the three-year period from

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1 January 2005 through to 31 December 2007 inclusive the exchange rate of the ZMK against the US\$ has ranged from 3,707 to 4,417 and yielded an average of 4,002. Notwithstanding this range SRK notes that the combination of both the weakening of the US\$ and local inflation continues to erode margins with the resulting increase in US\$ denominated expenditures;

- **Inflation Rate Fluctuations:** Specifically related to the macro-economic policies of the individual countries. During the period from 1 January 2005 through 31 December 2007 inclusive the United States CPI ranged between 1.3% and 4.7% reported on a 12-month basis. During the period from 1 January 2005 through 31 December 2007 inclusive the Zambian CPI has ranged between 7.9% and 19.5% reported on a 12-month basis, yielding an average of 12.7%;
- **Country Risk:** Specifically country risk including: political, economic, legal, tax, operational and security risks;
- **Legislative Risk:** Specifically changes to future legislation (tenure, mining activity, labour, occupational health, safety and environmental) within Zambia and the other countries in which the Company has Gemstone Assets;
- **Exploration Risk:** Resulting from the elapsed time between discovery of deposits, development of economic feasibility studies to bankable standards and associated uncertainty of outcome;
- **Mining Risk:** Specifically Mineral Resource estimate risks, uninsured risks, industrial accidents, labour disputes, unanticipated ground water and geotechnical conditions, human resource management and safety performance; and
- **Development Project Risk:** Specifically technical risks associated with greenfield projects and brownfield expansions for which technical studies are limited to conceptual studies or less and that substantive expansions are not yet supported by the completion of a minimum of PFS.

In addition to those stated above, the Gemstone Assets are subject to certain specific risks and opportunities, which independently may not be classified to have material impact (that is likely to affect more than 10% of the individual operations annual pre-tax profits), but in combination may do so.

### 11.3 Specific Risks and Opportunities

In addition to the specific risks and opportunities identified below, addressing the general deficiencies identified in Section 4.0 of this CPR (General SRK Comments) are key: to demonstrating the technical feasibility and economic viability of the Company's Strategic Plan; to further identify the impact of the environmental liabilities; and to demonstrate that the increased production of coloured gemstones will not adversely impact on the market price for rough and/or cut emerald, beryl and amethyst. The deficiencies identified in Section 4.0 are:

- **Mineral Resource and Ore Reserve Management** specifically in respect of the lack of a formal Mineral Resource and Ore Reserve Management system which appropriately addresses:
  - the currently limited application and documentation of Quality Control and Quality Assurance procedures,
  - the currently limited reconciliation specifically in respect of Reaction Zones,
  - the current reliance on manual methods at Kariba,
  - the current limited and conceptual nature of mine design and production scheduling undertaken to substantiate substantial expansion programmes, and
  - the absence of a consolidated technical document which demonstrates the technical feasibility (on a multi-disciplinary basis) and economic viability of the Company forecasts such as a LoMp or in the case of brownfield expansions a minimum of a PFS;
- **Gemstone Market Analysis** which demonstrably addresses:
  - the value chain in respect of the uplift from rough to cut gemstones, and

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- the impact of marked increases in production of rough emerald, beryl and amethyst on the global demand-supply balance and consequently price relationships;
  - **Environmental Management**, specifically the limitations in respect of the following at each of the Company's Gemstone Assets:
    - The lack of an appropriately defined environmental management system,
    - The lack of appropriate monitoring, and
    - The lack of defined closure plans which adequately addresses both bio-physical closure costs as well as social aspects including human resource planning and terminal benefits liabilities; and
  - **Environmental Compliance:** The Company has not developed any formal environmental or OHS policies which are then subsequently encompassed within formalised management systems. Furthermore, the lack of on-going monitoring as well as the absence of OHS statistics is notable. SRK recognises that compliance to date has been largely tested against local requirements, however SRK considers that the current situation would be markedly improved should broader consideration be given to international benchmarks: specifically the principals embodied within the World Bank, Equator Principles or the principles established by the ICMM.

The EPB at Kariba is outdated, does not address the current operation in any adequate detail and consequently there is no documentation against which to assess compliance. Furthermore, SRK notes that no additional environmental work has been undertaken to assess the potential impacts of the proposed expanded operations at Kariba or Kagem.

Notwithstanding the above SRK notes the proactive steps proposed and commenced by the Company, specifically in respect of the Mineral Resource and Ore Reserve management as well as environmental matters. Specifically in respect of the latter the Company:

- is establishing a Safety, Health and Environmental department staffed by an environmental officer who will be responsible for monitoring of the Company's performance against stipulated norms and initiate corrective actions;
- is recruiting a senior level manager at the corporate level who will be directly responsible for establishing corporate policies in respect of environmental and OHS as well as the development of a company wide environmental management plan; and
- has appointed independent consultants to prepare an EPB inclusive of an environmental management plan for the proposed Kagem Expansion.

The principal **risks** and **opportunities** at the Gemstone Assets are:

- **Technical and Economic Risk** associated with conceptual level studies which in conjunction with certain high level assumptions are relied upon for the establishment of significant expansions as in the case of Kagem and Kariba. In respect of the former, the key issues relate to:
  - the geological risk associated with assumed prevalence and concentration of Reaction Zones across the entire 920m strike length of TMS at Kagem, and
  - the increased production risk should the mining of advanced waste stripping to expose the necessary strike length not occur timeously.

Whilst, the Company has accepted certain of the high level modifications as proposed by SRK, the current Strategic Plan assumes:

- the establishment of the full strike length of TMS exposed by 1 July 2009,
- the establishment of maximum Reaction Zone mining and processing rates of 12ktpm by July 2009, and
- a 400% (compared with 2007) increase in production to an annualised 11.5tpa of combined emerald and beryl by October 2009.

SRK considers the above to be challenging and whilst appropriate equipment and contractor mining services are being procured a more prudent approach would be to more

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gradually increase the mining production rates, specifically that of ore to enable full production to be achieved some 12 months latter than planned. This statement also assumes that the completion of an appropriately detailed Pre-Feasibility study (due to commence in June 2008) does not identify any potential limitations in attaining such a target.

Similar comments apply to the proposed expansion at Kariba in respect of the adequacy of the current technical work undertaken by the Company to support the proposed expansion plans;

- **Environmental Liability Risk (Bio-physical closure cost):** The inability of the Gemstone Assets to fund the bio-physical closure cost from estimated operating cashflows, should operations cease prior to the period assumed by the Company. This would result in an unfunded liability since the estimated rehabilitation expenditure is not currently funded. As at 1 January 2008, the Company's bio-physical closure cost is estimated at US\$10.40m. SRK notes that certain components of this risk may be mitigated as no assumptions have been made regarding the ability to generate revenue through sale of assets when reporting this environmental liability. Furthermore SRK has assumed that the backfilling of pits will not be required. Specific environmental risks at each of the Gemstone Assets include:
  - Inadequate settling facilities at Kagem and Mbuva-Chibolele to capture and treat water discharge which is very high in suspended solids which is currently being addressed at Kagem through construction and commissioning of a third settling dam (expected May 2008), and
  - The presence of artisanal miners and the potential significant impact of post decommissioning operations as witnessed at the nearby Kamakanga mine;
- **Terminal Benefits Liability Risk:** The inability of the Gemstone Assets to fund the terminal benefits liabilities from estimated operating cashflows, should operations cease prior to the period projected by the Company. This liability is not currently funded. As at 1 January 2008, the Company's terminal benefits liability is estimated at US\$5.21m. SRK notes however that potential exists to relocate certain employees to Kagem in line with the proposed expansion. This opportunity is however limited and unless profitable operations are re-established at Mbuva-Chibolele and Kariba the necessity for funding this liability will be immediate;
- **Kariba economic operations opportunity** through completion of a multi-disciplinary PFS which demonstrates the technical feasibility and economic viability of an expanded production scenario. SRK notes however that this opportunity is critically dependent upon a significant increase in the sales price for rough amethyst, reduced unit costs as a function of significant expansion, and the effective doubling of the currently identified Mineral Resource base;
- **Mineral Resources increase opportunities**, through:
  - further definition drilling down-dip of the currently defined Inferred Mineral Resources at Kagem specifically below the 1,075m RL (125m below surface),
  - completion of further exploration including: drilling at the Libwente and Dabwisa prospects at Kagem; and airborne geophysical surveys over the Company's combined properties in the vicinity of Kagem,
  - testing of down-dip and strike extensions to the currently identified Inferred Mineral Resource at Kariba, specifically below the 50m depth horizon;
  - completion of preliminary exploration activities in the wider prospecting licence of PLLS-300 specifically targeting the presence of parallel shears to the shear zone currently exploited at Kariba. SRK notes however that the prospecting licence expires in October 2008 and half of the currently held area will need to be relinquished prior to re-applying, and
  - demonstrating economic viability at Mbuva-Chibolele through a combination of further bulk sampling down-dip to determine whether gemstone qualities improve and incorporating any price uplift due to downstream cutting and polishing initiatives; and
- **Exploration opportunities** at the Madagascar licences following completion of preliminary exploration and finalisation of the acquisition process.

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## 12 CONCLUDING REMARKS

### 12.1 Introduction

The following section includes a summary of SRK's opinion on the Gemstone Assets and the accompanying Mineral Resource statements and the merits of the Expenditure Programme as proposed by the Company and incorporated into its Strategic Plan.

SRK has conducted a comprehensive review and assessment of all material issues likely to influence the future operations of the Gemstone Assets. The base data upon which the Mineral Resources and Expenditure Programme as stated herein, as provided and taken in good faith by SRK, have been reviewed and in part adjusted by SRK where considered appropriate.

### 12.2 Mineral Resources and Mineral Resource Management

As at 1 January 2008 the Gemstone Assets has the following JORC Code compliant Mineral Resources:

- **At Kagem:** An Inferred Mineral Resource of 1,462kt of Reaction Zone material grading 80.0g/t combined emerald and beryl (22.6g/t of emerald and 57.4g/t of beryl); and
- **At Kariba:** An Inferred Mineral Resource of 325kt grading 37.1kg/t of amethyst.

Potential exists to expand the Mineral Resource base at both operations following the completion of the currently scheduled exploration activities. At Kariba however, the Company is currently awaiting completion of its negotiation with the GoZ to increase its equity participation from its current 50% to 76%. Should this not be successful then the proposed expansion will not be implemented and given the current unprofitable operations the currently stated Mineral Resource may not continue to be classified as compliant with the JORC Code as potentially economically mineable.

It should however be noted that depending on the results of the market analysis for emerald, beryl and amethyst the addition of significant Mineral Resources may be limited to continuation of operating life beyond that presently assumed by the Company (~10 years) or as replacement to the deeper resources already identified.

SRK considers the current approach to Mineral Resource management to be limited and that the establishment of a formalised process as planned is critical to enable adequate technical and economic assessments of future proposals. To date this has been hindered by the combined impact of limited resources as well as a commitment to establish the necessary protocols. At Kagem however, SRK notes the Company's improvements in respect of introducing formalised geological processes and the focus on application of higher quality mining practices. The current focus in these areas must be continued to further develop the Company's management systems, thereby establishing the appropriate multi-disciplinary focus required to ensure continued success.

### 12.3 Expenditure Programme

The Company's Strategic Plan assumes the expenditure of some US\$33.04m, to be expended from 1 April 2008 through 31 March 2010 inclusive over a 24-month period and comprising: US\$4.43m for exploration and unspecified acquisition expenditures; US\$0.21m for care and maintenance costs at Mbuva-Chibolele; US\$1.00m for funding of loss position at Kariba; US\$7.55m for corporate operating expenses; and US\$19.84m for capital expenditures (Kagem Expansion, Indian polishing and cutting facilities and transaction costs).

Some 80% of this expenditure is directly allocated to the Kagem expansion and funding of two years of corporate operating expenditures.

The accuracy of the planned expenditures at Kagem largely reflect the level of technical work undertaken to date. The direct exploration expenditures, other than for Kagem only assume one successive phase of work and are generally limited to that required for maintaining current licence commitments.

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In the context of the above limitations, SRK considers the Expenditure Programme as developed from 1 April 2008 through 31 March 2010 inclusive to be appropriately defined and warranted given the Mineral Resources delineated to date and the potential in the immediate areas of the defined orebodies and the other targets situated within the various licence areas.

Consequently SRK concludes that the character of the Gemstone Assets is of sufficient merit to justify the direct exploration expenditures allocated from 1 April 2008 through 31 March 2010 inclusive.

Notwithstanding the above, SRK notes that the Company's Strategic Plan is ambitious and assumes substantive increases in production by July 2009. Furthermore, the level of technical work undertaken to support such expansion is only at a conceptual level and relies upon a number of high level assumptions. Accordingly SRK considers that completion of a multi-disciplinary Pre-Feasibility study (to commence June 2008) which demonstrates the technical feasibility and economic viability of that proposed to be crucial and in the absence of such analysis a more prudent approach would be to consider a more gradual build up to full production, thereby delaying the current attainment of peak monthly production (July 2009) by some 12 months. Furthermore the proposed expansion is critically dependent upon the assumptions regarding the prevalence and concentration of Reaction Zones within the TMS across the full strike extent of the currently identified Inferred Mineral Resource. Should this not be demonstrated through the planned full strike length exposure, assumed 1 July 2009, achieving the increased production rate on a sustainable basis will be ambitious.

A further assumption which is key to the success of the Strategic Plan is the consideration of the potential impact of increased production on the overall demand-supply balances in respect of both rough and cut gemstones, specifically for emerald and beryl. This analysis is currently underway and the ability as a minimum to maintain current rough prices is crucial to ensuring the economic viability of the operations. The Company's intention to benefit from the establishment of cutting and polishing activities and hence benefit from the price uplift associated with such downstream activities, as well as implementing its other broader strategies including: marketing and branding; structured supply chain; ethical sourcing and assured provenance; consistent supplies to customers; and critical mass, market share and economies of scale may however offset any negative aspects associated with over-supply should they occur.

#### **12.4 Environmental Liabilities**

SRK estimates that the Company's current environmental liabilities comprising both bio-physical closure costs and social (terminal benefits liabilities) costs are US\$15.61m. These liabilities are currently not funded and such funding is primarily dependent upon the establishment of cash positive operations through the proposed expansion at Kagem. Certain opportunities exist to limit the impact of such liabilities through sale of assets as well as the management of human resources in line with the requirements of the expansion programmes.

SRK notes however the absence of a formalised environmental management system which would address the bio-physical components of these liabilities, if not only through better quantification, and may also ensure that they do not increase through continuation of poor practices. The absence of formal policies and management systems also extends to Occupational Health and Safety and these in combination with the environmental aspects require redress in order to ensure effective monitoring of their impacts.

Notwithstanding the above SRK notes the proactive steps proposed and commenced by the Company, specifically in respect of the Mineral Resource and Ore Reserve management as well as environmental matters. Specifically in respect of the latter the Company:

- is establishing a Safety, Health and Environmental department staffed by an environmental officer who will be responsible for monitoring of the Company's performance against stipulated norms and initiate corrective actions;
- is recruiting a senior level manager at the corporate level who will be directly responsible for establishing corporate policies in respect of environmental and OHS as well as the development of a Company wide environmental management plan; and
- has appointed independent consultants to prepare an EPB inclusive of an environmental management plan for the proposed Kagem Expansion.

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**For and behalf of SRK Consulting (UK) Limited**

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## GLOSSARY OF TERMS

Acquisition	The acquisition of a 75% interest in Kagem via the acquisition of the entire issued share capital of Greentop and Krinera, the put and call option to acquire a licence to use the Fabergé brand name and the put and call option to acquire Oriental Mining.
actinolite	A monoclinic mineral in the hornblende series of the amphibole group; forms a series with tremolite; green, bladed, acicular, fibrous (byssolite asbestos), or massive (nephrite jade); prismatic cleavage; in low-grade metamorphic rocks; strahlite.
Admission	The admission to the Alternative Investment Market, a market operated by the London Stock Exchange plc.
Admission Document	The Admission Document published in connection with the Company's application to the London Stock Exchange.
Advanced Gemstone Assets	Assets upon which Mineral Resources reported in accordance with an internationally recognised reporting code: specifically Kagem and Kariba.
AIM Rules	The AIM Rules for Companies and the AIM Rules for Nominated Advisers, February 2007.
Al	A light, silvery-white, ductile metal with high electrical conductivity and good resistance to corrosion. Obtained from bauxite. Symbol, Al. It is the lightest of the metals in general use commercially and is the basis for light alloys used in the construction of modern aircraft and rockets; aluminum coatings are used for telescope mirrors, decorative paper, packages, and toys. The oxide, alumina, occurs naturally as ruby, sapphire, corundum, and emery.
Alex Stewart	Alex Stewart Group Limited.
Alfred H Knight	Alfred H Knight International Limited (Zambia).
Al <sub>2</sub> O <sub>3</sub>	Aluminium Oxide.
albite	A member of the plagioclase and the alkali feldspar series; prismatic cleavage; a common rock-forming mineral in granite, intermediate to felsic igneous rocks, low-temperature metamorphic rocks, and hydrothermal cavities and veins; can be used as a glaze in ceramics.
amethyst	A transparent to translucent, purple to pale-violet variety of quartz common as a semiprecious gemstone. The colour results from a hole defect associated with ferric iron substitution for silicon. A term applied to a deep-purple variety of corundum and to a pale reddish-violet variety of beryl.
amphibolite	A crystalloblastic rock consisting mainly of amphibole and plagioclase with little or no quartz. As the content of quartz increases, the rock grades into hornblende plagioclase gneiss.

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andesite	a dark-coloured, fine-grained extrusive rock that, when porphyritic, contains phenocrysts composed primarily of zoned sodic plagioclase (esp. andesine) and one or more of the mafic minerals (e.g., biotite, hornblende, pyroxene), with a groundmass composed generally of the same minerals as the phenocrysts, although the plagioclase may be more sodic, and quartz is generally present; the extrusive equivalent of diorite.
antiform	A fold whose limbs close upward in strata for which the stratigraphic sequence is not known.
Ar	Argon, the most abundant noble gas on Earth.
Auditors	BDO Stoy Hayward LLP.
azimuth	direction of a horizontal line as measured on an imaginary horizontal circle, the horizontal direction reckoned clockwise from the meridian plane of the observer, expressed as the angular distance between the vertical plane passing through the point of observation and the poles of the Earth and the vertical plane passing through the observer and the object under observation. In the basic control surveys of the United States, azimuths are measured clockwise from south, a practice not followed in all countries.
bankable standards	A feasibility study in which technical feasibility and economic viability has been demonstrated to a sufficient level to enable project financing with limited conditions precedent.
Base Information Date	1 January 2008.
Basement Complex	an underlying complex that behaves as a unit mass and does not deform by folding.
Basic Unit	inter-layered TMS and amphibolite.
Be	Beryllium, a steel grey, strong, light-weight yet brittle alkaline earth metal.
$\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$	beryllium aluminum silicate, the most common form of beryl.
bench	The horizontal step or floor along which coal, ore, stone, or overburden is mined.
BeO	A beryllium bearing mineral.
berm	A horizontal shelf or ledge built into the embankment or sloping wall of an open pit or quarry to break the continuity of an otherwise long slope and to strengthen its stability or to catch and arrest slide material. A berm may be used as a haulage road or serve as a bench above which material is excavated from a bank or bench face.
beryl	A hexagonal mineral, $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$ ; green, blue-green, and other pale tints; in granite pegmatites, mica schists, and an accessory mineral in felsic igneous rocks; the chief source of beryllium. Transparent and colored gem varieties include emerald, aquamarine,morganite, heliodor, golden beryl, bixbite, and vorobievite.

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biome	A climatically and geographically defined area of ecologically similar communities of plants, animals, and soil organisms, often referred to as ecosystems.
bio-physical liability	That portion of an environmental liability which is related to the physical closure of a mining operation and specifically excludes any social.
biotite	a common rock-forming mineral in crystalline rocks, either as an original crystal in igneous rocks or as a metamorphic product in gneisses and schists.
blanks	Samples that are used to establish the effect of the sample matrix or to ensure that the matrix is not affecting the analysis.
boudinage	A structure common in strongly deformed sedimentary and metamorphic rocks, in which an original continuous competent layer or bed between less competent layers has been stretched, thinned, and broken at regular intervals into bodies resembling boudins or sausages, elongated parallel to the fold axes.
BQ	Letter name specifying the dimensions of bits, core barrels, and drill rods in the B-size and Q-group wireline diamond drilling system having a core diameter of 36.5 mm and a hole diameter of 60 mm.
brownfield project	A project where development is undertaken on a pre-existing operating site.
bulk sample	the taking of large samples, which may consist of large-diameter drill core, the contents of a trench or mine working, or a car or train load of ore material, for metallurgical testing in mine evaluation.
Ca	Calcium, fifth most abundant element by mass in the earth's crust.
cadastre unit	a quadrilateral formed by the intersection of meridians and parallels and with a distance equal to six sexagesimal seconds, and that covers an average planimetric surface area of 3.3400Ha (0.0334km <sup>2</sup> ).
calc-silicate	A metamorphic rock consisting mainly of calcium-bearing silicates, such as diopside and wollastonite, and formed by metamorphism of impure limestone or dolomite; associated with skarn-type mineral deposits.
capital expenditure	Expenditures incurred during the process of commencing, expanding or sustaining production.
carriage insurance and freight	Where the seller must pay the costs, freight, and insurance necessary to bring the goods to the named port of destination.
care and maintenance	Where production has been temporarily suspended pending a change in technical-economic circumstances.

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cash operating cost	An internationally recognised metric for stating operating costs per unit of saleable commodity; including direct smelting costs, direct overhead costs, by-product credits, consulting fees, management fees, transportation and distribution charges.
chlorite	A compound that contains this group, with chlorine in oxidation state +3. Chlorites are also known as salts of chlorous acid.
coloured gemstones	a piece of attractive mineral, which when cut and polished is used to make jewellery or other adornments.
Commercial stone	grades 1 through 4.
comminution	The breaking, crushing, or grinding by mechanical means of stone, coal, or ore, for direct use or further processing.
Company	Gemfields Resources Plc.
Competent Person	a person who is a Member or Fellow of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Overseas Professional Organisation' ("ROPO") included in a list promulgated from time to time. A 'Competent Person' must have a minimum of five years experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which that person is undertaking.
Conceptual Study	A technical study which precedes a scoping study and seeks to assess the technical and economic viability of a property at a conceptual level. Often based on unclassified mineral resources.
concordant	Said of intrusive igneous bodies, the contacts of which are parallel to the bedding or foliation of the country rock.
Copperbelt	The copper mining area of Zambia, around the towns of Ndola, Kitwe, Chingola, Luanshya and Mufulira. In some contexts it includes the Katangan Copperbelt of the Democratic Republic of Congo, around Lubumbashi, exploiting the same ore body which runs under the border.
Cr	Asteel-gray, lustrous, hard metal that takes a high polish and has a high melting point.
Cr <sub>2</sub> O <sub>3</sub>	Chromite, the most common form of chrome bearing ore.
crusher	A machine for crushing rock or other materials. Among the various types of crushers are the ball-mill, gyratory-crusher, Hadsel mill, hammer mill, jaw crusher, rod mill, rolls, stamp mill, and tube mill.
cut gemstone	A gemstone in its cut and polished state.
cut-off grade	The minimum economic concentration of mineral/metals within a rock mass below which the material is classified either as marginal ore or waste.

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dambo	Complex shallow wetlands in central, southern and eastern Africa, particularly in Zambia and Zimbabwe.
diamond	An isometric mineral, a form of carbon, C; crystallizes in octahedra, dodecahedra, or cubes, commonly with curved edges and striated faces; rarely twinned; has octahedral cleavage and conchoidal fracture. Fresh cleavages have adamantine luster, but crystal faces are commonly greasy; colorless when pure but pale tints to black (bort) with impurities. The hardest natural substance, it defines 10 on the Mohs hardness scale and 15 on the Povarennykh scale, but ranges from 42 to 46 on a linearised Mohs scale. Its high refractive index ( $n = 2.42$ ) and strong dispersion give fire to faceted gems. Diamond occurs in kimberlite pipes and dikes, also in river and beach placers.
diamond core	A drill core formed by the act or process of drilling boreholes using bits inset with diamonds as the rock-cutting tool. The bits are rotated by various types and sizes of mechanisms motivated by steam, internal-combustion, hydraulic, compressed-air, or electric engines or motors.
dip	The angle at which a bed, stratum, or vein is inclined from the horizontal, measured perpendicular to the strike and in the vertical plane.
Director	Director of Mine Safety.
discounted cashflow	Cashflows which have been discounted by application of a discount factor.
dolerite	In British usage, the preferred term for what is called diabase in the United States. A fine-grained character of the rock that makes it difficult to identify megascopically.
dopping	A process whereby the stone is affixed to a pen-like “dop-stick” using wax or cement to facilitate girdling and faceting.
drill core	A solid, cylindrical sample of rock produced by an annular drill bit, generally rotatively driven but sometimes cut by percussive methods.
dyke	Tabular igneous intrusion that cuts across the bedding or foliation of the country rock.
Effective Date	1 January 2008.
emerald	A brilliant green gem variety of beryl, highly prized as a gemstone. The colour, which is caused by chromium or vanadium impurity, ranges from medium-light to medium-dark tones of slightly bluish green to slightly yellowish green.
Equator Principles	A set of voluntary environmental and social guidelines for ethical project finance. These principles commit banks and other signatories to not finance projects that fail to meet these guidelines.

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evapotranspiration	All methods of water moving from a liquid to water vapour in nature. Includes both evaporation and transpiration.
Expenditure Programme	The projected expenditures commencing 1 April 2008 for a 24-month period including the capital investments in support of the Kagem Expansion, the establishment of the lapidary initiative in India and head-office operating expenditures.
Exploration	The search for coal, mineral, or ore by (1) geological surveys; (2) geophysical prospecting (may be ground, aerial, or both); (3) boreholes and trial pits; or (4) surface or underground headings, drifts, or tunnels. Exploration aims at locating the presence of economic deposits and establishing their nature, shape, and grade, and the investigation may be divided into (1) preliminary and (2) final.
Exploration Programme	The exploration programme as defined by the Company and incorporated into the Expenditure Programme as included in the Strategic Plan.
Exploration Properties	Assets upon which either historical mining or recent exploration activities have occurred.
Exploration Prospects	Assets upon which limited or no exploration activity has been undertaken to date.
Extension drilling	A drilling programme aimed at extending the currently defined geological boundaries of an orebody.
Extra fine	grade 8 through 10.
Fabergé	Fabergé Limited.
Fabergé Option	The option (also exercisable by Fabergé) to enter into a 15 year worldwide and exclusive licence with Fabergé to use the Fabergé name in branding, marketing and selling coloured gemstones excluding diamonds.
Fe	Alustrous, silvery soft metal.
Feasibility Study	A technical and economic study which demonstrates the technical and economic viability of a mining project to within a range of accuracy of 15% and to an appropriate degree of detail such that a decision for proceeding to the project development stage may be made without substantive revision to either scope or scale.
feldspar	A group containing two high-temperature series, plagioclase and alkali feldspar; colourless or white and clear to translucent where pure. Constituting 60% of the Earth's crust, feldspar occurs in all rock types and decomposes to form much of the clay in soil, including kaolinite.
felsic	Derived from feldspar, lenad or feldspathoid, and silica, and applied to light-coloured rocks containing an abundance of one or all of these constituents. Also applied to the minerals themselves, the chief felsic minerals being quartz, feldspar, feldspathoid, and muscovite.

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FeO	Iron Oxide.
fillers	A treatment/enhancement process for gemstones whereby fractures are “filled” to disguise their presence.
Fine stone	grade 6 through 8
flitch	A vertical increment of a bench which is excavated (post blasting).
free-digging	Ore or waste which may be mechanically excavated without recourse to the use of explosives.
free on board	Price of consignment to a customer when delivered, with all prior charges paid, onto a ship or truck.
garnet	the silicate minerals almandine, andradite, calderite, goldmanite, grossular, hibshite, katoite, kimzeyite, knorringite, majorite, pyrope, schlorlomite, spessartine, and uvarovite.
Gemchib	Gemchib Minerals Ltd
Gemfields	Gemfields Resources Plc
Gemhouse	Gemhouse Inc
gemology	The study of fashioned minerals, their imitators and substitutes both natural and synthetic, prized for their beauty and durability. It concerns composition, structure, occurrence, origin, fashioning, and identification of gems.
Gemstone Assets	The coloured gemstone assets comprising the Advanced Gemstone Assets, the Exploration Properties and the Exploration Prospects.
Gemworld	Gemworld International Inc
geochemical soil/rock sampling	The search for economic mineral deposits or petroleum by detection of abnormal concentrations of elements or hydrocarbons in surficial materials or organisms, usually accomplished by instrumental, spot-test, or quickie techniques that may be applied in the field.
geotechnical	Investigation of the soil and bedrock on and below a site to determine their engineering properties and how they will interact with, on or in a proposed construction.
geophysical mapping	The exploration of an area in which geophysical properties and relationships unique to the area are mapped by one or more geophysical methods.
gneiss	In a metamorphic rock, commonly gneiss, the coarse, textural lineation or banding of the constituent minerals into alternating silicic and mafic layers.
Good stone	grade 4 through 6.
grade	The relative quantity or the percentage of ore-mineral or metal content in an orebody.

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granite	Plutonic rock in which quartz constitutes 10% to 50% of the felsic components and in which the alkali feldspar/total feldspar ratio is generally restricted to the range of 65% to 90%.
greenfield project	A project located on site which has no significant history of prior commercial operations.
Greentop	Greentop International Inc
Guidance Note	The Guidance note for Mining, Oil and Gas Companies, March 2006.
haul road	A road built to carry heavily loaded trucks at a good speed. The grade is limited on this type of road and usually kept to less than 17% of climb in direction of load movement.
hornblende	A felsic plutonic rock, generally adamellite or granodiorite, containing an amphibole (often hornblende) as an essential dark-coloured constituent; with decreasing quartz it grades through tonalite into normal diorite.
hydraulic excavator	An excavator used in open-pit mines powered by hydraulic means.
hydrothermal	Of or pertaining to hot water, to the action of hot water, or to the products of this action, such as a mineral deposit precipitated from a hot aqueous solution, with or without demonstrable association with igneous processes.
Ikonos satellite imagery	Imagery sourced from a commercial earth observation satellite, which was the first to collect publicly available high-resolution imagery at 1m and 4m resolution.
Indicated Mineral Resource	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.
Inferred Mineral Resource	That part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.
infill drilling	The process of secondary drilling to aid further definition of an exploration and/or mining target.

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Irumide	A Mesoproterozoic terrane of deformed basement and folded supracrustals, which occurs along the southern margin of an Archaean/Palaeoproterozoic unit called the Bangweulu Block in Zambia.
isoclinal fold	A fold whose limbs are parallel.
Joint Brokers and co-lead managers	Canaccord and JP Morgan Cazenove Limited.
JORC Code	The 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.
K	Potassium, a soft silvery-white metallic alkali metal that occurs naturally bound to other elements in seawater and many minerals.
K <sup>40</sup>	Isotopes used for radiometric dating.
Kagem	Kagem emerald mine.
Kagem Expansion	The planned production expansion at Kagem to increase processing of Reaction Zone material to 144ktpa.
Kagem ML	Kagem Mining Limited.
Kaolin	Former name for kaolinite. The aluminous minerals of the kaolinite-serpentine group.
Kariba	Kariba amethyst mine.
Kariba Conceptual Study	The conceptual study for Kariba which encompasses the proposed expansion of production.
Kariba ML	Kariba Minerals Limited.
Kagem Plant-1	The older (1984) processing facility at Kagem.
Kagem Plant-2	The newer (2006) processing facility at Kagem.
knocking shed	A processing facility at Kariba whereby amethyst is sawn and knocked to remove waste material.
Komatiite	Magnesium-rich ultramafic volcanic rock of high temperature origin. The term was originally applied by Viljoen and Viljoen (1969) to basaltic and ultramafic lavas near the Komati river, Barberton Mountain Land, Transvaal, South Africa. Nickel-copper sulphide mineral deposits may be associated with komatiites.
Krineria	Krineria Group S.A.
lapidary	A processing plant in which rough gemstones are cut, polished, or engraved.
Li	Lithium, a soft alkali metal with a silver-white colour.

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LoMp	Life-of-mine plan.
Lonrho Africa	Lonrho (Africa) Limited.
macro-economic	A branch of economics that deals with the performance, structure, and behavior of a national or regional economy as a whole.
Madagascar	Republic of Madagascar.
magnetite	An igneous rock consisting essentially of magnetite and having an iron content of 65% to 70% or more.
marble	A metamorphic rock composed essentially of calcite, dolomite, or a combination of the two, with a fine- to coarse-grained crystalline texture.
marginal cut-off grade	A cut off grade which results from consideration of marginal costs: normally the cost of processing and some fraction of the overheads.
Mbuva	Mbuva Mining Ltd.
Mbuva-Chibolele	Mbuva-Chibolele emerald and beryl mine.
Measured Mineral Resource	That part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.
Mesoproterozoic	A geologic era that occurred between 1,600Ma and 1,000Ma.
metamorphism	The mineralogical, chemical, and structural adjustment of solid rocks to physical and chemical conditions that have generally been imposed at depth below the surface zones of weathering and cementation, and that differ from the conditions under which the rocks in question originated.
meta-pelite	A clastic rock with a grain size of less than 1/16m which has been metamorphosed, subject to high temperature and pressure.
meta-sedimentary	A metamorphic rock formed from sedimentary rock.
metasomatic	Pertaining to the process of metasomatism and to its results. The term is esp. used in connection with the origin of ore deposits.
Mg	Magnesium, an alloying agent to make aluminium-magnesium alloys.
MgO	Magnesium oxide, or magnesia, is a white solid mineral that occurs naturally as periclase and is a source of magnesium.
mica	a group of phyllosilicate minerals.

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migmatite	A composite rock composed of igneous or igneous-appearing and/or metamorphic materials that are generally distinguishable megascopically.
Mineral Experts' Reports	A technical report required in compliance with the listing requirements of the London Stock Exchange.
Mineral Resource	A concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
Miombo Woodland	A biome which includes four woodland savanna ecoregions characterized by the predominant presence of Miombo species, with a range of climates from humid to semi-arid, and tropical to subtropical or even temperate.
muscovite	A phyllosilicate mineral of aluminium and potassium.
Na <sub>2</sub> O	Sodium Oxide.
Neo-Proterozoic	The unit of geologic time from 1,000Ma to 542Ma.
Nomad	Nominated Advisor — Canaccord Adams Limited.
nominal	Expenditures/revenues stated in money of the day terms i.e. all items irrespective of historic or forecasts are stated in the different money terms for each period.
NQ	A letter name specifying the dimensions of bits, core barrels, and drill rods in the N-size and Q-group wireline diamond drilling system having a core diameter of 47.6 mm and a hole diameter of 75.7 mm.
OHSAS18001	Occupational Health and Safety Standard.
Ontario benchmark	An internationally recognised benchmark for the comparative assessment of safety statistics.
open-pit	A mine working or excavation open to the surface.
operating expenditure	All expenditures of a non capital nature necessary to realise projected sales revenue in any given reporting period.
Opticon™	Continuous fluorescence detection system.
Ore Reserves	The economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental

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	<p>factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.</p>
Oriental Mining	Oriental Mining SARL.
Oriental Mining Option	A put and call option to acquire various exploration prospects in Madagascar from Oriental Mining (for the consideration of GBP1.00) comprising 15 gemstone licences with a combined area of 125.00km <sup>2</sup> .
ore	The naturally occurring material from which a mineral or minerals of economic value can be extracted profitably or to satisfy social or political objectives. The term is generally but not always used to refer to metalliferous material, and is often modified by the names of the valuable constituent; e.g., iron ore; ore mineral.
orogenic belt	The process by which structures within fold-belt mountainous areas were formed, including thrusting, folding, and faulting in the outer and higher layers, and plastic folding, metamorphism, and plutonism in the inner and deeper layers. Adj: orogenic; orogenetic.
orthogneiss	Applied to gneissose rocks that have been derived from rocks of igneous origin.
overburden	Designates material of any nature, consolidated or unconsolidated, that overlies a deposit of useful materials, ores, or coal, specifically those deposits that are mined from the surface by open cuts.
Palaeoproterozoic	The first of the three sub-divisions (eras) of the Proterozoic occurring between 2,500Ma and 1,600Ma.
Panama	Republic of Panama.
paragneisses	The order in which the mineral constituents of a rock are formed.
pegmatite	An exceptionally coarse-grained igneous rock, with interlocking crystals, usually found as irregular dikes, lenses, or veins, esp. at the margins of batholiths. Most grains are 1cm or more in diameter. Although pegmatites having gross compositions similar to other rock types are known, their composition is generally that of granite; the composition may be simple or complex and may include rare minerals rich in such elements as lithium, boron, fluorine, niobium, tantalum, uranium, and rare earths. Pegmatites represent the last and most hydrous portion of a magma to crystallize and hence contain high concentrations of minerals present only in trace amounts in granitic rocks.
phlogopite	A monoclinic mineral; a magnesium-rich end-member of the biotite crystal solution series; mica group; pseudohexagonal with perfect basal cleavage; occurs in crystalline limestones as a product of dedolomitization, in potassium-rich ultramafic

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	rocks, as an alteration mineral in sulfur-rich hydrothermal assemblages, and in kimberlites.; amber mica; brown mica.
picking belt	A conveyor belt on which gemstone concentrates are placed and manually sorted.
pinacoid	An open crystal form consisting of two parallel faces.
pit optimisation	A process whereby a series of optimised shells for open pits are generated each corresponding to a specific commodity price assumption.
plunge	The vertical angle between a horizontal plane and the line of maximum elongation of an orebody.
pneumatolitic	A term used in different connotations by various authors and perhaps best abandoned. It has been used to describe: (1) the surface effects of gases near volcanoes; (2) contact-metamorphic effects surrounding deep-seated intrusives; (3) that stage in igneous differentiation between pegmatitic and hydrothermal, which is supposed to be characterized by gas-crystal equilibria; and (4) very loosely, any deposit containing minerals or elements commonly formed in pneumatolysis, such as tourmaline, topaz, fluorite, lithium, and tin, and hence presumed to have formed from a gas phase.
polishing and cutting	The process applied to rough gemstones to produce marketable products for the wholesale cut coloured gemstone market.
porphyroblast	A pseudoporphyratic crystal in a rock produced by metamorphic recrystallisation.
precipitation	Water that falls to the surface from the atmosphere as rain, snow, hail, or sleet. It is measured as a liquid-water equivalent regardless of the form in which it fell.
Pre-feasibility study	A technical and economic study which demonstrates the technical and economic viability of a mining project to within a range of accuracy of 25% and to an appropriate degree of detail such that a decision for proceeding to the project development stage may be made without substantive revision to either scope or scale.
pre-forming	An intermediate process for transforming rough gemstones to cut produce a saleable product.
pre-stripping	The removal of earth or non ore rock materials as required to gain access to the desired coal, ore, or mineral materials; the process of removing overburden or waste material in a surface mining operation.
Prospectus Rules	The Prospectus Rules as published by the FSA from time to time and governed by the UKLA.
pseudomorph	A mineral sample with the external crystal form of one mineral and the internal chemistry of another; e.g., cubes of

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	goethite after pyrite resulting from oxidation of the ferrous sulphide to ferric oxyhydroxide.
push-back	The staged mining increments as open-pits are expanded form the current surface to the ultimate pit design.
quartz	A hard, metamorphic rock which was originally sandstone.
ramp	An incline connecting two levels in an open pit or underground mine.
Rb	Rubidium, a soft, silvery-white metallic element of the alkali metal group.
Reaction Zone	The contact zone between the TMS and intrusive pegmatites within which economic concentrations of emerald and beryl may be found.
Real terms	Removal of the effect of inflation.
rock dump	The area where mine waste or spoil materials are disposed of or piled.
Rox	Rox Limited.
RoM	Run-of-Mine.
rough gemstone	A gemstone in its natural uncut and unpolished state.
royalty	The landowner's (normally the state) share of the value of minerals produced on a property. It is commonly a fractional share of the current market value or a fixed amount per tonne mined.
Rules	Collectively the AIM Rules, the Guidance Note, the Rules of the London Stock Exchange and the Prospectus Rules.
schist	A strongly foliated crystalline rock.
screen	A large sieve for grading or sizing coal, ore, rock, or aggregate. It consists of a suitably mounted surface of woven wire or of punched plate; it may be flat or cylindrical, horizontal or inclined, stationary, shaking, or vibratory, and either wet or dry operation; vibratory screen
settling pond/dam	A pond, natural or artificial, for recovering the solids from washery effluent.
shear zone	A wide zone of distributed shearing in rock.
Si	Silicon, the eighth most common element in the universe by mass.
silica	The chemically resistant dioxide of silicon; occurs naturally as five crystalline polymorphs: trigonal and hexagonal quartz, orthorhombic and hexagonal tridymite, tetragonal and isometric cristobalite, monoclinic coesite, and tetragonal stishovite. Also occurs as cryptocrystalline chalcedony, hydrated opal, the glass lechatelierite, skeletal material in

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	diatoms and other living organisms, and fossil skeletal material in diatomite and other siliceous accumulations. Also occurs with other chemical elements in silicate minerals.
silicosis	A condition of massive fibrosis of the lungs marked by shortness of breath and resulting from prolonged inhalation of silica dusts by those such as stonecutters, asbestos workers, miners-regularly exposed to such dusts.
sill	A concordant sheet of igneous rock lying nearly horizontal.
SiO <sub>2</sub>	Silicon dioxide, also found as sand or quartz.
slope angle	The slop (angle) at which the wall of an open pit or cut stands as measured along an imaginary plane extended along the crests of the berms or from the slope crest to its toe.
slurry	A thin watery suspension; e.g., the feed to a filter press or other filtration equipment.
social liability	That component of the environmental liability which <i>inter alia</i> includes terminal benefits liability.
spessartine	An isometric mineral; garnet group with Mn replaced by Fe and Mg; crystallizes as dodecahedra and trapezohedra; in skarns and granite pegmatites; may be of gem quality.
SRK	SRK Consulting (UK) Limited.
SRK Group	SRK Global Limited.
stockpile	An accumulation of ore or mineral built up when demand slackens or when the treatment plant or beneficiation equipment is incomplete or temporarily unequal to handling the mine output; any heap of material formed for loading or other purposes.
stockwork	A mineral deposit consisting of a three-dimensional network of planar to irregular veinlets closely enough spaced that the whole mass can be mined.
Strategic Plan	The Company's development plan for transforming Gemfields into a vertically integrated gemstone producer through significant production expansion at Kagem as well as the establishment of a lapidary in India.
strike	The course or bearing of the outcrop of an inclined bed, vein, or fault plane on a level surface; the direction of a horizontal line perpendicular to the direction of the dip.
stripping ratio	The unit amount of spoil or overburden that must be removed to gain access to a unit amount of ore or mineral material.
supergroup	A lithostratigraphic unit comprising two or more groups and lone formation.
Surpac	A general mining and geological modelling software package.

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sustaining capital	Capital expenditure required to sustain operations at current level of production, generally to replace aging equipment.
synformal	Displaying the characteristics of a fold whose limbs close downward in strata for which the stratigraphic sequence is unknown.
talc	In commercial usage, a talcose rock; a rock consisting of talc, tremolite, chlorite, anthophyllite, and related minerals.
terminal benefits liability	Statutory expenditures to be incurred by a business on termination of employment.
total employees costed	The total number of employees and contractors whose operating expenses are included in Cash Costs.
tourmaline	Any member of the trigonal mineral group which forms prisms of three, six, or nine sides; commonly vertically striated; varicolored; an accessory in granite pegmatites, felsic igneous rocks, and metamorphic rocks. Transparent and flawless crystals may be cut for gemstones.
tremolite	A monoclinic mineral; amphibole group with magnesium replaced by iron, and silicon by aluminum toward actinolite; white to green; long-bladed or stout prismatic crystals; may show columnar, fibrous, or granular masses or compact aggregates; in low-grade metamorphic rocks such as dolomitic limestones and talc schists; the nephrite variety is the gemstone jade; the asbestiform variety is byssolite.
trench	In geological exploration, a narrow, shallow ditch cut across a mineral deposit to obtain samples or to observe character.
truck	Any wheeled vehicle, usually self-propelled, used to transport heavy articles or materials. In mining, usually applied to dump and/or bottom-dump semitrailers used to transport mined waste and ore materials. The number of types of these haulage units varies widely from the small 1.8t standard dump truck to the unit with capacity 181t or greater. For larger stripping operations, where the haulage conditions are not too rugged, a diesel tractor pulling a bottom-dump semi-trailer of capacity 36t to 54t is most common. The newer trucks are equipped with power steering, power brakes, torque converters, and automatic transmissions.
true thickness	The width or thickness of a vein, stratum, etc., as measured perpendicular or normal to dip and strike. The true width is always the width of the vein, etc., at its narrowest point.
tuff	A general term for all consolidated pyroclastic rocks.
ultramafic	Said of an igneous rock composed chiefly of mafic minerals, e.g., monomineralic rocks composed of hypersthene, augite, or olivine.
ultimate pit design	The engineered pit design which corresponding to the final pit limits in a sequence of pushbacks.

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Upper Carboniferous	The geologic timescale that extends from the end of the Devonian period, about 359.2Ma, to the beginning of the Permian period, about 299.0Ma.
V	Vanadium, a soft and ductile element, vanadium naturally occurs in certain minerals and is used mainly to produce certain alloys.
Vein	An epigenetic mineral filling of a fault or other fracture in a host rock, in tabular or sheetlike form, often with associated replacement of the host rock; a mineral deposit of this form and origin.
Waste rock	Barren or sub-marginal rock or ore that has been mined, but is not of sufficient value to warrant treatment and is therefore removed ahead of the milling processes.
Whittle	Commercial mining software used to undertake pit optimisation.
Whittle shell	The raw un-designed shell which results from a pit optimisation, normally developed as part of a sequence of shells corresponding to increasing commodity prices.
wireframe	Three dimensional solids representing geological/mineralogical domains.
World Bank	Group of five international organizations responsible for providing finance and advice to countries for the purposes of economic development and poverty.
World Bank Policies and Guidelines	Policies and procedures covering financial mechanisms, organizational structures, and decision-making processes related to the world bank's fund and its programmes.
Xenolith	A pre-existing rock that has been incorporated into magma without melting. When the magma crystallizes the pre-existing rock fragment is known as a xenolith.
Zambia	Republic of Zambia.
1995 Act	Mines and Minerals Act (1995).
1997 Rules	Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, 1997.
2008 Act	Minerals Development Act No.7 of 2008.
$\delta^{18}\text{O}$	A measure of the ratio of stable isotopes in geochemistry.

## **ABBREVIATIONS**

ADT	articulated dump truck
AIDS	Acquired immune deficiency syndrome
AIM	Alternative Investment Market

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AIME	American Institute of Mining Engineering
AMC	African Mining Consultants
amsl	above mean sea level
ART	anti-retroviral therapy
AU	African Union
BID	Base Information Date
BVI	British Virgin Islands
CEng	Chartered Engineer
CIT	Corporate Income Tax
CMCS	Chibolele Mining Cooperative Society
COMESA	Common Market for Eastern and Southern Africa
CPI	Consumer Price Index
CPR	Competent Persons' Report
CPs	Competent Persons
DCF	Discounted Cashflow
DRC	Democratic Republic of Congo
E	East
ECZ	Environmental Council of Zambia
EIS	environmental impact statement
EMS	environmental management system
EPB	environmental project brief
EPCM	Engineering Procurement and Construction Management
FI	Fertility Index
FIMMM	Fellow of the Institute of Mining, Metallurgy and Materials
FSA	Financial Services Authority
GBP	Great British Pounds
GDP	Gross Domestic Product
GHZL	Gemfields Holdings Zambia Limited
GIS	Geographical Information System

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GL	Gemstone Licences
GMAusIMM	Graduate member of the Australian Institute of Mining and Metallurgy
GMT	Greenwich Mean Time
GNI	Gross National Income
GoZ	Government of Zambia
HIV	Human immunodeficiency virus
ICJ	International Courts of Justice
ICMM	International Council of Mining and Metals
IFC	International Finance Corporation
IMF	International Monetary Fund
JPMC	JP Morgan Cazenove Limited
LSE	London Stock Exchange
LSML	Large Scale Mining Licence
LTIFR	lost time injury frequency rate
MBL	Masters in Business and Law
MCOG	Marginal cut-off grade
MIMMM	Member of the Institute of Mining, Metallurgy and Materials
MLA	mining licence area
MMER	Statutory Instrument No 29 of 1997 — Mines and Minerals (Environmental) Regulations, 1997
MSAICE	member of the South African Institute of Consulting Engineers
MSAIMM	Member of the South African Institute of Mining and Metallurgy
MSc	Master of Science
MSD	Mine Safety Directorate
NML	Northern Minerals Limited
NRERA	Ndola Rural Emerald Restricted Area
OCOG	Operating cut-off grade
OHS	Occupational Health and Safety

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PFS	Pre-feasibility study
PhD	Doctor of Philosophy
PLLS	Prospecting Licence Large Scale
PP&E	Plant Property and Equipment
PPP	Purchase price parity.
Pr.Eng	Professional Engineer
P/S	pre-select
QA/QC	Quality Assurance and Quality Control
RZ	Reaction Zone
RZF	Reaction Zone Factor
S	South
SADC	Southern African Development Community
SEC	United States Securities and Exchange Commission
SRK	SRK Consulting (UK) Limited
TBS	talc-biotite schist
TBL	Terminal Benefits Liability
TEC	Total employees costed
TMS	talc-chlorite-tremolite-magnetite schist
UK	United Kingdom
UKLA	United Kingdom Listing Authority
US	the United States of America
USGS	United States Geological Society
VAT	Value Added Taxation
VCT	voluntary counselling and testing
VPT	Variable Profit Tax
WT	Windfall Tax
ZCCM	Zambian Consolidated Copper Mines
ZMCPI	Zambian Consumer Price Index

### **UNITS**

%	a percentage
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%Cr	percentage chrome
°	a degree
°C	a degree centigrade
'	a minute
cm	a centimetre
GBPm	a million Great Britain Pound
g/t	a gramme per tonne
g/t <sub>ore</sub>	a gramme per tonne of ore
g/t <sub>RZ</sub>	a gramme per tonne of Reaction Zone
g/t <sub>TMS</sub>	a gramme per tonne of TMS
kg	a kilogramme
kgpa	a kilogramme per annum
kct/t	a kilo carat per tonne
kg/t	a kilogramme per tonne
kg/TEC/month	a kilogramme per total employee costed per month
km <sup>2</sup>	a square kilometre
kt	a thousand metric tonnes
ktpa	a thousand metric tonnes per annum
ktpm	a thousand metric tonnes per month
m	a metre
m <sup>3</sup>	a cubic metre
Ma	a million years
Mct	a million carats
mm	a millimetre
MPa	a million Pascals
m/hole	metres drilled per hole
m/s	a metre per second
Mt	a million tonnes
Mtpa	a million tonnes per annum
No	number
ppm	parts per million
RL	reduced level

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t	a metric tonne
tph	a metric tonne per hour
$t_{\text{Reaction Zone}}/\text{TEC}/\text{month}$	a metric tonne of Reaction Zone per total employee costed per month
$t_{\text{Waste}}:t_{\text{ore}}$	tonnes of waste per tonne of ore
$t_{\text{Waste}}:t_{\text{Reaction Zone}}$	tonnes of waste per tonne of Reaction Zone
$t_{\text{Waste}}:t_{\text{TMS}}$	tonnes of waste per tonne of TMS
US\$	United States dollar
US\$bn	a billion United States dollars
US\$/capita	United States dollars per capita
US\$/ct	United States dollars per carat
US\$/kct	United States dollars per thousand carats
US\$/g	United States dollars per gramme
US\$/kg	United States dollars per kilogramme
US\$kpm	a thousand United States dollars per month
US\$m	a million United States dollars
US\$/ $t_{\text{mined}}$	United States dollars per tonne mined
US\$/ $t_{\text{ore}}$	United States dollars per tonne of ore
US\$/ $t_{\text{processed}}$	United States dollars per tonne processed
US\$/ $t_{\text{RZ}}$	United States dollars per tonne of Reaction Zone
US\$/ $t_{\text{TMS}}$	United States dollars per tonne of TMS
USCPI	United States consumer price index
wt%	percentage weight
ZMCPI	Zambian consumer price index
ZMK	Zambian Kwacha
ZMKk	a thousand Zambian Kwacha
ZMKk/km <sup>2</sup> /year	a thousand Zambian Kwacha per square kilometre per year
ZMKm	a million Zambian Kwacha

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**PART VIII**  
**FINANCIAL INFORMATION ON KAGEM**  
**Section A Accountant's report on Kagem**



BDO Stoy Hayward LLP  
Chartered Accountants

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London  
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The Directors and Proposed Directors  
Gemfields Resources Plc  
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15 St. Botolph Street  
London  
EC3A 7EE

13 May 2008

Canaccord Adams Limited  
7th Floor  
Cardinal Place  
80 Victoria Street  
London  
SW1E 5JL

Dear Sirs

**Kagem Mining Limited (“Kagem”)**

**Introduction**

We report on the financial information set out in Section B of Part VIII. This financial information has been prepared for inclusion in the admission document dated 13 May 2008 of Gemfields Resources Plc (the “Company”) (the “Admission Document”) on the basis of the accounting policies set out in note 1 to the financial information. This report is required by paragraph (a) of Schedule Two of the AIM Rules for Companies and is given for the purpose of complying with that paragraph and for no other purpose.

**Responsibilities**

The directors and proposed directors of the Company are responsible for preparing the financial information on the basis of preparation set out in note 1 to the financial information and in accordance with International Financial Reporting Standards as adopted by the European Union (“IFRSs”).

It is our responsibility to form an opinion on the financial information as to whether the financial information gives a true and fair view, for the purposes of the Admission Document, and to report our opinion to you.

Save for any responsibility arising under paragraph (a) of Schedule Two of the AIM Rules for Companies to any person as and to the extent there provided, to the fullest extent permitted by the law we do not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with Schedule Two of the AIM Rules for Companies, consenting to its inclusion in the Admission Document.

**Basis of opinion**

We conducted our work in accordance with Standards for Investment Reporting issued by the Auditing Practices Board in the United Kingdom. Our work included an assessment of evidence relevant to the

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amounts and disclosures in the financial information. It also included an assessment of significant estimates and judgements made by those responsible for the preparation of the financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial information is free from material misstatement whether caused by fraud or other irregularity or error.

Our work has not been carried out in accordance with auditing or other standards and practices generally accepted in the United States of America or in other jurisdictions and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices.

### **Opinion**

In our opinion, the financial information gives, for the purposes of the Admission Document, a true and fair view of the state of affairs of Kagem as at the dates stated and of its losses, cash flows, and the statement of recognised income and expenses for the periods then ended in accordance with the basis of preparation set out in note 1 to the financial information and has been prepared in accordance with IFRSs as described in note 1 to the financial information.

### **Declaration**

For the purposes of Paragraph (a) of Schedule Two of the AIM Rules for Companies, we are responsible for this report as part of the Admission Document and declare that we have taken all reasonable care to ensure that the information contained in this report is, to the best of our knowledge, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the Admission Document in compliance with Schedule Two of the AIM Rules for Companies.

Yours faithfully

BDO Stoy Hayward LLP  
Chartered Accountants

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**SECTION B FINANCIAL INFORMATION ON KAGEM**

**Income Statements**

	Notes	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Revenue	1	30,689,306	38,273,254	44,952,717	28,942,173
Mineral royalty tax		<u>(1,146,809)</u>	<u>(1,913,663)</u>	<u>(2,291,302)</u>	<u>(1,447,109)</u>
<b>Net revenue</b>		<b>29,542,497</b>	<b>36,359,591</b>	<b>42,661,415</b>	<b>27,495,064</b>
Cost of sales		<u>(22,795,903)</u>	<u>(26,744,311)</u>	<u>(40,111,034)</u>	<u>(21,012,134)</u>
<b>Gross profit</b>		<b>6,746,594</b>	<b>9,615,280</b>	<b>2,550,381</b>	<b>6,482,930</b>
Other operating income		13,962	463,171	12,000	—
Administrative expenses		(5,485,679)	(5,717,193)	(8,324,456)	(4,775,880)
Provision against advance capital payments	11	<u>—</u>	<u>(9,615,000)</u>	<u>(15,312,838)</u>	<u>—</u>
<b>Profit/(loss) from operations</b>	2	<b><u>1,274,877</u></b>	<b><u>(5,253,742)</u></b>	<b><u>(21,074,913)</u></b>	<b><u>1,707,050</u></b>
Finance income	4	7,853	12,771	12,821	4,455
Finance expense	5	(1,576,174)	(2,036,676)	(5,414,576)	(2,966,025)
Foreign exchange differences		<u>(152,840)</u>	<u>2,091,123</u>	<u>(10,401,801)</u>	<u>(255,273)</u>
<b>Loss before tax</b>		<b>(446,284)</b>	<b>(5,186,524)</b>	<b>(36,878,469)</b>	<b>(1,509,793)</b>
Taxation credit/(expense)	6	<u>114,142</u>	<u>(1,696,857)</u>	<u>875,970</u>	<u>1,216,880</u>
<b>Loss after tax</b>		<b><u>(332,142)</u></b>	<b><u>(6,883,381)</u></b>	<b><u>(36,002,499)</u></b>	<b><u>(292,913)</u></b>
<b>Attributable to:</b>					
– Equity holders of the parent	8	<u><u>(332,142)</u></u>	<u><u>(6,883,381)</u></u>	<u><u>(36,002,499)</u></u>	<u><u>(292,913)</u></u>
<b>Loss per share</b>					
Basic and diluted	8	<u><u>(16.61)</u></u>	<u><u>(344.17)</u></u>	<u><u>(1,800.12)</u></u>	<u><u>(14.65)</u></u>

All amounts relate to continuing activities

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**Statement of recognised income and expenses**

	Notes	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Loss for the financial period		<u>(332,142)</u>	<u>(6,883,381)</u>	<u>(36,002,499)</u>	<u>(292,913)</u>
Recognised income and expense for the period		(332,142)	(6,883,381)	(36,002,499)	(292,913)
Dividends	7	<u>(1,000,000)</u>	<u>(1,595,500)</u>	<u>(1,854,438)</u>	—
Total recognised gains and losses for the year/period		<u>(1,332,142)</u>	<u>(8,478,881)</u>	<u>(37,856,937)</u>	<u>(292,913)</u>

## Balance sheets

	Notes	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
<b>Fixed assets</b>					
Property, plant and equipment	9	26,290,694	33,484,189	38,352,995	34,189,588
Advance capital payments	11	—	—	—	—
		<u>26,290,694</u>	<u>33,484,189</u>	<u>38,352,995</u>	<u>34,189,588</u>
<b>Current assets</b>					
Inventories	10	6,697,370	8,963,583	6,206,981	7,616,249
Trade and other receivables	12	1,807,158	710,960	1,206,958	6,310,088
Cash and cash equivalents		<u>83,783</u>	<u>128,957</u>	<u>14,483,846</u>	<u>13,245,559</u>
		<u>8,588,311</u>	<u>9,803,500</u>	<u>21,897,785</u>	<u>27,171,896</u>
<b>Total assets</b>		<b><u>34,879,005</u></b>	<b><u>43,287,689</u></b>	<b><u>60,250,780</u></b>	<b><u>61,361,484</u></b>
<b>Liabilities</b>					
<b>Non-current liabilities</b>					
Long term liabilities	14	(1,360,659)	(8,012,500)	(25,068,827)	(2,459,905)
Deferred taxation	15	(2,670,408)	(4,362,795)	(3,486,825)	(1,151,180)
Provisions	22	<u>(16,348,653)</u>	<u>(17,166,086)</u>	<u>(18,024,390)</u>	<u>(18,475,000)</u>
<b>Total non-current liabilities</b>		<u>(20,379,720)</u>	<u>(29,541,381)</u>	<u>(46,580,042)</u>	<u>(22,086,085)</u>
<b>Current liabilities</b>					
Trade and other payables	13	(3,578,531)	(2,597,672)	(3,123,220)	(1,933,805)
Accruals and deferred income	13	(2,575,464)	(5,068,967)	(10,751,819)	(12,629,055)
Bank loans	13	(893,042)	(4,994,468)	(11,820,208)	(43,344,867)
Bank overdraft (secured)	13	(2,471,043)	(4,578,407)	(18,274,684)	(12,379,661)
Obligations under finance leases and hire purchase agreements	13	—	—	(9,637,200)	(9,654,508)
Dividend payable	13	—	—	(1,413,750)	(975,000)
Current tax payable	13	<u>(398,508)</u>	<u>(402,978)</u>	<u>(402,978)</u>	<u>(404,537)</u>
<b>Total current liabilities</b>		<u>(9,916,588)</u>	<u>(17,642,492)</u>	<u>(55,423,859)</u>	<u>(81,321,433)</u>
<b>Total liabilities</b>		<u>(30,296,308)</u>	<u>(47,183,873)</u>	<u>(102,003,901)</u>	<u>(103,407,518)</u>
<b>Capital and reserves attributable to equity holders of the company</b>					
Share capital	16	20,000	20,000	20,000	20,000
Retained earnings		<u>4,562,697</u>	<u>(3,916,184)</u>	<u>(41,773,121)</u>	<u>(42,066,034)</u>
<b>Total equity</b>	17	<u>4,582,697</u>	<u>(3,896,184)</u>	<u>(41,753,121)</u>	<u>(42,046,034)</u>
<b>Total equity and liabilities</b>		<b><u>34,879,005</u></b>	<b><u>43,287,689</u></b>	<b><u>60,250,780</u></b>	<b><u>61,361,484</u></b>

## Cash flow statements

	Notes	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
<b>Loss after tax</b>		<b>(332,142)</b>	<b>(6,883,381)</b>	<b>(36,002,499)</b>	<b>(292,913)</b>
Depreciation		4,264,336	4,500,625	7,404,575	4,182,264
Interest expense		1,159,085	2,036,676	4,301,113	1,995,799
Interest income		(7,853)	(12,771)	(12,821)	(4,455)
Loss/(profit) on disposal of property, plant and equipment		24,975	6,062	(3,735)	—
Exchange (gains)/losses		(50,969)	(2,044,940)	5,854,795	(4,765,393)
Provisions and charges		—	—	—	933,357
Provision for irrecoverable non current prepayments		—	9,615,000	15,312,838	—
Income tax (credit)/expense		<u>(114,142)</u>	<u>1,696,857</u>	<u>(875,970)</u>	<u>(1,216,880)</u>
<b>Cash flow from operating activities before changes in working capital</b>		<b>4,943,290</b>	<b>8,914,128</b>	<b>(432,167)</b>	<b>831,779</b>
Decrease/(increase) in inventories		371,492	(2,266,213)	2,756,602	(1,409,268)
(Increase)/decrease in trade and other receivables		(1,243,889)	1,096,198	(495,998)	(5,103,130)
Increase/(decrease) in trade and other payables		<u>2,761,520</u>	<u>1,512,644</u>	<u>5,752,775</u>	<u>(896,999)</u>
<b>Cash flow generated from operations</b>		<b>6,832,413</b>	<b>9,256,757</b>	<b>7,581,212</b>	<b>(6,577,618)</b>
Income taxes paid		<u>(638,988)</u>	<u>—</u>	<u>—</u>	<u>—</u>
<b>Net cash flow from operating activities</b>		<b>6,193,425</b>	<b>9,256,757</b>	<b>7,581,212</b>	<b>(6,577,618)</b>
<b>Investing activities</b>					
Purchase of property, plant and equipment		(5,093,931)	(11,704,782)	(12,281,646)	(18,857)
Sale of property, plant and equipment		21,350	4,600	12,000	—
Interest received		7,853	12,771	12,821	4,455
Advance capital payments	11	<u>—</u>	<u>(9,615,000)</u>	<u>(15,312,838)</u>	<u>—</u>
<b>Net cash outflow from investing activities</b>		<b>(5,064,728)</b>	<b>(21,302,411)</b>	<b>(27,569,663)</b>	<b>(14,402)</b>
<b>Net cash inflow/(outflow) before financing activities carried forward</b>		<b><u>1,128,697</u></b>	<b><u>(12,045,654)</u></b>	<b><u>(19,988,451)</u></b>	<b><u>(6,592,020)</u></b>

	Notes	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
<b>Net cash inflow/(outflow) before financing activities brought forward</b>		<u>1,128,697</u>	<u>(12,045,654)</u>	<u>(19,988,451)</u>	<u>(6,592,020)</u>
<b>Financing activities</b>					
Interest paid		(380,578)	(1,219,243)	(2,987,184)	(1,077,575)
Dividends paid		(1,000,000)	(1,595,500)	(440,688)	(438,750)
Borrowings received		2,929,468	15,824,340	18,851,018	18,262,190
Lease finance received		—	—	16,208,302	—
Borrowings repaid		(2,294,555)	(3,026,133)	(6,399,354)	(2,315,573)
Lease finance repaid		—	—	(4,585,031)	(3,181,536)
<b>Cash (outflow)/inflow from financing activities</b>		<u>(745,665)</u>	<u>9,983,464</u>	<u>20,647,063</u>	<u>11,248,756</u>
<b>Net increase/(decrease) in cash and cash equivalents</b>		<b>383,032</b>	<b>(2,062,190)</b>	<b>658,612</b>	<b>4,656,736</b>
<b>Cash and cash equivalents at the beginning of the period</b>		<u>(2,770,292)</u>	<u>(2,387,260)</u>	<u>(4,449,450)</u>	<u>(3,790,838)</u>
<b>Cash and cash equivalents at the end of the period</b>	21	<u><b>(2,387,260)</b></u>	<u><b>(4,449,450)</b></u>	<u><b>(3,790,838)</b></u>	<u><b>865,898</b></u>

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## **Notes to the financial information**

Kagem Mining Limited is a limited company incorporated in Zambia. The principal activities of the company are emerald and precious stone mining.

### **1. Accounting policies**

#### **BASIS OF PRESENTATION OF THE FINANCIAL INFORMATION**

The financial information has been prepared in accordance with operative International Financial Reporting Standards as adopted by the EU on a basis consistent with previous years.

The financial information is presented in Zambian Kwacha in units of thousands of Kwacha.

Kagem meets its day to day working capital requirements through its existing bank facilities. The nature of Kagem's business is such that there can be considerable unpredictable variations in the timing of cash inflows.

The financial information has been prepared on a going concern basis which assumes that Kagem will continue operating for the foreseeable future.

The directors are satisfied that, at the time of the approval of the financial information, there is no significant concern that the company will be unable to operate within its existing bank facilities and within that expected to be agreed on any later date.

#### **ADOPTION OF NEW AND REVISED STANDARDS**

The company has adopted all of the new and revised Standards and Interpretations issued by the International Accounting Standards Board (IASB) and the International Financial Reporting Interpretations Committee (IFRIC) of the IASB that are relevant to its operations and are effective for accounting periods beginning on or after 1 January 2005.

#### **SIGNIFICANT ACCOUNTING POLICIES**

The financial information has been prepared on the historical cost basis of accounting.

The principal accounting policies adopted are set out below:

##### **Revenue recognition**

Revenue is measured at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provided in the normal course of business, net of discounts and sales related taxes during the year.

Sales of goods are recognised when goods are delivered to customers and title has passed during the year.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the interest rate applicable.

##### **Leased assets**

Property, plant and equipment held under finance lease are capitalised and depreciated over their useful economic life. The lease payments are apportioned between a reduction of the outstanding liability and interest in such a way as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

##### **Borrowing costs**

Borrowing costs are recognised in the income statement in the year in which they are incurred.

##### **Provisions**

Provisions are raised when the company has a present legal or constructive obligation as a result of past events, and it is probable will result in an outflow of economic benefits that can be reasonably estimated. Provisions are measured at the directors' best estimate of the expenditure required to settle the obligation at the balance sheet date.

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## 1. Accounting policies (continued)

### Rehabilitation costs

The net present value of estimated rehabilitation cost is recognised and provided for in the financial statements and capitalised within mine development costs on recognition. Rehabilitation will generally occur on closure of the mine. Initial recognition is at the time of the disturbance occurring and thereafter when additional disturbance takes place. Annual increases in the provision due to unwinding of the discount are recognised in the income statement as a finance cost.

### Retirement benefit plans

Certain of Kagem's employees are entitled to retirement benefits. Provision is made for past service on the basis of current conditions and earnings for employees who have attained the age of at least 52 years. Other employees are on fixed term contracts and are entitled to end the contract of benefits. Provision is made for past service on the basis of contract terms.

The company also contributes to National Pension Scheme Authority a defined contribution pension scheme, for its eligible employees. Membership, with the exception of expatriate employees, is compulsory and monthly contributions by both employer and employees are made.

### Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profits for the year as adjusted for items which are non-assessable or disallowable.

Deferred tax is recognised on temporary differences arising from the recognition for tax purposes of certain items of income and expense in a different accounting period from that in which they are recognised in the financial statements. The deferred tax is computed by applying enacted statutory tax rates to differences between the financial statements carrying amounts and the tax bases of existing assets and liabilities. A deferred tax asset is reviewed at each balance sheet date and is only recognised when it is, in the opinion of the directors, recoverable beyond reasonable doubts. Account is taken of the deferred taxation assets relating to the carry forward of unused tax losses, where, in the opinion of the directors, recovery of such losses is assured beyond reasonable doubt.

Deferred tax liabilities are recognised on surpluses arising from the revaluation of property, plant and equipment. These deferred tax liabilities are amortised through equity at the same rate as the assets to which the revaluation surpluses relate are amortised or depreciated.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities levied by the same tax authority and Kagem intends to settle its current tax assets and liabilities on a net basis.

### Property, plant and equipment

Leasehold land and buildings and fixed plant and machinery are stated in the balance sheet at cost less depreciation.

Assets under construction are carried at cost, less any identified impairment loss. Such assets are initially shown as capital work in progress and transferred to the relevant class of assets when commissioned. Cost includes professional fees and where necessary, borrowing costs.

Depreciation is charged directly to the income statement.

Depreciation is charged to write off the cost of property, plant and equipment over their estimated useful lives on a straight line basis, at the following rates:

Leasehold buildings	2%
Plant equipment and machinery	10-20%
Fixtures and fittings	25%

Capital work in progress are not depreciated.

Gains or losses arising on the disposal of property, plant and equipment are determined as the difference between sales proceeds and the carrying amount of the asset and are recognised in income.

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## 1. Accounting policies (continued)

On the subsequent sale or retirement of a revalued asset, the attributable revaluation surplus remaining in revaluation reserves is transferred to revenue reserves.

### **Impairment**

Long term and other assets are evaluated for impairment when events or changes in economic circumstances indicate that the carrying amounts of such assets may not be recoverable. An estimate of the future discounted net cash flows of the related asset over the remaining useful life is used to determine whether the assets are recoverable and measure any impairment by reference to the fair value. Fair value is generally estimated using the company's expectation of discounted net cash flows.

### **Inventories**

Stocks of precious and semi-precious stones are valued at the lower of cost and net realisable value. Cost represents average production cost. Net realisable value is the estimated average market value of stones held for sale, after taking into account all directly related selling expenses.

Consumable stores and mine spares are valued at the lower of cost and net realisable value. Cost is calculated using the first-in first-out method. Net realisable value takes into account all directly related costs to be incurred in marketing, selling and distribution.

### **Financial instruments**

Financial assets and financial liabilities are recognised on Kagem's balance sheet when Kagem becomes a party to the contractual provisions of the instrument.

The principal financial assets of the company are trade and other receivables, and cash and cash equivalents and are accounted for as follows:

#### *Trade and other receivables*

Trade and other receivables are measured at initial recognition at fair value, and are subsequently measured at amortised cost using the effective interest rate method. Appropriate allowances for estimated irrecoverable amounts are recognised in the income statement when there is objective evidence that the asset is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of the estimated cash flows.

#### *Cash and cash equivalents*

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

#### *Financial liabilities and equity*

Financial liabilities and equity instruments issued by Kagem are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument. An equity instrument is any contract that evidence a residual interest in the assets of the company after deducting all of its liabilities.

The accounting policies adopted for specific financial liabilities and equity instruments are set out below:

#### *Trade and other payables*

Trade and other payables are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method.

#### *Bank borrowings*

Interest-bearing bank loans and overdrafts are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method. Any difference between the proceeds (net of transaction costs) and the settlement or redemption of borrowings is recognised over the term of the borrowings in accordance with the accounting policy for borrowing costs.

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## 1. Accounting policies (continued)

### *Equity instruments*

Equity instruments issued by Kagem are recorded at the proceeds received, net of direct issue costs.

### **Foreign currencies**

Transactions denominated in foreign currencies are translated into *Zambian Kwacha* at the rates of exchange ruling at the date of the transaction.

Assets and liabilities denominated in foreign currency are translated into *Zambian Kwacha* at the rates of exchange ruling at the balance sheet date. Gains and losses arising on translation are included in the income statement in the period in which they arise.

Exchange differences arising on cash and cash equivalents are treated as realised for taxation purposes.

## **RISK MANAGEMENT POLICIES**

### *i. Fair Value Risk*

Fair value risk is the amount at which assets and liabilities can be exchanged in a current transaction between willing parties, other than a forced sale or liquidation, and is best evidenced by a quoted market price, where one exists. The estimated fair values of assets and liabilities have been determined by the company using available market information and appropriate valuation methodologies. However, judgment is necessarily required to interpret market data to estimate fair values. Accordingly, the estimates are not necessarily indicative of the amounts that Kagem could realise in a current market exchange. The carrying amounts of the assets and liabilities approximate their fair values.

### *ii. Credit Risk*

Kagem is exposed to credit risk arising from credit sales. In the opinion of the directors, the credit risk arising from the credit sales is low.

### *iii. Operational Risk*

Proper appraisals are carried out for all credit customers and adequately documented before being forwarded for approval.

### *iv. Strategic Risk*

Kagem's strategic plan is comprehensive in all aspects with particular emphasis on compliance with legal and market conditions and senior management effectively communicates the plan to all staff levels and allocates resources in line with the laid down objectives.

### *v. Foreign Exchange Risk*

Kagem is exposed to foreign exchange risk arising from various currency exposures primarily with respect to the US Dollar. Kagem's finance department is responsible for hedging the net position in each currency.

## **CRITICAL MANAGEMENT ACCOUNTING JUDGEMENTS**

In the process of applying the accounting policies, which are described above, management has made the following judgements that have the most significant effect on the amounts recognised in the financial information:

Kagem has not applied the new requirements of International Accounting Standard Number 16 (IAS 16): Property, Plant and Equipment in respect of the following:

**Reassessment of residual values of property, plant and equipment:** IAS 16 now requires that in calculating the depreciation charge the company should reduce the depreciable amount of its assets in each period by its estimated residual value. In previous years, in terms of IAS 16, the estimated residual value was fixed on recognition of the asset and was not subject to re-assessment. The company is now required to reassess the residual value of its property, plant and equipment at each

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## 1. Accounting policies (continued)

balance sheet date. The continuous reassessment of the residual values typically leads to a change in depreciation charged annually. Depreciation ceases when the carrying value of an asset equals its residual value.

**Componentisation:** IAS 16 now requires that where significant components of an item of property, plant and equipment have different useful lives or residual values, those components should be accounted for as separate items of property, plant and equipment. Previously, all parts of an item of property, plant and equipment were depreciated at the same rate.

Management has determined that componenting items of property, plant and equipment would not result in material differences in the asset's carrying values.

**Assessment of useful lives:** IAS 16 requires that the Company reassess the useful lives of all of its property, plant and equipment. In instances where items of property plant and equipment were fully depreciated, these assets are now required to be reinstated to reflect their appropriate carrying value.

### New Accounting Standards

Certain new standards, amendments and interpretations to existing standards have been published that are mandatory for the company's accounting periods beginning on or after 1 January 2008 or later periods and which the company has decided not to adopt early. These are:

*IAS 1, Presentation of financial statements: A Revised Presentation* (effective for accounting periods beginning on or after 1 January 2009). The revised IAS 1 is still to be endorsed by the EU.

*Revised IFRS 3: Business Combinations* (effective for accounting periods beginning on or after 1 July 2009). The revised IFRS 3 is still to be endorsed by the EU.

*IFRS 8, Operating Segments* (effective for accounting periods beginning on or after 1 January 2009).

*IAS 23 Borrowing Costs* (revised) (effective for accounting periods beginning on or after 1 January 2009). The revised IAS 23 is still to be endorsed by the EU.

*Amendment to IFRS 2 share based payments: Vesting conditions and cancellations* (effective for accounting periods beginning on or after 1 January 2009). The amended IFRS 2 is still to be endorsed by the EU.

*Amendment to IAS 27: consolidated and separate financial statements.* Amendments are effective for periods beginning 1 July 2009. The amended IAS 27 is still to be endorsed by the EU.

*IFRIC 11, IFRS 2 – Group and Treasury Share Transactions* (effective for accounting periods beginning on or after 1 March 2007).

*IFRIC 12, Service Concession Arrangements* (effective for accounting periods beginning on or after 1 January 2008).

IFRIC 12 is still to be endorsed by the EU.

*IFRIC 13, Customer Loyalty Programmes* (effective for accounting periods beginning on or after 1 July 2008). IFRIC 13 is still to be endorsed by the EU.

*IFRIC 14, IAS 19 – The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction* (effective for accounting periods beginning on or after 1 January 2008). IFRIC 14 is still to be endorsed by the EU.

The directors anticipate that the adoption of these Standards and Interpretations in future periods will have no material impact on the financial information of Kagem.

## 2. Profit/(loss) from operations

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
<b>This is arrived at after charging/ (crediting):</b>				
Depreciation	2,901,948	3,138,237	6,042,187	3,501,611
Auditors' remuneration: audit services	130,403	110,689	161,571	—
(Profit)/loss on disposal of property, plant and equipment	6,062	24,975	(3,735)	—
Exchange differences	<u>643,102</u>	<u>693,470</u>	<u>12,311,392</u>	<u>5,863,664</u>

## 3. Employees

Staff costs for all employees, including executive directors, consist of:

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Wages and salaries	8,281,682	10,476,288	11,422,871	7,459,254
Pension costs	—	284,181	649,687	—
Directors' emoluments	<u>1,425,780</u>	<u>973,835</u>	<u>1,255,766</u>	<u>608,309</u>
	<u>9,707,462</u>	<u>11,734,304</u>	<u>13,328,324</u>	<u>8,067,563</u>

The average number of employees and contractors during the year/period, including directors, was:

	Year ended 31 March 2005	Year ended 31 March 2006	Year ended 31 March 2007	Six months ended 30 September 2007
Administration and operations	<u>314</u>	<u>340</u>	<u>387</u>	<u>392</u>

## 4. Finance income

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Interest received on bank deposits	<u>7,853</u>	<u>12,771</u>	<u>12,821</u>	<u>4,455</u>

## 5. Finance expenses

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Unwinding of discount on provisions	778,507	817,433	858,304	450,610
Bank interest and other charges	<u>797,667</u>	<u>1,219,243</u>	<u>4,556,272</u>	<u>2,515,415</u>
	<u>1,576,174</u>	<u>2,036,676</u>	<u>5,414,576</u>	<u>2,966,025</u>

## 6. Taxation expense/(credit)

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Corporation tax in respect of the current financial year	499,591	4,470	—	1,559
Adjustment in respect of prior year	—	—	—	1,117,206
Transfer (from)/to deferred taxation account	(613,733)	1,692,387	(875,970)	(2,335,645)
	<u>(114,142)</u>	<u>1,696,857</u>	<u>(875,970)</u>	<u>(1,216,880)</u>

The adjustment in respect of prior years represents additional tax due from assessments by the tax authorities relating to previous Kagem financial periods, 1996/7 to 2005/6.

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
<b>Reconciliation of the tax charge:</b>				
Loss before taxation	<u>(446,284)</u>	<u>(5,186,524)</u>	<u>(36,878,469)</u>	<u>(1,509,793)</u>
Taxation at 35%	(156,199)	(1,815,283)	(12,907,464)	(528,428)
<b>Permanent differences:</b>				
- Unrealised exchange losses/gains on loans	—	(419,406)	5,464,167	89,345
- Depreciation on leased assets	—	—	—	392,180
- Unwinding of discount	272,477	286,102	300,406	157,714
- Non cash benefits	129,111	106,215	153,224	112,894
- Earn out provision	—	—	145,334	—
- Other	(49,068)	44,515	89,203	326,654
- Subscriptions and donations	—	—	22,276	—
- Mining expenses	—	54,012	13,165	43,193
- Staff welfare	38,785	—	7,391	—
- Provision for recoverable non-current prepayments	—	3,365,250	5,359,493	—
- General provisions	—	—	—	753,143
- Lease capital repayments	—	—	—	(1,113,538)
- Mine development costs	476,835	476,835	476,835	238,418
- Mineral royalty tax provision	<u>401,383</u>	<u>(401,383)</u>	<u>—</u>	<u>—</u>
	<u>1,269,523</u>	<u>3,512,140</u>	<u>12,031,494</u>	<u>1,000,003</u>
<b>Temporary differences:</b>				
Excess of capital allowances over depreciation	(541,696)	(2,880,780)	(785,674)	—
Leases	—	—	(1,425,731)	765,047
Unrealised exchange gains	(72,037)	(72,037)	(949,748)	—
Tax losses	—	1,260,430	4,037,123	—
Other	—	—	—	(1,235,063)
	<u>(613,733)</u>	<u>(1,692,387)</u>	<u>875,970</u>	<u>(470,016)</u>
Tax charge excluding movement in deferred tax balance	<u>499,591</u>	<u>4,470</u>	<u>—</u>	<u>1,559</u>

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**7. Dividends**

	<b>Year ended 31 March 2005 K000</b>	<b>Year ended 31 March 2006 K000</b>	<b>Year ended 31 March 2007 K000</b>	<b>Six months ended 30 September 2007 K000</b>
Ordinary dividends				
Final dividend paid	<u>1,000,000</u>	<u>1,595,500</u>	<u>1,854,438</u>	<u>—</u>
	<u>1,000,000</u>	<u>1,595,500</u>	<u>1,854,438</u>	<u>—</u>

Final dividend paid in March 2005: K50.00; March 2006: K79.78; March 2007: K92.72; September 2007: Nil per share.

**8. Loss per share**

Loss per ordinary share have been calculated using the weighted average number of shares in issue during the relevant financial periods. The weighted average number of equity shares in issue and the earnings, being profit or loss after tax and dividends, are as follows:

	<b>Year ended 31 March 2005</b>	<b>Year ended 31 March 2006</b>	<b>Year ended 31 March 2007</b>	<b>Six months ended 30 September 2007</b>
Weighted average number of equity shares	<u>20,000,000</u>	<u>20,000,000</u>	<u>20,000,000</u>	<u>20,000,000</u>
	<b>K000</b>	<b>K000</b>	<b>K000</b>	<b>K000</b>
Loss after taxation	<u>(332,142)</u>	<u>(6,883,381)</u>	<u>(36,002,499)</u>	<u>(292,913)</u>

The number of shares used for the earnings per share is calculated as follows:

	<b>Year ended 31 March 2005</b>	<b>Year ended 31 March 2006</b>	<b>Year ended 31 March 2007</b>	<b>Six months ended 30 September 2007</b>
Basic number of shares	<u>20,000,000</u>	<u>20,000,000</u>	<u>20,000,000</u>	<u>20,000,000</u>

## 9. Tangible assets

	Mine Development Costs K000	Roads and leasehold buildings K000	Plant, Equipment and vehicles K000	Fixtures and fittings K000	Capital work in progress K000	Total K000
<b>Cost</b>						
As at 1 April 2004	15,570,146	85,647	9,814,713	197,560	3,613,233	29,281,299
Additions	—	21,583	374,540	51,478	4,646,330	5,093,931
Transfers	—	—	4,609,585	—	(4,609,585)	—
Disposals	—	—	(179,831)	—	—	(179,831)
<b>As at 31 March 2005</b>	<b>15,570,146</b>	<b>107,230</b>	<b>14,619,007</b>	<b>249,038</b>	<b>3,649,978</b>	<b>34,195,399</b>
Additions	—	—	11,604,621	8,000	92,161	11,704,782
Disposals	—	—	(28,800)	—	—	(28,800)
<b>As at 31 March 2006</b>	<b>15,570,146</b>	<b>107,230</b>	<b>26,194,828</b>	<b>257,038</b>	<b>3,742,139</b>	<b>45,871,381</b>
Additions	—	—	12,281,646	—	—	12,281,646
Transfer	—	—	3,733,874	—	(3,733,874)	—
Disposals	—	—	(49,254)	—	(8,265)	(57,519)
<b>As at 31 March 2007</b>	<b>15,570,146</b>	<b>107,230</b>	<b>42,161,094</b>	<b>257,038</b>	<b>—</b>	<b>58,095,508</b>
Additions	—	—	—	18,857	—	18,857
<b>As at 30 September 2007</b>	<b>15,570,146</b>	<b>107,230</b>	<b>42,161,094</b>	<b>275,895</b>	<b>—</b>	<b>58,114,365</b>
<b>Depreciation</b>						
As at 1 April 2004	—	15,944	3,650,480	107,451	—	3,773,875
Provided for the year	1,362,388	2,610	2,869,343	29,995	—	4,264,336
Disposals	—	—	(133,506)	—	—	(133,506)
<b>As at 31 March 2005</b>	<b>1,362,388</b>	<b>18,554</b>	<b>6,386,317</b>	<b>137,446</b>	<b>—</b>	<b>7,904,705</b>
Provided for the year	1,362,388	2,177	3,104,321	31,739	—	4,500,625
Disposals	—	—	(18,138)	—	—	(18,138)
<b>As at 31 March 2006</b>	<b>2,724,776</b>	<b>20,731</b>	<b>9,472,500</b>	<b>169,185</b>	<b>—</b>	<b>12,387,192</b>
Provided for the year	1,362,388	2,177	6,014,678	25,332	—	7,404,575
Disposals	—	—	(49,254)	—	—	(49,254)
<b>As at 31 March 2007</b>	<b>4,087,164</b>	<b>22,908</b>	<b>15,437,924</b>	<b>194,517</b>	<b>—</b>	<b>19,742,513</b>
Provided for the period	681,194	1,222	3,487,775	12,073	—	4,182,264
<b>As at 30 September 2007</b>	<b>4,768,358</b>	<b>24,130</b>	<b>18,925,699</b>	<b>206,590</b>	<b>—</b>	<b>23,924,777</b>
<b>Net book value</b>						
As at 31 March 2005	14,207,758	88,676	8,232,690	111,592	3,649,978	26,290,694
As at 31 March 2006	12,845,370	86,499	16,722,328	87,853	3,742,139	33,484,189
As at 31 March 2007	11,482,982	84,322	26,723,170	62,521	—	38,352,995
<b>As at 30 September 2007</b>	<b>10,801,788</b>	<b>83,100</b>	<b>23,235,395</b>	<b>69,305</b>	<b>—</b>	<b>34,189,588</b>

As at 30 September 2007, included in plant and equipment are assets with net book value of K7.5 billion held under finance leases.

All the company's property, plant and equipment has been pledged as security for borrowings. In the opinion of the directors, the amounts at which property, plant and equipment are stated are not in excess of those recoverable from their future use.

## 10. Inventories

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Precious and semi-precious stones	6,287,760	8,077,561	5,350,718	6,707,400
Consumable stores	409,610	886,022	856,263	908,849
	<u>6,697,370</u>	<u>8,963,583</u>	<u>6,206,981</u>	<u>7,616,249</u>

## 11. Advance capital payments

Between January 2006 and March 2007, Kagem paid a total of US\$7,597,690 to four foreign registered suppliers to supply mining machinery and equipment.

All the suppliers failed to deliver the specified equipments, despite management's efforts, the company could not obtain refunds of the amounts advanced. Therefore full provision has been made against these amounts.

## 12. Receivables

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
VAT recoverable	1,159,028	94,798	232,291	197,789
Staff debtors	327,820	279,250	228,390	195,272
Prepayments and accrued income	320,310	80,192	25,932	53,243
Trade receivables	—	256,720	720,345	6,511,148
Provision for doubtful debtors	—	—	—	(647,364)
	<u>1,807,158</u>	<u>710,960</u>	<u>1,206,958</u>	<u>6,310,088</u>

All amounts fall due for payment within one year.

## 13. Liabilities

### Amounts falling due within one year

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Trade and other payables	3,578,531	2,597,672	3,123,220	1,933,805
Accruals and deferred income	3,468,506	10,063,435	10,751,819	12,629,055
Bank loans	—	—	11,820,208	43,344,867
Bank overdrafts (secured)	2,471,043	4,578,407	18,274,684	12,379,661
Obligation under finance leases and hire purchase agreements	—	—	9,637,200	9,654,508
Dividend payable	—	—	1,413,750	975,000
Current tax payable	398,508	402,978	402,978	404,537
	<u>9,916,588</u>	<u>17,642,492</u>	<u>55,423,859</u>	<u>81,321,433</u>

### Bank overdraft

Kagem has overdraft facilities with Finance Bank Zambia Limited. The facilities are a Kwacha facility of K1 billion and a United States Dollar facility of US\$500,000. Interest is payable at the bank's base rate plus 5% per annum on the Kwacha facility and at one year Libor plus 5% per annum on the Dollar facility.

The facilities are secured by:

- a first legal mortgage for K2.9 billion over Plot 6374. Kitwe;
- a letter of hypothecation from the company for emeralds averaging US\$2million at any one time in favour of the bank;
- letter of undertaking that proceeds of all emerald sales be routed through the bank;
- a second charge over the fixed and floating assets of the company valued at US\$4.5 million; and
- undertaking to settle the Indo Zambia Bank Limited facilities within a maximum period of one year.

The facilities were consolidated post 30 September 2007 (see note 23).

## 14. Non-current liabilities

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Obligations under finance leases and hire purchase agreements	—	—	4,699,638	—
Other provisions	—	—	—	933,357
Bank loans	<u>1,360,659</u>	<u>8,012,500</u>	<u>20,369,189</u>	<u>1,526,548</u>
	<u>1,360,659</u>	<u>8,012,500</u>	<u>25,068,827</u>	<u>2,459,905</u>

### Financial liabilities are due:

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
<b>Overdraft</b>				
– in one year or less	2,471,043	4,578,407	18,274,684	12,379,661
<b>Loans</b>				
– in one year or less	893,042	4,994,468	11,820,208	43,344,867
– in more than one year but not more than two years	1,360,659	3,205,000	6,287,371	1,526,548
– in more than two years but not more than five years	—	4,807,500	14,081,818	—
	<u>2,253,701</u>	<u>13,006,968</u>	<u>32,189,397</u>	<u>44,871,415</u>
<b>Finance leases</b>				
– in one year or less	—	—	9,637,200	9,654,508
– in more than one year but not more than two years	—	—	4,699,638	—
	<u>—</u>	<u>—</u>	<u>14,336,838</u>	<u>9,654,508</u>

The leases, denominated in United States Dollars, were obtained for the purchase of mining equipment. The leases are payable in sixteen quarterly instalments from 18 July 2006 to 18 August 2010. The leases are secured by:

- i) Directors personal guarantees;
- ii) Mortgage of commercial property located on stand number 6374, corner of Dr Aggrey Avenue and Kariba Road, Kitwe, valued at US\$450,000;
- iii) Post dated cheques; and
- iv) Specific charges on the lapidary equipment being imported under the lease facility.

### Analysis of loans by lender:

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
<b>Loans comprise:</b>				
Finance Bank Zambia Ltd loan 1	—	9,615,000	9,288,161	7,737,269
Finance Bank Zambia Ltd loan 2	—	—	6,046,906	4,996,301
Finance Bank Zambia Ltd loan 3	—	—	14,156,830	11,755,449
Finance Bank Zambia Ltd loan 4	—	—	—	12,563,000
Finance Bank Zambia Ltd loan 5	—	—	—	5,699,190
First Rand Group	—	—	2,697,500	2,120,206
Indo Zambia Bank Ltd loan 1	2,253,721	1,789,468	—	—
Indo Zambia Bank Ltd loan 2	—	1,602,500	—	—
	<u>2,253,701</u>	<u>13,006,968</u>	<u>32,189,397</u>	<u>44,871,415</u>

### Finance Bank Zambia Loan 1

The loan was taken out for US\$3,000,000 on 23 December 2005 and is repayable by six equal half yearly payments from 31 January 2007, interest is charged at 3% over BOZ base rate. The loan is secured under the security agreement for the overdraft detailed in note 13.

#### 14. Non-current liabilities (continued)

##### Finance Bank Zambia Loan 2

The loan was taken out for US\$1,500,000 on 19 May 2006 and is repayable by 10 equal half yearly instalments from 30 May 2007, interest is charged at 3% over BOZ base rate. The loan is secured under the same terms as the Finance Bank Zambia Loan 1 with an additional second charge over the entire floating assets, hypothecation of emerald stocks located at Fwaya Fwaya Camp and the assignment of sale proceeds of emeralds through a letter of undertaking.

##### Finance Bank Zambia Loan 3

The loan was taken out for US\$4,000,000, expressed in Euro equivalent, on 28 April 2006 and is repayable by four equal annual instalments from 4 October 2006, interest is charged at 3% above EIB rate. The loan is secured over new assets and by a charge over the other assets plus a mortgage of gemstones produced and the mining area.

##### Finance Bank Zambia Loan 4

The loan was taken out for US\$3,400,000 on 20 June 2007 and is repayable by four equal instalments from 30 June 2009, interest is charged at 3% above EIB rate. The loan is secured by first charge over new assets and over gemstones produced.

##### Finance Bank Zambia Loan 5

The loan was taken out for US\$2,000,000 on 22 June 2007 and is repayable by 13 December 2007, the loan is secured by way of a charge over future gemstone sales.

##### First Rand Bank

The loan was taken out on 30 March 2007 for US\$650,000 and is repayable by equal quarterly payments from 29 June 2007 until 31 December 2008. The loan is secured by way of a charge over the company's plant.

#### 15. Deferred taxation

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Deferred taxation (see below)	<u>(2,670,408)</u>	<u>(4,362,795)</u>	<u>(3,486,825)</u>	<u>1,151,180</u>
			<b>Provided</b>	
	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Accelerated capital allowances	2,742,445	5,623,225	6,408,899	5,213,671
Unutilised tax losses	—	(1,260,430)	(5,297,554)	(4,062,491)
Unrealised exchange losses	(72,037)	—	949,748	—
Leases	—	—	1,425,732	—
	<u>2,670,408</u>	<u>4,362,795</u>	<u>3,486,825</u>	<u>1,151,180</u>
Deferred taxation movements are:				
	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Opening balance	(2,742,445)	(2,670,408)	(4,362,795)	(3,486,825)
Accelerated capital allowances	—	(2,880,780)	(785,674)	1,195,228
Leases	—	—	(1,425,732)	1,425,732
Unrealised exchange gains	72,037	(72,037)	(949,748)	949,748
Carried forward tax losses	—	1,260,430	4,037,124	(1,235,063)
Closing balance	<u>(2,670,408)</u>	<u>(4,362,795)</u>	<u>(3,486,825)</u>	<u>(1,151,180)</u>

## 16. Share capital

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
<b>Authorised</b>				
20,000,000 ordinary shares of K1 each	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
<b>Allotted, called up and fully paid</b>				
20,000,000 ordinary shares of K1 each	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>

## 17. Reconciliation of movements in shareholders' funds

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
At the beginning of the period/year	5,914,839	4,582,697	(3,896,184)	(41,753,121)
Dividends paid	(1,000,000)	(1,595,500)	(1,854,438)	—
Loss for the period/year	<u>(332,142)</u>	<u>(6,883,381)</u>	<u>(36,002,499)</u>	<u>(292,913)</u>
<b>At the end of the period/year</b>	<u>4,582,697</u>	<u>(3,896,184)</u>	<u>(41,753,121)</u>	<u>(42,046,034)</u>

## 18. Contingent liabilities

There were no known material contingent liabilities at 31 March 2005, 31 March 2006, 31 March 2007 and 30 September 2007.

## 19. Commitments

Commitments for capital expenditure:

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Authorised by the directors but not provided for	<u>40,000</u>	<u>3,025,000</u>	<u>—</u>	<u>—</u>

## 20. Related party transactions

The company in the ordinary course of business enters into various purchase and service transactions with related parties. These transactions are under terms that are no less favourable than those arranged with third parties.

(i) Trading transactions:

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
Purchase of goods and services (management fees)	<u>1,534,465</u>	<u>1,900,586</u>	<u>2,247,636</u>	<u>1,447,109</u>
Amounts due from related parties	<u>—</u>	<u>—</u>	<u>720,345</u>	<u>811,958</u>

All related party trading transactions have taken place with the holding company, Hagura Mining Limited, incorporated in the United Kingdom.

(ii) Compensation of key management personnel:

	Year ended 31 March 2005 K000	Year ended 31 March 2006 K000	Year ended 31 March 2007 K000	Six months ended 30 September 2007 K000
The remuneration of directors and other members of key management during the year was as follows:	<u>190,350</u>	<u>171,534</u>	<u>222,215</u>	<u>608,309</u>

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## 21. Notes supporting the cash flow statement

Cash and cash equivalents for the purposes of the cash flow statement comprises:

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Cash available on demand	83,783	128,957	14,483,846	13,245,559
Overdrafts	(2,471,043)	(4,578,407)	(18,274,684)	(12,379,661)
	<u>(2,387,260)</u>	<u>(4,449,450)</u>	<u>(3,790,838)</u>	<u>865,898</u>

## 22. Provision for environmental rehabilitation

	As at 31 March 2005 K000	As at 31 March 2006 K000	As at 31 March 2007 K000	As at 30 September 2007 K000
Opening balance	15,570,146	16,348,653	17,166,086	18,024,390
Unwinding of discount	<u>778,507</u>	<u>817,433</u>	<u>858,304</u>	<u>450,610</u>
Closing balance	<u>16,348,653</u>	<u>17,166,086</u>	<u>18,024,390</u>	<u>18,475,000</u>

The above provision relates to the cost of correcting any environmental damage at the company's mine. The provision is based upon estimates provided by environmental consultants of the costs to comply with international standards. Limited environmental rehabilitation regulations currently exist in Zambia and the minimum legal requirement is likely to be significantly less than the International Standards estimate. It is reasonably possible that the company's estimate of its ultimate rehabilitation liabilities could change as a result of changes in regulations and cost estimates.

## 23. Post balance sheet events

On 14 December 2007, the net debt position with Finance Bank Zambia was renegotiated whereby the company's borrowings were replaced by two new term loans totalling \$10m (K39bn) repayable quarterly over 3 years. The borrowings attract interest at LIBOR + 3.5%. The loans are secured by a first charge over the Kitwe head office, the hypothecation of emerald stocks at the mine and a first charge over all other fixed and floating assets.

## PART IX

### ADDITIONAL INFORMATION

#### 1. RESPONSIBILITY

The Company, the Directors and Proposed Directors whose names, functions and business addresses are set out on page 2 of this document hereby accept responsibility for the information contained in this document including individual and collective responsibility for compliance with the AIM Rules save that only the Directors have responsibility for the recommendation set out in paragraph 26 of Part I of this document. To the best of the knowledge and belief of the Company, the Directors and Proposed Directors (who have taken all reasonable care to ensure that such is the case), the information contained in this document is in accordance with the facts and does not omit anything likely to affect the import of such information.

#### 2. THE GROUP

2.1 The Company was incorporated in England and Wales with registered number 05129023 on 14 May 2004 under the Companies Act 1985 as a public company limited by shares. On 13 July 2004, the Company obtained its certificate to do business and exercise borrowing powers pursuant to section 117 of the Act. The principal legislation under which the Company operates is the Act and the regulations made thereunder. Under the Act, the Company operates as a public limited company whereby the liability of its members is limited. The Company's principal place of business is Plot No. 6374, Corner of Dr. Aggrey & Karibu Roads, Light Industrial Area, Kitwe.

2.2 The Company is the ultimate holding company of the Group and has the following subsidiaries:

Name	Company Number	Parent/per cent. owned	Place and Date of Incorporation	Principal Activity
Gemfields Limited	595609	Company 100 per cent.	British Virgin Islands, 6 May 2004	Intermediate holding company
Gemfields Canada Inc	613239	Gemfields Limited, 100 per cent.	New Brunswick, Canada, 18 June 2004	Intermediate holding company
Kariba Minerals Limited	LCO 13422	Gemfields Canada Inc., 50 per cent.	Lusaka, Zambia, 4 October 1984	Gemstone exploration and mining
Mbuva Mining Limited	LC031204	Gemfields Canada Inc, 100 per cent.	Lusaka, Zambia, 21 March 1994	Gemstone exploration and mining
Gemfields Holdings Zambia Limited	55178	Gemfields Limited, 100 per cent.	Lusaka, Zambia, 30 April 2004	Gemstone exploration and mining
Gemhouse Mining Zambia Ltd	LCO 37071	Gemfields Holdings Zambia Ltd, 100 per cent.	Lusaka, Zambia, 18 October 1996	Gemstone exploration and mining
Gemfields India Pvt Ltd	436911 MH 2005 PTC 152358	Gemfields Ltd, 100 per cent.	India, 1 April 2005	Gemstone cutting and polishing
Almizan Development Ltd	622038	Company, 100 per cent.	British Virgin Islands, 2 November 2004	Intermediate holding company
Sarina Global Ltd	615300	Company, 100 per cent.	British Virgin Islands, 20 September 2004	Dormant
Gemfields Mining (Mozambique) Limited	100039346	Company 90 per cent., Alok Sood 10 per cent.	Republic of Mozambique, 10 August 2007	Gemstone exploration and mining

2.3 In addition, on Admission, the Company will have the following subsidiaries (which are currently within the Target Group):

Name	Company Number	Parent/per cent.owned	Place and Date of Incorporation	Principal Activity
Greentop International Inc.	88894	Company, 100 per cent.	British Virgin Islands, 22 June 1993	Holding company
Krinerer Group SA	9171 Ficha (card) 46750, Rollo (Reel) 2958 Imagen (Frame) 86	Company, 100 per cent.	the Republic of Panama, 30 October 1979	Holding company
Hagura Mining Ltd (BVI)	74702	Greentop, 50 per cent., Krinerer, 50 per cent.	British Virgin Islands, 18 December 1992	Holding company
Hagura Mining Ltd (UK)	01491197	Greentop, 50 per cent., Krinerer, 50 per cent.	England & Wales, 16 April 1980	Holding company
Kagem Mining Ltd	12958	Hagura Mining Ltd (UK), 75 per cent., the Government of the Republic of Zambia, 25 per cent.	Zambia, 12 March 1984	Gemstone exploration and mining
Kagem Lapidaries Limited	64755	Kagem, 99.99 per cent. shares, Hagura UK, 00.01 per cent.	Zambia, 26 December 2006	Gemstone exploration and mining

### 3. SHARE CAPITAL

3.1 The authorised and issued share capital of the Company as at the date of this document, and on Admission (assuming no options are exercised between the date of this document and Admission) is as follows:

#### Ordinary Shares of £0.01 each

	As at the date of this document		On Admission	
	Amount	Number	Amount	Number
<b>Authorised</b>	£ 2,000,000	200,000,000	£ 6,000,000	600,000,000
<b>Issued and fully paid</b>	£1,045,757.33	104,575,733	£3,091,527.40	309,152,740

3.2 Since incorporation the following Ordinary Shares have been issued:

Date	Number of Shares	Subscription Price	Purpose
14 May 2004	2	£0.01	Subscription shares
20 June 2004	36,251,839	—	Share for share exchange to holders of common shares in Gemfields Canada Inc.
30 June 2004	7,000,000	US\$0.50	Cash placing with new and existing investors
28 November 2004	350,000	£0.28	Cash placing with new and existing investors
<b>Total issued shares as at 31 December 2004</b>	<b>43,601,841</b>		
22 April 2005	8,868,890	US\$0.35	Exercise of warrant options
22 April 2005	6,500,000	US\$0.50	Cash placing with new and existing investors
26 September 2005	9,000,000	US\$0.50	Consideration for the acquisition of Almizan Limited (holder of certain exploration licences)
28 November 2005	26,666,667	£0.45	Institutional placing on 2005 Admission
<b>Total issued shares as at 31 December 2005</b>	<b>94,637,398</b>		

<b>Date</b>	<b>Number of Shares</b>	<b>Subscription Price</b>	<b>Purpose</b>
19 May 2006	125,000	US\$0.15	Option exercise
19 May 2006	116,667	US\$0.50	Option exercise
27 June 2006	83,334	US\$0.15	Option exercise
27 June 2006	83,334	US\$0.50	Option exercise
23 November 2006	1,500,000	£0.50	In consideration for the acquisition of Sarina Global Limited (holder of certain exploration licences )
22 November 2006	20,000	US\$0.15	Option exercise
20 December 2006	8,000,000	£0.40	Institutional placing
21 December 2006	10,000	US\$0.15	Option exercise
<b>Total issued shares as at 31 December 2006</b>	<b>104,575,733</b>		
<b>Total issued shares as at 31 December 2007</b>	<b>104,575,733</b>		

3.3 Conditional upon the Resolutions being passed at the EGM expected to be held on 5 June 2008 (and upon the Acquisition Agreement and the Placing Agreement becoming unconditional in all respects (other than in respect of Admission)):

3.3.1.1 the authorised share capital of the Company shall be increased by £4,000,000 from £2,000,000 to £6,000,000 by the creation of 400,000,000 new Ordinary Shares; and

3.3.1.2 the Directors will be generally and unconditionally authorised pursuant to Section 80 of the Act to exercise all the powers of the Company to allot relevant securities (within the meaning of Section 80 of the Act) (i) pursuant to the Acquisition and the Placing up to an aggregate nominal amount of £2,045,770.07; and (ii) otherwise than in connection with the Acquisition and the Placing up to an aggregate nominal amount of £1,000,000 such authority to expire at the earlier of the conclusion of the next annual general meeting of the Company or the date falling 15 months after the date of the passing of the Resolution ;

3.3.1.3 the Directors will be empowered pursuant to Section 95 of the Act to allot equity securities (within the meaning of Section 94(2) to 94(3A) of the Act) pursuant to the authority conferred by the resolution at paragraph 3.3.1.2 above as if Section 89(1) of the Act did not apply to any such allotment, such authority (unless previously revoked, varied or renewed) to expire on the earlier of the conclusion of the next annual general meeting of the Company and the date falling 15 months after the date of the passing of the Resolution, save that the Company may before such expiry make an offer or agreement which would or might require equity securities to be allotted after such expiry and the Directors may allot equity securities in pursuance of such an offer or agreement notwithstanding that the authority conferred has expired, and provided further that such power shall be limited to:

(a) the allotment of equity securities up to an aggregate nominal amount of £2,045,770.07 in connection with the Acquisition and the Placing;

(b) any allotment of equity securities where such securities have been offered (whether by way of a rights issue, open offer or otherwise) to holders of Ordinary Shares where the equity securities respectively attributable to the interests of all holders of Ordinary Shares are proportionate (as nearly as maybe) to the respective numbers of Ordinary Shares held by them, subject to such exclusions and other arrangements as the Directors may deem necessary or expedient to deal with fractional entitlements or legal or practical problems under the laws of, or the requirements of any recognised regulatory body or any stock exchange in, any territory or otherwise howsoever; and

(c) any allotments (otherwise than pursuant to sub-paragraphs (a) or (b) above) of equity securities up to an aggregate nominal value not exceeding £650,000.

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- 3.4 As regards share options, the Company currently operates the Unapproved Scheme further details of which are set out in paragraph 7 below.
- 3.5 Save as disclosed in this document, no share or loan capital of the Company has been issued or is proposed to be issued, fully or partly paid, either for cash or for a consideration other than cash and no share or loan capital of the Company is under option or agreed conditionally or unconditionally to be put under option. There are no listed or unlisted securities issued by the Company not representing share capital.
- 3.6 The New Ordinary Shares will be admitted to trading on AIM with ISIN number GB00B0HX1083.
- 3.7 The Company has no convertible securities, exchangeable securities or securities with warrants and no person has any preferential subscription rights for any share capital in the Company.
- 3.8 There are no founders' or management or deferred shares comprised within the Company's capital.
- 3.9 As a result of the issue of the New Ordinary Shares more than 59.73 per cent. of the Enlarged issued share capital of the Company has been paid for with assets other than cash. The percentage of the issued share capital of the Company paid for with assets other than cash is 44.71 prior to the implementation of the Acquisition, Placing and Admission.

#### **4. MEMORANDUM AND ARTICLES OF ASSOCIATION**

- 4.1 The principal objects of the Company, as set out in paragraph 3 of its Memorandum of Association, are, *inter alia*, to carry on business as a general commercial company and to carry on any other business which may in the opinion of the Directors be advantageously carried on by the Company.
- 4.2 The Articles of Association of the Company (the "Articles") contain, *inter alia*, provisions to the following effect:
- 4.2.1 Voting rights
- Subject to any special terms or restrictions as to voting attached to any shares by or in accordance with the Articles, on a show of hands every member, who (being an individual) is present in person or (being a corporation) is present by a representative not being himself a member, shall have one vote and on a poll every member who is present in person or by proxy shall have one vote for every share of which he is the holder.
- 4.2.2 Dividends
- (a) The profits of the Company available for dividend and resolved to be distributed shall be applied in the payment of dividends to the members in accordance with their respective rights and priorities. The Company in general meeting may declare dividends accordingly. No dividend or interim dividend may be paid otherwise than in accordance with Part IX of the Act.
- (b) No dividend shall be payable except out of the profits of the Company (available for distribution under the terms of the Act and every other relevant UK Act of Parliament ("Statutes")) or in excess of the amount recommended by the Directors.
- (c) Dividends must be declared and paid according to the amounts paid on the shares in respect of which the dividends are paid. For these purposes, no amount paid on a share in advance of calls shall be treated as paid on the share. Dividends shall be apportioned and paid pro rata according to the amounts paid on the shares during any portions of the period in respect of which the dividend is paid but, if any share is issued on terms providing that it ranks for dividend as from a particular date, the share shall rank for dividend accordingly.
- (d) The Directors may pay such interim dividends as appear to them to be justified by the profits of the Company.

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- (e) A general meeting declaring a dividend or bonus may direct payment of the dividend or bonus wholly or partly by the distribution of specific assets and, in particular, of paid up shares or debentures of another company or in any one or more of these ways.
  - (f) Dividends unclaimed for 12 years after the date they were declared or they become due for payment shall, unless the Directors otherwise resolve, be forfeited and revert to the Company.
  - (g) The Directors may, if authorised by an ordinary resolution, offer any holders of ordinary shares one or more of the following:
    - (i) instead of taking the net cash amount or any part of it (to be determined by the Directors) of the dividend, they may invest the cash in subscribing for unissued ordinary shares; or
    - (ii) instead of taking the net cash or any part (to be determined by the Directors) of it of the dividend, elect to receive new ordinary shares credited as fully paid; or
    - (iii) forgo their entitlement to all or part (to be determined by the Directors) of the dividend and take fully paid bonus ordinary shares; or
    - (iv) any other option in respect of all or part (to be determined by the Directors) of any dividend on any ordinary shares held by them as the Directors determine.
  - (h) The Directors may exclude from any offer referred to at 4.2.2(g) above any holders of Ordinary Shares where the Directors believe that the making of the offer to them would or might involve the contravention of the laws of any territory or that for any other reason the offer should not be made to them.
  - (i) There is no fixed date on which an entitlement to dividend arises.
  - (j) There are no provisions relating to the rate of dividend or method of its calculation, periodicity or the cumulative or non-cumulative nature of payments.

#### 4.2.3 Distribution of assets on a winding-up

- (a) On the winding up of the Company, the balance of the assets available for distribution, after deduction of any provision made under section 719 of the Act (as replaced by s247 Companies Act 2006) and subject to any special rights attaching to any class of shares, shall be applied in repaying to the members of the Company the amounts paid up on the shares held by them together with any premium paid up or credited as paid up on the issue of such shares. Any surplus will belong to the holders of any ordinary shares then in issue.
- (b) If the Company is wound up the liquidator may, with the authority of an extraordinary resolution, divide among the members in specie or kind the whole or any part of the assets of the Company. He may for that purpose set such value as he deems fair upon any one or more class or classes of property and may determine how the division is carried out as between the members or different classes or members. He may with the same authority, vest any part of the assets in trustees upon such trust for the benefit of members as the liquidator with the same authority thinks fit, but no contributory shall be compelled to accept any shares in respect of which there is a liability.

#### 4.2.4 Transfer of shares

- (a) Each member may transfer all or any of his shares held in certified form by a written instrument or transfer in any usual form or in any form approved by the Directors. The instrument of transfer of a share shall be executed by or on

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behalf of the transferor and except in the case of a fully paid share by or on behalf of the transferee. The Directors may in their absolute discretion and without giving reason refuse to register any transfer of shares. Subject to the foregoing, the Directors may also decline to register any instrument of transfer unless:

- (i) the transfer, duly stamped is deposited at the office or such other place as the Directors may appoint accompanied by the certificate of the shares to which it relates, and such other evidence as the Directors may reasonably require;
  - (ii) the instrument of transfer is in respect of only one class of share; and
  - (iii) in the case of a transfer to joint holders, they do not exceed four in number.
- (b) If the Directors refuse to register a transfer they shall, within 2 months after the date the transfer was lodged with the Company send to the transferee notice of the refusal. The registration of transfers may be suspended at such times and for such periods (not exceeding 30 days in any year) as the Directors may from time to time determine.

#### 4.2.5 Share capital and changes in capital

- (a) The Company in general meeting may by ordinary resolution increase its capital by such sum, to be divided into shares of such amounts, as the resolutions prescribe.
- (b) Unless the Company by ordinary resolution at the general meeting at which the capital is increased otherwise directs, any new shares proposed to be issued shall be offered in the first instance in accordance with section 89 of the Act (save to the extent disapplied from time to time by special resolution) to all the shareholders for the time being, on the same or on more favourable terms than those offered or to be offered to persons other than shareholders, in proportion to the number of shares of the shares of the same class held by them.
- (c) The new shares shall be subject to the provisions of the Statutes and of these Articles with reference to payment of calls, lien, transfer, transmission, forfeiture and otherwise.
- (d) The Company may purchase its own shares (including any redeemable shares) except where there are outstanding convertible securities of the Company unless there are provisions in the relevant trust deed permitting the purchase or it has been sanctioned by an extraordinary resolution passed by the holders of the convertible shares.
- (e) The Company may by ordinary resolution consolidate and divide all or any of its shares into shares of a larger amount, cancel any shares which, at the date of the passing of the resolution, have not been taken, or agreed to be taken, by any person, subdivide its shares or any of such shares into shares of smaller amount than is fixed by the Memorandum of Association.
- (f) Upon consolidation of fully paid shares into shares of larger amount the Directors may settle any difficulty which arises and in particular may, as between the holders of shares consolidated, determine which shares are consolidated into each consolidated share.
- (g) The Company may by special resolution reduce its share capital, any capital redemption reserve fund and any share premium account in any manner subject to any conditions and consents required by law.
- (h) The Company may by special resolution create and sanction the issue of shares which are, or at the option of the Company or the holder are to be liable to be redeemed, subject to and in accordance with the provisions of the Statutes.

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#### 4.2.6 Modification of rights

- (a) Whenever the capital of the Company is divided into different classes of shares or groups and either whilst the Company is a going concern or during or in contemplation of a winding up, the special rights attached to any class or group may be modified or abrogated, subject to the provisions of the Statutes or of the Company's Memorandum of Association and unless otherwise provided by the terms of issue of the shares of that class or group, either with the consent in writing of the holders of three-quarters of the issued shares of the class or group, or with the sanction of an extraordinary resolution passed at a separate general meeting of the holders (but not otherwise).
- (b) The Company may by ordinary resolution convert any paid-up shares into stock, or re-convert any stock into paid-up shares of any denomination.
- (c) Subject to, and in accordance with, the provisions of the Statutes and subject to Article 52.1 of the Company's Articles and the requirements of the Nominated Adviser, the Company may purchase its own shares (including any redeemable shares).
- (d) The Company may not purchase its own shares if at the time of purchase there are outstanding any convertible securities of the Company, unless either there are provisions in the relevant trust deed or terms of issue permitting the purchase or the purchase has been sanctioned by an extraordinary resolution passed at a separate class meeting of the holders of the convertible securities.
- (e) The Company may by special resolution create and sanction the issue of shares which are, or at the option of the Company or the holder are to be liable, to be redeemed, subject to and in accordance with the provisions of the Statutes. The special resolution sanctioning the issue shall also make such alterations to these Articles as are necessary to specify the terms on which and the manner in which the shares are to be redeemed.

#### 4.2.7 Directors

- (a) Unless and until determined by ordinary resolution, the number of Directors shall not be less than two nor more than eight.
- (b) The Directors shall be paid out of the funds of the Company by way of remuneration for their services such sums as they may determine.
- (c) The ordinary aggregate remuneration of all of the non-executive directors of the Company from time to time shall not exceed £150,000 per annum or such other amount as the Company may determine by ordinary resolution.
- (d) The Company may by ordinary resolution elect any person to be a Director, either to fill a casual vacancy or as an addition to the existing Board.
- (e) Any Director who at the request of the Board performs special services or goes or resides abroad may receive extra remuneration.
- (f) No shareholding qualification for Directors is required. Directors are not required to retire upon the attainment of a particular age.
- (g) Each director may attend and speak at any general meeting of the Company.
- (h) The office of a Director may be vacated if:
  - (i) he resigns by notice in writing;
  - (ii) becomes bankrupt or receives an order against him;
  - (iii) he becomes of unsound mind;
  - (iv) he is absent from meetings of the Directors for 6 months;
  - (v) he is removed or prohibited from being a director under statute; or
  - (vi) he is requested in writing by all the other Directors to resign his office.

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- (i) A Director may hold any other office or place of profit with the Company (except auditor) in conjunction with his office of Director.
  - (j) He may act by himself or his firm in a professional capacity for the Company and be entitled to remuneration. He may also become a director or officer of a company in which the Company is interested in or promoted by.
  - (k) A Director cannot count in the quorum on a resolution of the Board concerning his own appointment.
  - (l) A Director will not be disqualified by his office from contracting with the Company either with regard to his tenure of any office or place of profit or as vendor or purchaser or in any other manner.
  - (m) A Director who is interested in a contract or arrangement with the Company must declare the nature of his interest at the meeting of the Board at which the question of entering into the contract or arrangement is first taken into consideration.
  - (n) A Director must not vote on or count in the quorum in respect of any resolution of the Board concerning a contract in which he has a material interest otherwise than by virtue of his interests in securities. This does not apply to the following:
    - (i) a contract for giving the Director security or a guarantee in respect of money lent by him for the benefit of the Company or a debt or obligation of the Company for which he has assumed responsibility under a guarantee or security;
    - (ii) where the Company is offering securities in which offer the Director may be entitled to participate as holder of securities;
    - (iii) relating to another company in which he and any connected person do not to his knowledge hold an interest in shares representing one per cent or more of any class of equity share capital or voting rights;
    - (iv) pension, superannuation or similar scheme or retirement, death or disability benefits scheme or employees share scheme which does not award him any privilege or benefit not awarded to the employees to whom the scheme relates; or
    - (v) concerning insurance which the Company proposes to maintain.
  - (o) The business of the Company shall be managed by the Directors, who may exercise all such powers of the Company save where they are required to be exercised in general meeting.
  - (p) The Directors may arrange that any branch or other business is carried on by a subsidiary of the Company. They may make such arrangements as they think advisable for the taking of profits or bearing of losses of the branch or subsidiary.
  - (q) The Directors may by power of attorney appoint any person to be the attorney of the Company.
  - (r) The Directors may procure the establishment and maintenance of any pension or superannuation fund, scheme or arrangement or life assurance scheme.
  - (s) The Directors may establish and maintain any scheme approved by an ordinary resolution for the allotment of or the grant of options to subscribe for shares of the Company to persons in the employment of the Company.
  - (t) All cheques, promissory notes, drafts, bills of exchange and other negotiable or transferable instruments, and all receipts for monies paid to the Company, shall be signed, drawn, accepted, endorsed or otherwise executed in such manner as the Directors determine.

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- (u) The Directors may appoint one or more of their number to an executive office. Such post shall receive such remuneration as the Directors determine.
  - (v) At every annual general meeting any Directors who have been appointed by the Directors since the previous annual general meeting and one-third of the other Directors shall retire from office. A Director retiring at a meeting shall retain office until the close of the meeting. The Directors to retire shall be those who have been longest in office and a retiring Director shall be eligible for re-election.
  - (w) The Company may, by ordinary resolution of which special notice has been given in accordance with section 379 of the Act (as replaced by s312 Companies Act 2006), remove any Director before the expiration of his period of office and may by an ordinary resolution appoint another person in his place.
  - (x) Questions arising at any meeting shall be determined by a majority of votes and in the case of an equality of votes the chairman shall have a second or casting vote.
  - (y) The quorum necessary for the transaction of the business of the Directors may be fixed by the Directors and unless fixed at any other number shall be two, save that where all the Directors are conflicted other than one, where upon the quorum is one.

#### 4.2.8 Borrowing powers

- (a) The Directors may exercise all the powers of the Company to borrow money and to mortgage or charge all or any part of the undertaking, property and assets (both present and future), including its uncalled capital and, subject to the Statutes, to issue debentures and other securities, whether outright or as collateral security, for any debt, liability or obligation of the Company or of any third party.
- (b) The Board must restrict the borrowings of the Company and exercise all voting and other rights or powers of control exercisable by the Company in relation to its subsidiaries so as to secure that the aggregate principal amount outstanding of all borrowings by the Group does not, without the previous sanction of an ordinary resolution, exceed the greater of £100,000,000 or three times the aggregate of the amount paid up or credited as paid up on the issued share capital of the Company and the amount standing to the credit of the reserves as shown by the then latest audited balance sheet.

#### 4.2.9 General Meetings of the Company

- (a) A general meeting shall be held in each year at such time (within a period of not more than 15 months after the holding of the last preceding general meeting) and place as may be determined by the Directors. The Directors may convene an extraordinary general meeting whenever they think fit. On the requisition of members in accordance with Statute, the Directors shall convene an extraordinary general meeting. Whenever the Directors convene an extraordinary general meeting on the requisition of members, they shall convene it for a date not more than 6 weeks after the date when the requisition is deposited at the registered office of the Company (unless the requisitionists consent in writing to a later date being fixed). If there are not within the United Kingdom sufficient Directors capable of acting to form a quorum, any Director or any two members of the Company may convene an extraordinary general meeting in the same manner as nearly as possible as that in which meetings may be convened by the Directors.
- (b) In the case of the annual general meeting or of a meeting convened to pass a special resolution at least 21 clear days' notice and in other cases at least 14 days' notice must be given. Save as otherwise provided in the Articles all holders of Ordinary Shares shall be entitled to receive a notice.

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- (c) The notice shall specify the place, the day and the hour of meeting (and in the case of an annual general meeting shall specify the meeting as such) and state with reasonable prominence that a member entitled to attend and vote is entitled to appoint a proxy, who need not also be a member, to attend and vote instead of him. In the case of special business, the notice must specify the general nature of the business (and, in the case of a meeting convened for passing a special or extraordinary resolution, the intention to propose the resolution as special or extraordinary resolution as the case may be). The notice shall be given to the auditors of the Company and the Directors and to such members as are, under the Articles, entitled to receive notices from the Company. With the consent in writing of all, or such less number as is required by Statute, of the members entitled to attend and vote, a meeting may be convened by a shorter notice and in such manner as those members think fit.

#### 4.2.10 Untraced shareholders

The Company may sell (in such manner and for such price as the Directors think fit) the shares of a member or the shares to which a person is entitled by virtue of transmission on death or bankruptcy if:

- (a) during the period of 12 years prior to the date of the publication of the advertisements referred to in paragraph (b) below (or, if published on different dates, the first date), being a period during which at least three dividends have been payable, all warrants and cheques in respect of the shares in question sent in the manner authorised by these Articles have remained uncashed; and
- (b) the Company on expiry of the period of 12 years has given notice, by advertisement in both a national newspaper and a newspaper circulating in the area in which the last known address of the member or the address at which service of notices may be effected in the manner authorised by these Articles is located, of its intention to sell the shares; and
- (c) during the period of 12 years and the period of 3 months following the publication of the advertisements, or following the later publication if the two advertisements are published on different dates, the Company has received no indication either of the whereabouts or of the existence of the member or person; and
- (d) notice has been given to the Nominated Adviser (where the Company's shares have been admitted to trading on AIM) or (as the case may be) the UK Listing Authority (where the Company's shares are admitted to the Official List) of its intention to make the sale.

## 5. DIRECTORS' AND OTHER INTERESTS

5.1 Paragraphs 5.1.1 and 5.1.2 below set out the interests of the Directors and Proposed Directors, their immediate families and persons connected with them (within the meaning of section 252 of the Companies Act 2006), in the share capital of the Company (which have been notified to the Company the Disclosure and Transparency Rules as published by the FSA), as they will appear in the register of directors' interests maintained under Section 809 of the Companies Act 2006 as at the date of this document and as they are expected to be on Admission (assuming no options are exercised between the date of this document and Admission), which are as follows:

### 5.1.1 Issued Ordinary Shares beneficially held:

Directors, Proposed Directors and connected persons	As at the date of this document		On Admission	
	Number of Ordinary Shares	Per cent. of Issued Share Capital	Number of Ordinary Shares	Per cent. of Issued Share Capital
Rajiv Gupta	8,888,890	8.49%	8,888,890	2.88
Graham Mascall	nil	nil	nil	nil
Richard James	nil	nil	nil	nil
Clive Newall	nil	nil	nil	nil
Sean Gilbertson	nil	nil	nil	nil
Finn Behnken	nil	nil	nil	nil

### 5.1.2 Share options:

- (a) As at the date of this document, the following Directors and Proposed Directors have been granted the following options to acquire Ordinary Shares under the terms of the Unapproved Scheme:

Ordinary Shares under option as at the date of this document				
Name	Number	Grant Date	Expiry Date	Exercise Price
Rajiv Gupta	1,600,000	28 Oct 2004	27 Oct 2014	US\$0.50
Graham Mascall	750,000	22 April 2005	21 April 2015	(350,000) £0.45 (400,000) US\$0.50
Richard James	500,000	22 April 2005	21 April 2015	(300,000) US\$0.50 (200,000) £0.45
Clive Newall	500,000	22 April 2005	21 April 2015	£0.45
Sean Gilbertson	nil	nil	nil	nil
Finn Behnken	nil	nil	nil	nil

- (b) The Directors and Proposed Directors will also be granted the following options to acquire Ordinary Shares under the terms of the Unapproved Scheme on Admission exercisable at the Issue Price:

Ordinary Shares under option as at Admission		
	Option granted on Admission	Total options following Admission*
Rajiv Gupta	nil	1,600,000
Graham Mascall	250,000	1,000,000
Richard James	500,000	1,000,000
Clive Newall	200,000	700,000
Sean Gilbertson	1,000,000	1,000,000
Finn Behnken	300,000	300,000

\* assuming no options are granted between the date of this document and Admission

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- 5.2 Save as disclosed in paragraph 5.1 above, none of the Directors or Proposed Directors, their immediate families and persons connected with them, will have immediately following Admission any interest in the share capital of the Group. Further details of the Unapproved Scheme are given in paragraph 7 below.
- 5.3 Save as disclosed in this document:
- 5.3.1 no Director or Proposed Director has or has had any interest in any transaction which is or was of an unusual nature, contains or contained unusual terms or is or was effected during the current or immediately preceding financial year, or which was effected during any earlier financial year and remains in any respect outstanding or unperformed; and
- 5.3.2 no loans or guarantees have been granted or provided to or for the benefit of the Directors or Proposed Directors by any member of the Group.
- 5.4 None of the Directors or any person connected with them (within the meaning of section 252 of the Companies Act 2006) is interested in any related financial product referenced to the Ordinary Shares (being a financial product whose value is, in whole or in part, determined directly or indirectly by reference to the price of the Ordinary Shares including a contract for difference or a fixed odds bet).

## **6. DIRECTORS' AND PROPOSED DIRECTORS' SERVICE AGREEMENTS AND REMUNERATION**

### 6.1 Directors

#### 6.1.1 Rajiv Ramlal Gupta

Rajiv Ramlal Gupta entered into a service agreement with the Company dated 1 September 2005 and has been appointed Executive Vice Chairman. The scope of his employment is to perform such duties and exercise such powers consistent with his position or assigned to him by the board of directors. The agreement is terminable by either party on 6 months' notice. He is entitled to a basic salary of £25,000 per annum payable monthly and a bonus at the discretion of the board of directors. He receives 5 days paid holiday a year, exclusive of bank holidays, and the Company will continue to pay his salary and benefits during an absence of 6 weeks in any 6 month period on medical grounds. The agreement contains post termination restrictive covenants which place limitations and restrictions on the solicitation of customers and employees, dealings with customers and interfering with suppliers of the Group and from acting in competition with the business of the Group. The agreement also includes provision for the assignment to the Company of intellectual property discovered by Rajiv Gupta during his term in office and provision for the non-disclosure of confidential information.

In addition Rajiv Ramlal Gupta has entered into a service agreement with Almizan Development Limited ("Almizan") dated 1 June 2007 and has been appointed Executive Vice Chairman. He is entitled to a basic salary of £75,000 and receives 15 days paid holiday a year. The terms of the service contract with Almizan are similar to those in the service contract with the Company.

#### 6.1.2 Richard Paul James

Richard Paul James entered into a service agreement with the Company dated 1 February 2007 (as amended by a side letter dated 13 May 2008) and has been appointed Chief Financial Officer. The scope of his employment is to perform such duties and exercise such powers consistent with his position or assigned to him by the Audit Committee. The agreement is terminable by either party on 6 months' notice. He is entitled to a basic salary of £150,000 per annum payable monthly and receives mobile phone, broadband, health insurance and Chartered Accountant annual subscriptions paid by the Company. He receives 20 days paid holiday a year, exclusive of bank holidays, and the Company will continue to pay his salary and benefits during an absence of 6 weeks in any 6 month period on medical grounds. The agreement contains post termination restrictive covenants which place limitations and restrictions on the solicitation of customers and employees, dealings with customers and interfering

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with suppliers of the Group and from acting in competition with the business of the Group. The agreement also includes provision for the assignment to the Company of intellectual property discovered by Richard James during his term in office and provision for the non-disclosure of confidential information.

#### 6.1.3 Graham Edward Mascall

Graham Edward Mascall was appointed as non-executive Chairman with effect from 11 April 2005. He is currently entitled to a fee of £36,000 per annum gross payable quarterly in arrears (to be increased to £45,000 on Admission). He is required to provide the Company with 12 days service per annum. He is required to attend; 12 monthly Company board meetings per year, the AGM each year and board committee meetings (which other than audit committee meetings, are both usually planned to coincide with the date of a board meeting) and occasional additional meetings for specific purposes. He has also been granted an option over 350,000 ordinary shares in the Company exercisable at £0.45 and 400,000 ordinary shares in the Company exercisable at an exercise price equal to US\$0.50 subject to the terms and conditions of the Unapproved Scheme. The Company will be responsible for any out of pocket expenses incurred by him. The letter of appointment contains a restrictive covenant that he will not hold any directorships in the same business sector as the Company except with prior approval of the board.

#### 6.1.4 Geoffrey Clive Newall

Geoffrey Clive Newall was appointed as non-executive director with effect from 19 April 2005. He is entitled to a fee of £12,000 per annum gross payable quarterly in arrears (to be increased to £18,000 on Admission). He is required to provide the Company with 12 days service per annum. He is required to attend; 12 monthly Company board meetings per year, the AGM each year and board committee meetings (which other than audit committee meetings, are both usually planned to coincide with the date of a board meeting) and occasional additional meetings for specific purposes. He has also been granted an option over 500,000 ordinary shares in the Company exercisable at £0.45 subject to the terms and conditions of the Unapproved Scheme. The Company will be responsible for any out of pocket expenses incurred by him. The letter of appointment contains a restrictive covenant that he will not hold any directorships in the same business sector as the Company except with prior approval of the board.

### 6.2 Proposed Directors

#### 6.2.1 Sean Gilbertson

Sean Gilbertson entered into a service agreement with the Company dated 13 May 2008 and will be appointed Interim Chief Executive Officer of the Company, with effect from and conditional on Admission. The scope of his employment is to perform such duties and exercise such powers consistent with his position or assigned to him by the board of directors. He has agreed to devote 66 per cent. of his professional time in carrying out these duties for the Company. The agreement is terminable by the Company on 3 months written notice or by Sean Gilbertson on 6 months notice. He is entitled to a basic salary of £150,000 per annum payable monthly. He is entitled to 13 days paid holiday. However, the Company will continue to pay his salary and benefits during an absence of 6 weeks in any 6 month period on medical grounds. The agreement contains post termination restrictive covenants which place limitations and restrictions on the solicitation of customers and employees, dealings with customers and interfering with suppliers of the Group and from acting in competition with the business of the Group. The agreement also includes provision for the assignment to the Company of intellectual property discovered by Sean Gilbertson during his term in office and provision for the non-disclosure of confidential information.

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6.2.2 Finn Behnken

Finn Behnken has pursuant to a letter of appointment dated 13 May 2008, agreed to act as non-executive director conditional upon and with effect from Admission. He is entitled to a fee of £16,000 per annum gross payable quarterly in arrears. His letter of appointment also grants him an option over 300,000 ordinary shares in the Company exercisable at the Issue Price subject to the terms and conditions of the Unapproved Scheme and conditional on Admission. The Company will be responsible for any out of pocket expenses incurred by him. The letter of appointment contains a restrictive covenant that he will not hold any directorships in the same business sector as the Company except with prior approval of the board.

6.3 Peter Kitchen, Sanjay Khandelwal and Valentine Chitalu have each resigned as a director of the Company as at 12 May 2008.

6.4 Save as referred to above, there are no service agreements or letters of appointment in existence between any of the Directors or the Proposed Directors and the Company which cannot be determined by the Company without payment of compensation (other than statutory compensation) within one year and none of the service contracts referred to in this paragraph has been amended in the last six months.

6.5 The aggregate remuneration including salaries, fees, pension contributions, bonus payments and benefits in kind of the directors by the Company during the year ended 30 June 2007 amounted to US\$701,497. It is estimated that the aggregate amount of the remuneration to be paid and benefits in kind to be granted to the Directors and Proposed Directors for the current financial year under the arrangements in force at the date of this document will be US\$702,167.

6.6 Set out below are the details of the directorships held over the past 5 years by each of the Directors and Proposed Directors (other than in respect of the Company and its subsidiaries or, in the case of the Proposed Directors, the Target Group):

<b>Name</b>	<b>Other current directorships</b>	<b>Former directorships (in last 5 years)</b>
Rajiv Gupta	Gupta Gemhouse Pvt Ltd  Twentieth Century Enterprise (Partner) Diacrystal India Pvt. Ltd. Metro Entertainment (Bengal) Pvt Ltd Metro Entertainment (Bombay) Pvt Ltd Golden Films & Finance Pvt Ltd TAG Enterprise (Partner) Broadway Realty Pvt. Ltd. Kristal Exports (Partner) Gemhouse Worldtrade (Partner) Gemtech Lapidary Pvt. Ltd	Crystal Agro Pvt. Ltd. Top Investments & Finance Pvt
Richard James	Fordport Flat Management Limited	Gulf International Minerals Limited Gulf International Minerals (Jersey) Limited  Tower Marketing Limited Globetrotter Promotions Limited Greenback Procurement Limited Atticus Appreciation Limited Haka Horrorshow Limited Radipole Associates Limited Springbok Consulting Limited Arc Professional Consultants Limited

Name	Other current directorships	Former directorships (in last 5 years)
Graham Mascall	Caledon Resources Plc Lubel Coal Company (UK) Ltd. Rio Alto Minerals Ltd. Linden Mining Ltd. Katanga Mining Limited Templar Minerals Limited Uramin Inc	Trevor Chappell Underarm Limited  BHP Billiton International Development Limited Iberian Base Metals Public Limited Company Berkeley Mining Plc Eurozinc Mining Corp. International Molybdenum Plc Uramin UK Limited, Anglo Asian Mining Plc
Geoffrey Newall	Mill House Mining Limited	First Quantum Minerals Ltd Anvil Mining Ltd Mopani Copper Mines Ltd Kensington Resources Ltd Coverinvest Ltd. Ocean Finance Ltd. Adastra Minerals Inc
Sean Gilbertson	Faberge Conduit Limited Rox Conduit Limited Rox Limited Sandfontein & Houms Rivier Properties Pty Limited Pallinghurst (Cayman) Founder Limited Pallinghurst Consolidated (Cayman) Limited Pallinghurst (Cayman) GP Limited Faberge Limited (formerly Project Egg Limited) Arianna Investments Limited Pallinghurst Resources LLP VegaGraphics Pty Limited GigaJoule Limited	Venturellectual Ltd Global Coal Ltd
Finn Behnken		Mine Waste Solutions (Pty) Limited Chemwes Limited

6.7 No Director who will be continuing with the Enlarged Group or Proposed Director:

- 6.7.1 has been a partner in any partnerships in the past 5 years save for those partnerships in which Rajiv Gupta is a partner as referred to in paragraph 6.6 above;
- 6.7.2 has any unspent convictions in relation to indictable offences;
- 6.7.3 has had no bankruptcy order made against him or entered any individual voluntary arrangement with any of his creditors;
- 6.7.4 has, is or has been involved in:
  - 6.7.4.1 any receiverships, compulsory liquidations, creditors' voluntary liquidations, administrations, company voluntary arrangements or any composition or arrangement with the creditors generally or any class of the creditors of any company where such Director was a director at the time of or within the 12 months preceding such events;
  - 6.7.4.2 any compulsory liquidations, administrations, or partnership voluntary arrangements of a partnership where such Director was a partner at the time of or within 12 months preceding such events;

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- 6.7.4.3 receiverships of any asset of such Director or of a partnership of which the Director was a partner at the time of or within the 12 months preceding such events; or
- 6.7.4.4 any public criticism of such Director by statutory or regulatory authorities (including recognised professional bodies) or been disqualified by a court from acting as a director of a company or from acting in the management or conduct of the affairs of any company.
- 6.8 The full names of the Directors and Proposed Directors of the Company, none of whom has a previous name, are set out on page 2 of this document.

## **7. SHARE OPTION SCHEME**

### **7.1 Introduction**

The Group operates one share option scheme, the Unapproved Scheme, under which directors, officers and employees of the Company or any subsidiary (a Participating Company) can be offered options to acquire Ordinary Shares. The Unapproved Scheme is administered by the Remuneration Committee.

The Company has granted options to employees, ex-employees and consultants to the Group to acquire an aggregate of 8,260,000 Ordinary Shares under the terms of the Unapproved Scheme which are still subsisting (including those granted to the Directors totalling 4,625,000) and of which 7,723,335, are fully exercisable and the remaining 536,665 are subject to annual vesting as to one third of the options granted on the first, second and third anniversaries of the date of grant. All these additional options have a term of ten years (save for options over 1,275,000 Ordinary Shares (granted to previous directors of the Company) which shall expire on the date falling 6 months after Admission or on the third anniversary of Admission (subject to approval by the Shareholders at the EGM) and 2,885,000 options have an exercise price of US\$0.15, 3,020,000 options have an exercise price of US\$0.50, 50,000 options have an exercise price of US\$1.50 and 2,305,000 options have an exercise price of £0.45. In addition, the Company has approved the grant on Admission of options over 4,430,000 Ordinary Shares under the Unapproved Scheme exercisable at the Issue Price and subject to annual vesting as to one third of the options granted as the first, second and third anniversaries of the date of the grant. On Admission, options over 12,690,000 Ordinary Shares will have been granted and remain outstanding which will represent 4.10 per cent. of the Enlarged Share Capital (assuming no options are exercised between the date of this document and Admission).

### **7.2 The Unapproved Scheme**

The principal terms of the Unapproved Scheme are summarised as follows:

#### **7.2.1 Eligibility**

Participation is restricted to executive directors who work at least 25 hours per week for a Participating Company and employees (other than directors save where such director is a member of the Remuneration Committee) of a Participating Company.

A 'Participating Company' is a company that forms part of the Group plus certain joint venture companies nominated by the Board to be a Participating Company.

#### **7.2.2 Exercise Price**

The share price is specified at the time the options are granted. If the shares are listed on a Recognised Investment Exchange then the exercise price will be not less than the mid-market closing price for that class of share on the date immediately preceding grant. Otherwise, the exercise price may be at any level provided it is not less than the nominal value of the share. It is anticipated that shares will be granted at market value on the date of grant.

#### **7.2.3 Total number of shares**

Due to commitments (arising from acquisitions of other companies) to grant share options, the total number of ordinary shares over which options are granted in any ten year period (whether exercised or not), when added to all such options granted under all other share option schemes of the Company and any options granted to members of the Remuneration Committee as referred to in paragraph 7.2.11 below, shall not exceed the greater of:

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- (a) 12,000,000 shares; and
- (b) 10 per cent. of the fully diluted ordinary share capital of the Company in issue at that time.
- 7.2.4 Class of shares
- The shares granted under the Unapproved Scheme will be fully paid up ordinary shares in the Company.
- 7.2.5 Time of exercise
- On the first, second and third anniversaries of the date of grant one third of the shares under the option will become exercisable and shall generally remain exercisable until the tenth anniversary of the grant date. Generally when someone ceases to be an employee or director they lose the right to exercise their share options. In some circumstances, the Board may extend the right to exercise any option by six months from the date of departure but only to the extent the option was exercisable at the date of cessation of employment.
- Where an employee or director is to be transferred to work in another country and the Board consider that as a result of that transfer that person will suffer a tax or other disadvantage upon exercising his options he may, in certain circumstances, be entitled to exercise his options at any time during the period beginning three months before and ending three months after the date of the transfer.
- In relation to options granted to replace options under the Unapproved Scheme the Board has the discretion to adjust the time of exercise to reflect the exercise period in the original option under the Unapproved Scheme.
- 7.2.6 Performance Conditions
- The Unapproved Scheme rules permit the Company's board of directors to impose 'Performance Conditions' which must be satisfied before options can be exercised. Performance Conditions, if any, must be objective and set out in full in the option certificate or a schedule referred to in the option certificate. They generally cannot be amended following grant of the option.
- It is not currently intended that Performance Conditions be imposed on options granted initially. Such options will be granted to provide incentives to key personnel.
- 7.2.7 Tax
- The eligible participants are located in the UK and in other countries and different tax rules will apply to option holders depending on where they were employed at the date of grant and where they are when the option is exercised.
- A condition of granting any option is that the option holder indemnifies the Company for any tax liability relating to the exercise of the option that is incurred by the Company or any Participating Company. There is a mechanism allowing the Company at the time of exercise to sell sufficient shares to satisfy the tax liability, unless the option holder pays the tax liability at the time of exercise.
- 7.2.8 Change in share structure
- If the share structure of the Company changes, the number of shares over which the employee has an option will be adjusted to reflect any relevant changes.
- 7.2.9 Early exercise of share option in event of takeover
- Where control of the Company is obtained as a result of a general offer, an option holder may exercise his options early to participate in the general offer and following the general offer being accepted the options will lapse.
- 7.2.10 Amendment of the Unapproved Scheme rules
- The Board has the power to amend or waive any of the Unapproved Scheme rules provided that such alteration is made with the prior approval of the shareholders in general meeting or where such amendment does not affect the basic principles of the Unapproved Scheme.

## 7.2.11 Grant of options to Remuneration Committee members

Where it is necessary or desirable to grant options to members of the Remuneration Committee in order to recruit or retain them and such person is not an employee, that person will not be eligible for a grant of options under the Scheme. In such cases, options may be granted by way of a separate agreement that incorporates all of the rules of the Scheme.

## 8. SUBSTANTIAL SHAREHOLDERS

8.1 Save as disclosed in paragraph 5.1 above and 8.2 below and save for the following shareholders, as at 12 May 2008 (being the latest practicable date prior to the publication of this document) and disregarding any shares to be acquired in the Placing, none of the Directors or Proposed Directors are aware of any interest which represents 3 per cent. or more of the issued share capital of the Company as at the date of this document or on Admission or of any persons who, directly or indirectly, jointly or severally, exercise or could exercise control over the Company:

Shareholder	As at the date of this document		On Admission	
	Number of Ordinary Shares	Per cent. of Issued Share Capital	Number of Ordinary Shares	Per cent. of Issued Share Capital
Deutsche Bank AG	13,472,567	12.88%	16,805,900	5.44
Matterhorn Investment Management LLP <sup>2</sup>	13,371,892	12.79%	15,038,559	4.86
CA Fiduciary Services Limited <sup>1</sup>	8,888,890	8.49%	8,888,890	2.88
Capital Research and Management Company <sup>3</sup>				
State Street Nominees Limited	6,816,000	6.52%	10,149,333	3.28
Credit Suisse Securities (Europe) Limited	5,378,000	5.14%	5,378,000	1.74
FMR Corp and Fidelity International Limited	5,086,300	4.86%	5,086,300	1.65
PICTET & CIE <sup>4</sup>	3,375,000	3.23%	3,375,000	1.09

1 CA Fiduciary Services Limited hold the legal title to these shares as trustee of The Tavistock Trust. Rajiv Gupta is the beneficial owner of the shares.

2 Goldman Sachs Securities (Nominees) Limited hold the legal title to these shares on behalf of the beneficial owner, Matterhorn Investment Management LLP.

3 State Street Nominees Limited hold the legal title to these shares on behalf of the beneficial owner, Capital Research and Management Company.

4 Euroclear Nominees hold the legal title to these shares on behalf of the beneficial owner, PICTET & CIE.

8.2 On Admission, Rox will be the registered holder of approximately 56.35 per cent. of the Company's Ordinary Shares. A relationship agreement is in place between the Company and Rox to ensure Rox's control is not abused (see paragraph 10.1.2 of this Part IX for further details). The Company has been notified that pursuant to an agreement between Rox and a vehicle of which Rajiv Gupta is a beneficiary, Rajiv Gupta's entire shareholding in the Company will be transferred to Rox within three months of Admission which will mean Rox will hold 183,091,453 Ordinary Shares representing approximately 59.22 per cent. of the Enlarged Share Capital following such transfer (assuming no options are exercised between the date of this document and the date of such transfer).

8.3 Save as far as disclosed in respect of the Acquisition, as far as the Company is aware as at 12 May 2008 (being the last practicable date prior to the publication of this document) there are no arrangements the operation of which may at a later date result in a change of control of the Company.

8.4 Neither the Company nor any Director has or has had any interest, right to subscribe or short position, direct or indirect in any member of the Target Group.

8.5 All holders of the Ordinary Shares have the same voting rights as each other.

## 9. RELATED PARTY TRANSACTIONS

9.1 The following transactions are all the related party transactions (which for these purposes are those set out in the Standard adopted according to Regulations (EC) (No 1606/2002)) that the Company has entered into since 30 June 2004:

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- 9.1.1 The acquisition of Gemhouse Inc. in 2004 by the Company has resulted in possible non-resident withholding tax liabilities payable by the Group on behalf of the non-Canadian shareholders at the time of the acquisition. A provision of US\$1,180,000 has been made for these liabilities although the exact amount has yet to be determined. The Group intends to pay these liabilities on behalf of the shareholders once the exact amount is finalised. The Group then intends to recover the amounts from the relevant shareholders. However a provision has been made in the financial statements against the full amount of these receivables.
- 9.1.2 On 26 September 2005, the Company acquired 100 per cent. of the share capital in Almizan Limited (“Almizan”). Almizan was acquired indirectly from Rajiv Gupta, a director of the group.
- 9.1.3 On 13 November 2006, the Company acquired 100 per cent. of the share capital in Sarina Global Limited (“Sarina”). Sarina was acquired indirectly from Rajiv Gupta, a director of the group.
- 9.2 Save as set out in Section B of Part VIII of this document, the Target Group has not entered into any related party transactions (which for these purposes are those set out in the Standard adopted according to Regulations (EC) (No 1606/2002)) since 31 March 2004.

## 10. MATERIAL CONTRACTS

- 10.1 The following contracts, not being contracts entered into in the ordinary course of the Company or the Group, have been entered into in the two years immediately preceding the date of this document or are subsisting agreements which are included within, or which relate to, the assets and liabilities of the Company or the Group (notwithstanding whether they are within the ordinary course of business or were entered into within the previous two years), have been entered into by the Company or Group companies and are or may be material:
- 10.1.1 Material contracts (excluding those relating to the Proposals)
- (a) an indemnity letter dated 22 September 2005 and an escrow deed dated 26 September 2005 in relation to an indemnity letter addressed to the Company from, *inter alia*, Rajiv Gupta in relation to the transfer of prospecting licences at Miputu, Mitondo North, NR South, Mitondo South, Nkabashila East and Nkabashila West which are now owned by the Group.
  - (b) an escrow agreement dated 2 November 2005 between Rajiv Gupta and the Company pursuant to which Rajiv Gupta paid to the Company US\$478,000. This sum is being held by the Company in a separate account, pending agreement with the Canadian tax authority of the amount of non resident withholding tax liability payable by the Group on behalf of shares in which Rajiv Gupta had an interest (“Withholding Tax Liability”). Following determination of the Withholding Tax Liability, the Company will be entitled to that part of the escrow account as is equal to the Withholding Tax Liability and any excess will be paid to Rajiv Gupta. The Group would seek to recover any shortfall from Rajiv Gupta.
  - (c) Jagoda Option Agreement — an agreement dated 23 November 2006 between Jagoda Gems Limited and Gemfields Holdings Zambia Limited as amended by an addendum to the agreement dated 22 August 2007 pursuant to which Gemfields Holdings Zambia Limited has been granted an option to acquire Gemstone Mining Licence No. 205. The Group paid US\$50,000 for an option to acquire the licence expiring on 30 September 2005 and then paid another US\$50,000 to extend the period of the option to 31 March 2008. The consideration for the acquisition of the licence is a sum of US\$1,950,000. This option was not exercised and has lapsed.
  - (d) Placing Agreement 2006 — the Company entered into a placing agreement dated 18 December 2006 between (1) the Company, and (2) Canaccord. Under the placing agreement, Canaccord agreed, as agent for the Company to use its reasonable endeavours to procure subscribers for 8,000,000 new Ordinary Shares at a price of 40 pence per Ordinary Share. Under the placing

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agreement the Company agreed, on the terms and subject to the conditions of the placing agreement, to pay to Canaccord a commission of 5 per cent. of the aggregate value of the new Ordinary Shares placed by Canaccord and the costs and expenses of the placing together with applicable VAT. Pursuant to the placing agreement, the Company raised £3,200,000 (before expenses) to provide funds for the development of the Company's assets at the Kariba Amethyst mine and the Jagoda Pink Tourmaline mine.

- (e) Gemfields Holdings Zambia Limited — an agreement dated 1st July 2007 between Gemfields Holding Zambia Limited and Gemfields Mining Limited (a Group company incorporated within Zambia) for the sale of the business and assets of Gemfields Holdings Zambia Limited to Gemfields Mining Limited in consideration of the payment of US\$20,275,045. The sale is conditional upon, *inter alia*, the consent of the director of the Ministry of Mines in Zambia to the transfer of the mining licences and exploration licences currently held by Gemfields Holdings Zambia Limited. This consent has not been received as at the date of this document.

#### 10.1.2 Material contracts relating to the Acquisition

- (a) Acquisition Agreement — dated 17 December 2007 between Rox and the Company pursuant to which the Company will purchase the entire issued share capital of Greentop and Krinera. The consideration for the sale will be satisfied by the allotment and issue of 137,910,340 New Ordinary Shares to Rox.

The acquisition of Greentop and Krinera is subject to the following key conditions: (i) Gemfields having entered into agreements to raise sufficient sums so as to satisfy its minimum working capital requirement and such agreements being unconditional in all respects other than as to Admission; (ii) the passing of the Resolutions at the EGM; and (iii) Admission occurring by 8.00 a.m. (BST) on 30 June 2008.

Under the Acquisition Agreement, Gemfields and Rox have respectively agreed (in the period up to Completion) to procure that the businesses of the Group and the Target Group, respectively, are run as going concerns in the same way carried on prior to 17 December 2007 and that certain material actions in relation to the businesses of the Group and the Target Group are not undertaken without the other's consent.

Under the terms of the Acquisition Agreement, Rox has provided certain warranties and an indemnity to Gemfields and Gemfields has given certain warranties to Rox. These warranties are usual for a transaction of this type. The warranties were given at signing of the Acquisition Agreement and will be repeated shortly before Admission by reference to the facts then prevailing. The warranties and indemnity are subject to matters disclosed in disclosure letters exchanged by Gemfields and Rox.

The warranties and the indemnity are subject to certain limitations including the aggregate total liability of Rox or Gemfields (as relevant) in respect of a claim being limited to: (i) US\$5,000,000 if a claim is made on or before 19 February 2008; (ii) US\$4,000,000 if a claim is made between 20 February 2008 and 19 April 2008; and (iii) US\$2,000,000 if a claim is made between 19 April 2008 and 16 October 2008, in each case in addition to: (x) the lower of (a) such sum as is equal to the proceeds of sale of the Consideration Shares and (b) US\$60 million; or (y) if Rox has exercised its right pursuant to the Lock-In and Escrow Agreement (referred to below) to dispose of some or all of the Consideration Shares and deposit a sum of US\$60 million with Canaccord, that deposited amount.

Neither Rox nor Gemfields will be liable for any claim under a warranty or indemnity given by it under the Acquisition Agreement unless it receives from the other party written notice of the claim prior to 30 June 2009. There

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is a per claim de minimis threshold of US\$500,000 and an aggregate de minimis threshold of US\$1,000,000 in relation to claims under the warranties and indemnities given by each of (i) Gemfields; and (ii) Rox.

The Acquisition Agreement may be terminated in a number of circumstances including: (i) by Rox if the Directors withdraw their recommendation to vote in favour of the Resolutions or if Gemfields materially breaches the Acquisition Agreement or fundamentally breaches the warranties as originally given or on the basis that such warranties are repeated at Completion by reference to the facts and circumstances then prevailing; and (ii) by Gemfields if Rox materially breaches the Acquisition Agreement or fundamentally breaches the warranties as originally given or on the basis that such warranties are repeated at Completion by reference to the facts and circumstances then prevailing. The meaning of material and fundamental for the purposes of the termination provisions are set out in the Acquisition Agreement.

The Acquisition Agreement also includes a put and call option in relation to the acquisition of the entire issued share capital of Oriental Mining (which holds (subject to certain registration requirements more fully explained in paragraph 4 of Part I of this document) 15 licences for gemstone exploration in Madagascar) by Gemfields. In consideration for the sum of £1, Gemfields has the right to exercise the option to acquire Oriental Mining, and Rox has the right to oblige Gemfields to exercise such option, within three months of Completion. The Acquisition Agreement contains certain warranties given by Rox to Gemfields in relation to Oriental Mining and its licences. The Acquisition Agreement further contains a put and call option between Fabergé Limited and Gemfields to enter into a worldwide exclusive 15 year licence to use the Fabergé brand name in respect of coloured gemstones (excluding diamonds).

- (b) Relationship Agreement — to be entered into between the Company and Rox on completion of the Acquisition Agreement to regulate their relationship following Admission. Each party has undertaken to ensure that all transactions, agreements, relationships and arrangements (whether contractual or otherwise) entered into between the Company and Rox will only be made on a commercial arm's length basis and that the Company will at all times be able to carry on its business independently of Rox. The Relationship Agreement will remain in place so long as the Ordinary Shares are admitted to trading on AIM and Rox is the controlling shareholder of the Company (being able to exercise 30 per cent. or more of the votes being capable of being cast on a poll at a general meeting or able to control the appointment of directors who are able to exercise a majority of votes at board meetings). If conflicts or potential conflicts arise between the interests of Rox and the Company, Rox shall not vote at a meeting of the Company on any matter which it is interested or which is the subject of any such conflict or potential conflict of interests. Rox will also procure that any director of the Company appointed by the Company on behalf of Rox will not vote or participate in any discussion at any meeting of the board of directors of the Company in relation to any actual or proposed transaction, agreement or matter which is the subject of any conflict or potential conflict of interest between the interests of Rox and the Company.
- (c) Fabergé Licence Agreement — in the event that the put and call option set out in the Acquisition Agreement is exercised by either Rox or the Company, the Company will enter into the Fabergé Licence Agreement with Fabergé Limited. Pursuant to the Fabergé Licence Agreement, Fabergé grants the Company a worldwide exclusive 15 year licence to use the Fabergé brand name in respect of coloured gemstones (excluding diamonds) in return for the Company paying royalties to Fabergé Limited based on net sales volumes of its sales of gemstones (which have met certain specification standards in order to be affixed with the Fabergé mark) on a sliding scale from 6 per cent. to 2 per cent. of sales.

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- (d) Rox Escrow Agreement — upon Completion of the Acquisition Agreement the Company and Rox will enter into a lock-in and escrow agreement pursuant to which the Consideration Shares are to be held under an escrow mechanism to meet any successful claims against Rox under the Acquisition Agreement. The escrow mechanism will remain in place until 30 June 2009. In addition relevant shares may be retained in the escrow beyond 30 June 2009 if there has been a claim under the Acquisition Agreement which has been notified to Rox but has not been settled prior to 30 June 2009. Should Rox elect to sell any of the Consideration Shares, the escrow mechanism will also apply to the proceeds of the sale of the Consideration Shares up to \$60 million. If there is a claim under the Acquisition Agreement which is agreed between the Company and Rox or finally determined by a court and not appealed, the Company may instruct the escrow agent (Canaccord) to sell such number of Consideration Shares as is required to meet the claim (net of sale expenses) and to remit the proceeds to the Company. The Company and Rox have provided customary indemnities to Canaccord under the escrow agreement.
  - (e) Management Agreement — please see paragraph 10.2 below.
  - (f) Irrevocable undertakings — as detailed at paragraph 17 of Part I of this document, certain Directors and shareholders have given irrevocable undertakings to vote in favour of the Resolutions.
  - (g) Loan Agreement — an agreement dated 18 March 2008 between Rox and Kagem pursuant to which Rox has agreed to loan US\$15 million (unsecured) to Kagem, the entire of which is expected be drawn down by the end of April 2008. The purpose of the loan is in respect of interim funding for capital expenditure, working capital and general corporate purposes of Kagem. Repayment is due prior to the termination date being the earlier of 18 September 2008 or if there is a bankruptcy or winding up of Kagem. The interest on the loan is LIBOR plus 4 per cent. unless Kagem fails to make a repayment whereupon the interest rate is increased to LIBOR plus 18 per cent.. Interest accrues monthly and is payable as a lump sum at the repayment date. Kagem has agreed not to incur any further financial indebtedness without the consent of Rox, not to dispose of any material asset nor grant any loans until repayment of the loan. The loan is intended to rank equally with all of its other present and future unsecured payment obligations of Kagem. It is intended that the loan will be repaid using the proceeds of the Placing.

#### 10.1.3 Material contracts relating to the Placing and Admission

- (a) Nominated Adviser Agreement — pursuant to an agreement dated 13 May 2008 between Canaccord, the Company and the Directors, Canaccord was appointed to act as the Company's Nominated Adviser and Broker for a period of one year from the date of Admission and thereafter unless terminated by at least three months' prior written notice by Canaccord or the Company (the "Nominated Adviser Agreement"). Under the terms of the Nominated Adviser Agreement, the Company agreed to pay Canaccord for its services an annual fee of £60,000 (plus VAT).
- (b) Placing Agreement — the Company has entered into a Placing Agreement dated 13 May 2008 between (1) the Company, (2) the Directors, (3) the Proposed Directors (4) Canaccord and (5) JPMorgan Cazenove. Under the Placing Agreement, Canaccord and JPMorgan Cazenove (the "Managers") have conditionally agreed, as agent for the Company, on the terms and conditions of the Placing Agreement to use its reasonable endeavours to procure subscribers for the Placing Shares at the Issue Price. Under the Placing Agreement the Company has agreed on the terms and subject to the conditions of the Placing Agreement, to pay to the Managers a commission of 5 per cent. of the aggregate value of the Placing Shares placed at the Issue Price (other than approximately 33,333,333 Placing Shares placed with Rox on

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which the Company will pay the Managers a commission of US\$100,000), pay the Managers a corporate finance fee of £325,000 and the costs and expenses of the Placing together with any applicable VAT. In addition, under the terms of the Placing Agreement the Directors and Proposed Directors agreed with Canaccord, JPMorgan Cazenove and the Company not to dispose of any Ordinary Shares held by them for a period of 12 months from Admission except through Canaccord or JPMorgan Cazenove in such orderly manner as Canaccord or JPMorgan Cazenove respectively shall reasonably require with a view to the maintenance of an orderly market in the Ordinary Shares. The Placing Agreement contains warranties and an indemnity from the Company and the Directors and Proposed Directors to the Managers. The Placing is not being underwritten. The Managers are entitled to terminate its obligations under the Placing Agreement in certain specified circumstances prior to Admission.

- 10.1.4 Rox lock-in — pursuant to a lock-in agreement dated 13 May 2008, between the Company, Canaccord, JPMorgan Cazenove and Rox, Rox has agreed (save for certain standard exceptions) not to dispose of any interest in Ordinary Shares held by it (save for any Placing Shares issued to Rox in connection with the Placing) for a period of 12 months following Admission. For a further period of 12 months after the expiry of the above period, Rox has agreed not to dispose of any interests in any Ordinary Shares other than through Canaccord or JPMorgan Cazenove in such orderly manner as Canaccord or JPMorgan Cazenove respectively shall reasonably require with a view to the maintenance of an orderly market in the Ordinary Shares.
- 10.2 In addition to those agreements referred to at paragraph 10.1.2 above, the following contracts, not being contracts entered into in the ordinary course of the Target Group, have been entered into in the two years immediately preceding the date of this document or are subsisting agreements which are included within, or which relate to, the assets and liabilities of the Target Group (notwithstanding whether they are within the ordinary course of business or were entered into within the previous two years), have been entered into by the Target Group and are or may be material:
- 10.2.1 Nominee Agreement — dated 23 December 1992 between Hagura BVI and Hagura UK pursuant to which Hagura UK holds 9,000,000 shares in Kagem as nominee for Hagura BVI. As nominee, Hagura UK must follow the instructions of Hagura BVI and pay dividends, interest and other income generated from the assets to Hagura BVI. Hagura BVI may at any time, and the nominee may with thirty days notice, terminate this agreement. In consideration of the services provided by the nominee, Hagura BVI will pay Hagura UK in advance a nominal yearly fee.
- 10.2.2 Privatisation agreement and settlement agreement — a privatisation agreement dated 18 May 2001 between the Minister Of Finance as representative of the Government of the Republic of Zambia (“GoZ”), Hagura UK, Greentop and Krinera pursuant to which Hagura UK agreed to acquire 8,400,000 shares in Kagem from GoZ (the “**Privatisation Agreement**”). The Privatisation Agreement was amended by a settlement agreement dated 15 June 2005 under which the number of shares that Hagura UK was to acquire from GoZ was reduced to 6,000,000 shares in consideration of the payment of US\$3,600,000. As a result of the agreement, as of 24 November 2005, Hagura UK holds 75 per cent. (9,000,000 shares of which it holds as nominee for Hagura BVI, please see paragraph 10.2.1 for further details) and GoZ holds 25 per cent. (5,000,000 shares) in Kagem. The Privatisation Agreement imposes, *inter alia*, the following obligations on Hagura UK:
- (a) for a period of 36 months after completion (until 24 November 2008), disposal of a controlling interest in the Kagem shares held by Hagura UK or any core asset used by Kagem is subject to certain restrictions including the consent of the GoZ (such consent not to be unreasonably withheld);
  - (b) Hagura UK must procure that Kagem carries on its business to achieve the objectives in Hagura UK’s business plan and must provide Kagem with the funds to do so until 24 November 2010;

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- (c) Hagura UK undertook to procure that Kagem will make an investment commitment totalling US\$11,700,000 by 24 May 2009. This investment commitment is made up of (i) the increase of the ordinary share capital of Kagem by US\$5,00,000 and (ii) the sourcing of third party financing of not less than US\$6,700,000 with repayment terms being not less three years. As at the date of this document, the financing commitment of US\$6,700,000 has been made but the equity portion US\$5,000,000 has not been made and is due by 24 May 2009; and
- (d) following completion of the Privatisation Agreement, Hagura UK agreed to procure that Kagem make payments to its employees in the event of any retrenchment, redundancy or retirement in accordance with the employees' prevailing conditions of service through its own resources or resources allocated by Hagura UK without recourse to GoZ. Hagura UK agreed to indemnify GoZ and Kagem for claims or actions it may suffer in this regard. In addition, Hagura UK agreed to procure certain employment standards (for example relating to training and safe working environment) are maintained by Kagem.

The Privatisation Agreement also gave GoZ the right to a 13 per cent. free carried, non dilutable interest in Kagem and earn out provisions which would have entitled GoZ to annual payments for a period of 10 years following completion of the Privatisation Agreement. However, in accordance with the terms of the Privatisation Agreement, Hagura UK purchased these rights from GoZ in consideration of US\$1,600,000 in November 2007

- 10.2.3 First Kagem management agreement — dated 27 April 2007 between Hagura UK and Kagem. Under the agreement, which runs for a period of five years from June 2006, Hagura UK agreed to take over the day-to-day running of the Kagem mine. Hagura UK is entitled to a management fee at a rate of five per cent. of Kagem's gross turnover.
- 10.2.4 Second Kagem management agreement — dated 1 November 2007 between Gemfields Mining Limited and Hagura UK. Under this agreement Gemfields Mining Limited is to provide the appointment of, supervision of and provision of guidance to the management team of Kagem, ensure the orderly management and control of the mining activities of Kagem including the provision of personnel and equipment; and management and conduct of the business to the best of its ability and in the best interests of Kagem and its shareholders. Gemfields Mining Limited will be paid a monthly fee of US\$40,000, the monthly charges per individual engaged in providing the services and the at cost charges for provision of the service. Either party may terminate this agreement, without cause, on giving 15 days written notice to the other party.
- 10.2.5 FBZ debt facilities — each of Kagem and Kagem Lapidaries have term loans provided by the Finance Bank of Zambia (“**FBZ**”) for US\$6,500,000 and US\$3,500,000 respectively (the “**FBZ Debt Facilities**”). Each of the FBZ Debt Facilities is provided on substantially the same terms as set out in facility letters each dated 14 December 2007 and accepted by Kagem on 18 December 2007 and Kagem Lapidaries on 19 December 2007. The FBZ Debt Facilities explicitly replace all prior facilities granted by FBZ to Kagem and Kagem Lapidaries. The purpose of the FBZ Debt Facilities is: (i) the repayment of all prior facilities (which included facilities provided by FBZ and the Leasing Finance Company Limited, which have now been repaid); (ii) the expansion and development of the Kagem Emerald Mine; and (iii) for general working capital purpose. Repayment of the principal amount is to be made in twelve equal quarterly instalments commencing 31 March 2008 with interest (in each case at 3 month EURIBOR plus 3.5 per cent. pa). The FBZ Debt Facilities expire on 31 December 2010 (subject to any event of default). Joint security is to be provided for the loan to Kagem and includes; (i) a legal mortgage over Stand No. 6374 Kitwe, (ii) hypothecation of stocks of emeralds located at Fwaya Fwaya Camp (the Kagem Emerald Mine); and (iii) a first charge over fixed and floating assets of the borrower.

Kagem and Kagem Lapidaries have agreed to provide certain monthly financial information to FBZ, keep the secured property insured and provide access to FBZ to

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its premises and certain records. Kagem and Kagem Lapidaries have also agreed not, without the prior written consent of FBZ, to mortgage, charge pledge or otherwise encumber any of their assets or make a loan, grant credit, give any guarantee or indemnity or otherwise incur any liability otherwise than in the ordinary course.

- 10.2.6 Kagem mining contract — effective 13 November 2007, Kagem entered into a contract with Triple S Ranch (a Zambian company, the “**Contractor**”) for mining of waste rock at the Kagem Emerald Mine (the “**Kagem Mining Contract**”). The Contractor has agreed to provide certain services at the Kagem Emerald Mine including, but not limited to, the excavation and removal of earth, dumping of the excavated earth at designated dump sites and maintenance of the level of such sites and dump roads. In consideration of such services, Kagem pays the contractor a fee based upon a unit price range of US\$1.60 to US\$1.74 per cubic meter of insitu rock removed, depending upon the level of support equipment used by the Contractor, which is invoiced by the Contractor on a monthly basis. In the event that the Contractor fails to meet certain minimum performance levels by 15 per cent. or more, Kagem may hold back a percentage of the contract price until such performance levels are met. The Kagem Mining Contract is for an initial period of 18 months renewable by mutual consent of the parties up to a maximum period of 24 months and may be terminated: (i) by either party of three months written notice; or (ii) by Kagem in the event that market trends of revenues from ore make the operation unviable or in the event certain service targets are not met by the Contractor for a continuous period of three months; and (iii) by the Contractor if Kagem delays payments on a regular basis over three consecutive months. The Contractor undertakes to comply with all legislation applicable to the provision of the services under the Kagem Mining Contract and make its own arrangements (at its own cost) for the engagement and support of employees. The Contractor agrees to indemnify Kagem for all claims arising out of any loss, damage or injury to persons or third party or Kagem property resulting from its carrying out of the contract (save where such loss is caused by an act or omission by Kagem).

## **11. LEGAL AND ARBITRATION PROCEEDINGS**

- 11.1 No member of the Group is, nor has been involved in any governmental, legal or arbitration proceedings which may have, or have had, during the twelve months preceding the date of this document, a significant effect on the Company or the Group’s financial position or profitability, nor, so far as the Group is aware, are any such proceedings pending or threatened.
- 11.2 No member of the Target Group is nor has been, involved in any governmental, legal or arbitration proceedings which may have, or have had, during the twelve months preceding the date of this document, a significant effect on the Target Group’s financial position or profitability, nor, so far as the Target Group is aware, are any such proceedings pending or threatened.

However, as part of the process of obtaining legal opinions on the Target Group, the Directors and Proposed Directors became aware that the Kagem Mining File is currently being reviewed by the Anti-Corruption Commission in Zambia. The Target Group’s Zambian Counsel has attended the offices of the Anti-Corruption Commission to review Kagem’s Mining File and subsequently issued their legal opinion. No notice, proceedings or complaint from the Anti-Corruption Commission has been received by the Target Group.

The Directors and Proposed Directors understand that the review relates to matters prior to Rox’s acquisition and to the change of control arising from Rox’s acquisition of Greentop and Hagura and the proposed Acquisition. The Proposed Directors (in relation to Rox’s acquisition) and the Directors and Proposed Directors (in respect of the Acquisition) have received advice from their legal advisers that the respective acquisitions are in accordance with applicable agreements and Zambian law. Accordingly the Directors and Proposed Directors believe that the review is unlikely to have a significant adverse effect on the Enlarged Group.

## **12. TAXATION**

### *General*

The statements below are general in character and are intended only as a general guide to certain aspects of current law and HM Revenue & Customs practice. They apply to the beneficial

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owners of Ordinary Shares who are resident in the UK for tax purposes and who hold shares as investments and may not apply to certain classes of taxpayers (such as dealers in securities). Prospective purchasers of Ordinary Shares, and in particular those who are subject to taxation in a jurisdiction other than in the UK, are strongly advised to consult their own professional advisers.

#### *Dividend Income*

No tax will be withheld from dividend payments by the Company.

An individual Shareholder in the Company who is resident in the UK for tax purposes will be entitled to a tax credit in respect of any dividend received from the Company and will be taxable on the aggregate of the net dividend and the tax credit (“the gross dividend”). The value of the tax credit is currently one ninth of the net dividend (or 10 per cent. of the gross dividend). The gross dividend is treated as the top slice of such individual’s income. In the case of a UK resident individual Shareholder who is only liable to income tax at the basic rate, the tax credit will discharge his or her tax liability in respect of the gross dividend and there will be no further tax to pay and no right to claim any repayment of the tax credit from HM Revenue & Customs. In the case of a UK tax resident individual Shareholder of the Company who is liable to income tax at the higher rate (currently 40 per cent.) and tax on dividends at the rate applicable to dividends (currently 32.5 per cent.), the tax credit will be set against his or her tax liability in respect of the gross dividend and, accordingly, he or she will have to pay additional tax at a rate of 22.5 per cent. of the gross dividend.

UK resident individuals, pension funds and charities are not entitled to reclaim the tax credit on dividends paid by the Company.

A non-UK tax resident Shareholder of the Company is not generally entitled to the benefit of payment of the tax credit from HM Revenue & Customs in respect of any dividend received. An entitlement to the payment of the tax credit may, however, be available in whole or in part if there is an appropriate provision granting the entitlement under any applicable double tax treaty between the UK and the county in which the Shareholder is resident for tax purposes. However, the amount payable under any such double tax treaty (if anything) will generally be less than 1 per cent. of the dividend to which it relates.

Subject to certain exceptions, a Corporate Shareholder which is resident for tax purposes in the UK and which is not a dealer in securities will not normally be liable to UK Corporation tax on any dividends received, but cannot claim repayment of tax credit.

A Shareholder who is not resident in the UK (for tax purposes) should consult his or her own tax adviser concerning his or her liabilities on dividends received, his or her entitlement to reclaim any part of the tax credit and, if he or she is so entitled, the procedure for doing so. A Shareholder resident outside the UK may also be subject to foreign taxation on dividend income under local law.

#### *Capital gains*

An individual Shareholder who is resident or ordinarily resident in the UK in the relevant year of assessment, or who carries on a trade, profession or vocation in the UK to which the Ordinary Shares are attributable, may be subject to UK taxation on capital gains in respect of a disposal of Ordinary Shares.

Individual Shareholders who are neither resident nor ordinarily resident in the UK will not be subject to UK capital gains tax in respect of gains arising on disposals of their shareholding. However, a Shareholder who has previously been resident or ordinarily resident in the UK may in some cases be subject to UK tax on capital gains in respect of a disposal of Ordinary Shares in the event that they re-establish residence in the UK.

The intended activities of the Company are such that the Directors are advised that the Ordinary Shares will not rank as eligible shares for Enterprise Investment Scheme relief.

Subject to certain exceptions, a Shareholder which is a company resident for tax purposes in the UK, or holds shares through a permanent establishment in the UK, may be subject to UK tax on capital gains in respect of a disposal of Ordinary Shares.

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A Shareholder which is a company not resident in the UK for tax purposes will have no UK liability to tax on capital gains in respect of a disposal of Ordinary Shares, though may be subject to foreign tax on the capital gain under local law.

#### *Inheritance tax*

The Ordinary Shares are UK-situated assets for the purposes of UK inheritance tax. A gift of such shares by, or on the death of, an individual Shareholder may (subject to certain exemptions and reliefs) give rise to a liability to UK inheritance tax even if the Shareholder is neither domiciled nor deemed to be domiciled in the UK for tax purposes.

#### *Stamp duty and stamp duty reserve tax (“SDRT”)*

The statements below are intended as a general guide to the current position. They do not apply to certain intermediaries who are not liable to stamp duty or SDRT or to persons connected with depository arrangements or clearance services who may be liable at higher rates.

The Directors have been advised in relation to stamp duty and stamp duty reserve tax that no liability to stamp duty or SDRT arises on the allotment of the New Ordinary Shares by the Company. The registration of and the issue of definitive share certificates to placees or the first registration of New Ordinary Shares in the name of a member of CREST will not give rise to any liability to stamp duty or SDRT.

Any subsequent conveyance or transfer on sale of Ordinary Shares will usually be subject to stamp duty at the rate of 0.5 per cent. of the amount or value of the consideration. A charge to SDRT at the rate of 0.5 per cent. of the amount or value of the consideration will also arise on an unconditional agreement to transfer such shares, although that liability including any interest (but not penalties) will be cancelled and any SDRT already paid will be repaid if, within six years of the SDRT liability arising, a transfer is executed pursuant to the agreement and stamp duty is paid on that transfer.

Where Ordinary Shares are held in uncertificated form within CREST, a transfer of shares through CREST will generally be subject to SDRT at the rate of 0.5 per cent of the value of the consideration given. Special rules apply in connection with clearance services and depository receipts systems.

### **13. SIGNIFICANT CHANGES**

#### 13.1 Group

Save for the temporary cessation of production at the Mbuva-Chibolele mine and the expiry of the Jagoda option (further details of which are set out at paragraph 8 of Part I of this document) and the entering into certain agreements in connection with the Acquisition there has been no significant change in the financial or trading position of the Group since 31 December 2007 (the date to which the last interim accounts were prepared).

#### 13.2 Target Group

Save for the new FBZ Debt Facility, the management agreement with Gemfields and the Rox loan agreement (further details on which are set out at paragraph 10.2.5, 10.2.4 and 10.1.2 respectively of this Part IX) and the entering into certain agreements in connection with the Acquisition, there has been no significant change in the financial or trading position of the Target Group since 30 September 2007 (the date to which the financial information set out in Section B of Part VII was prepared).

### **14. WORKING CAPITAL**

The Directors and Proposed Directors are of the opinion, having made due and careful enquiry, taking into account the proceeds of the Placing and available bank and other facilities, that the working capital available to the Enlarged Group will be sufficient for its present requirements, that is, for at least the next 12 months from the date of Admission.

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## 15. PROPERTY, PLANT AND EQUIPMENT OF THE ENLARGED GROUP

The Enlarged Group occupies the following principal establishments:

Address	Tenure	Terms of occupation
MWB Business Exchange 1 Berkeley Street London W1J 8DJ United Kingdom	Licence to occupy	A licence to occupy office 214 at the premises for a monthly fee of £4,370 (plus VAT) subject to renewal. The licence currently expires on 30 June 2008.
Metro House, 2 <sup>nd</sup> Floor M.G.Road Mumbai — 400 020 Maharashtra. India	Licence to occupy	A licence to occupy on a rent free basis.
Plot 3719 Prescot Road Light Industrial Area Box 22550 Kitwe, Zambia	Freehold	Not applicable.
Stand No. 6374 City of Kitwe	Leasehold	A 99 year lease commencing 1 December 1991 for an annual rent of KWA 700
Plot 450 Lusaka Road	Leasehold	10 year lease dated 1 June 2006 for monthly rent of US\$1,001 payable annually for the first two years, US\$1,501 for the following 3 years and then subject to negotiation

Save as referred to in this document, the Company does not have nor does any member of the Enlarged Group have and has no current intention to acquire, any material tangible fixed assets (including freehold and leasehold property).

## 16. INVESTMENTS

16.1 Neither the Group nor the Target Group has made any principal investments for the period covered by their latest three financial years save for as set out in this document and the following:

### *Group*

16.1.1 Chibolele — an agreement dated 23 July 2004 between Chibolele Mining Co-Operative Society (CMCS), Gemfields Holdings Zambia Limited and Gemchib Minerals Limited for the acquisition by Gemchib Minerals Limited of a 70 per cent. interest in Plot No11A/1 in the Kafubu Emerald area in consideration for a transfer of 30 per cent. of the issued share capital in Gemchib Minerals Limited to CMCS. Gemfields Holdings Zambia Limited was granted a six month option expiring on 23 January 2005, to acquire the 30 per cent. shareholding from CMCS for US\$1,250,000, which it exercised on 20 January 2005.

16.1.2 Kamakanga — an agreement dated 4 July 2005 made between Kuber Mineral and Metal Mining Company Limited, Haree Enterprises Limited and Gemfields Holdings Zambia Limited for the acquisition by Gemfields Holdings Zambia Limited of Stand No. 3719 at Kitwe in the Copperbelt Province of Zambia, certain moveable property and certain mining rights and consequential developments and improvements for a total consideration of US\$2,451,000, payment of US\$1,351,000 of which has been deferred until a date on or before the expiry of 180 days from the date the agreement was signed. Payment of the deferred consideration was made in December 2006.

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- 16.1.3 Kafubu — an agreement dated 21 September 2005 between Gemfields Holdings Zambia Limited and Arinus Limited, a company incorporated in Zambia, pursuant to which Gemfields Holdings Zambia Limited was granted an exclusive option, exercisable within a period of 120 days, to acquire a part of Plot No. 10B in the Kafubu area of the NRERA covered by gemstone licence No GL744 for an initial option fee of US\$160,000 and a further payment of US\$540,000 on exercise of the option. The option was exercised and consideration paid in full.
- 16.1.4 Exploration Licence — an agreement dated 26 September 2005 between CA Fiduciary Services Limited (as trustee of certain trusts) and the Company pursuant to which the entire issued share capital of Almizan Development Limited was transferred to the Company for a total consideration of 9,000,000 Ordinary Shares. Almizan Development Limited held the right to call for the transfer to it of the Miputu, Mitondo North, NR South, Mitondo South, Nkabashila East and Nkabashila West exploration licences which are now owned by the Group.
- 16.1.5 Exploration Licence — an agreement dated 26 September 2005 between CA Fiduciary Services Limited (as trustee of certain trusts) and the Company pursuant to which the entire issued share capital of Sarina Global Limited was transferred to the Company for a total consideration of 1,500,000 Ordinary Shares. Sarina Global Limited held the right to call for the transfer to it (or its nominee) of the Mitondo East exploration licence which is now owned by the Group. On 13<sup>th</sup> November 2006, the Group completed the acquisition of 100 per cent. of the share capital in Sarina for US\$1,432,500 payable in shares. At the date of completion, the market price of a share in the Company was £0.50.

*Target Group*

- 16.1.6 Kagem — the acquisition of a further 30 per cent. of Kagem by Hagura UK pursuant to the Privatisation Agreement, further details of which are set out in paragraph 10.2.2 of this Part IX.
- 16.2 Save for the Acquisition, there are no principal investments in progress and there are no principal future investments on which the Group or the Target Group has made a firm commitment.

**17. AUDITORS AND FINANCIAL INFORMATION**

- 17.1 BDO Stoy Hayward LLP, Registered Auditors, 55 Baker Street, London W1U 7EU have audited the financial statements of the Group for the three financial years ending 30 June 2007. BDO Stoy Hayward is a member of the Institute of Chartered Accountants in England and Wales.
- 17.2 The Company's accounting reference date is 30 June. The Target Group's accounting reference date is 31 March.
- 17.3 The financial information concerning the Group contained in this document does not constitute statutory accounts within the meaning of section 240 of the Act. Statutory accounts of the Group for the three financial years ending 30 June 2007, on which the auditors gave an unqualified report and which did not contain statements made under section 237(2) or (3) of the Act, have been delivered to the Registrar of Companies.
- 17.4 No financial information contained in this document is intended by the Company to represent or constitute a forecast of profits by the Company nor constitute the publication of accounts by it.

**18. CONSENTS**

- 18.1 Canaccord Adams Limited has given and not withdrawn its written consent to the issue of this document including references to its name in the form and context in which they appear.
- 18.2 JP Morgan Cazenove has given and not withdrawn its written consent to the issue of this document including references to its name in the form and context in which they appear.
- 18.3 BDO Stoy Hayward LLP has given and not withdrawn its written consent to the inclusion in this document of its accountant's report set out in Part VIII of this document in the form and context in which it is included.

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- 18.4 SRK Consulting (UK) Limited of 5<sup>th</sup> Floor Churchill House, 17 Churchill Way, Cardiff CF10 2HH accepts responsibility for its report set out in Part VII of this document and, to the best of its knowledge and belief (having taken all reasonable care to ensure that such is the case), believes the information contained in such report is in accordance with the facts and does not omit anything likely to affect the import of such information. SRK Consulting (UK) Limited has given and not withdrawn its written consent to the inclusion in this document of its report and to the issue of this document with the references to its name in the form and context in which they appear.
- 18.5 Gemworld International Inc. of 2640 Patriot Blvd., Suite 240, Glenview, Illinois 60026 accepts responsibility for its report set out in IV of this document and, to the best of its knowledge and belief (having taken all reasonable care to ensure that such is the case), believes the information contained in such report is in accordance with the facts and does not omit anything likely to affect the import of such information. Gemworld International Inc has given and not withdrawn its written consent to the inclusion in this document of its report and to the issue of this document with the references to its name in the form and context in which they appear.

## **19. GENERAL**

- 19.1 The total expenses of, and incidental to, the Proposals payable by the Company are estimated to amount to approximately £2.5m (exclusive of any value added tax).
- 19.2 The total net proceeds of the Placing (after expenses and excluding VAT) is £27.5m.
- 19.3 Save for the Group's various mining licences and other exploration licences and the Fabergé licence (if the option is exercised) referred to in this document, the Group is not dependent on any patents or other intellectual property rights, licences or particular contracts or new manufacturing processes which are considered of fundamental importance to its business.
- 19.4 Other than pursuant to the Placing Agreement, no commissions are payable by the Company to any person in consideration of his agreeing to subscribe or his procuring or agreeing to procure subscribers for the Ordinary Shares.
- 19.5 Other than professional advisers disclosed in this document, and trade suppliers no person has received, directly or indirectly, from the Company within 12 months immediately preceding the date of this document or has entered into contractual arrangements to receive, directly or indirectly, from the Company: (a) fees totalling £10,000 or more; (b) securities in the Company with a value of £10,000 or more (calculated by reference to the Issue Price); or (c) any other benefit with a value of £10,000 or more.
- 19.6 The following payments aggregating over £10,000 have been made by the Group (or on behalf of it) to a government or regulatory authority or similar body with regard to the acquisition of, or maintenance of, its assets:
- 19.6.1 a payment totalling \$38,412 (K152,880,954) on 11 April 2007 to the Zambia Revenue Authority in connection with royalty payments; and
- 19.6.2 a payment totalling \$51,406 (K212,796,000) on 20 April 2007 to the Zambia Revenue Authority in connection with royalty payments.
- 19.7 The following payments aggregating over £10,000 have been made by the Target Group (or on behalf of it) to a government or regulatory authority or similar body with regard to the acquisition of, or maintenance of, its assets:
- 19.7.1 a payment totalling US\$3,600,000, the final instalment of which was paid on 12<sup>th</sup> October 2007, to the Minister of Finance as representative of the Government of the Republic of Zambia in connection with the acquisition by Hagura UK of an additional 30 per cent. of the outstanding shares in Kagem pursuant to the Privatisation Agreement;
- 19.7.2 a payment of US\$1,600,000 on 21<sup>st</sup> November 2007 to the Minister of Finance as representative of the Government of the Republic of Zambia in connection with the acquisition of its anti-dilution and earn-out rights pursuant to the Privatisation Agreement;
- 19.7.3 a payment of US\$1,417,526 on 13 December 2007 to the Government of the Republic of Zambia in connection historical royalty liabilities; and

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- 19.7.4 a payment of US\$100,058 on 14 December 2007 to the Minister of Finance as representative of the Government of the Republic of Zambia in connection historical earn-out liabilities under the Privatisation Agreement.
- 19.8 Other than the application for Admission, the Ordinary Shares have not been admitted to dealings on any recognised investment exchange nor has any application been made, nor, except as stated above, are there intended to be any other arrangements for dealing in the Ordinary Shares.
- 19.9 The Company is placing 66,666,667 New Ordinary Shares pursuant to the Placing. The Issue Price of 45 pence per Ordinary Share represents a premium of 44 pence over the nominal value of £0.01 per Ordinary Share and is payable in full on issue.
- The period within which placing participations may be accepted pursuant to the Placing and arrangements for the payment and holding of monies payable thereunder pending Admission are set out in the Placing Agreement and in the placing letters to be sent to prospective placees (the '**Placing Letters**'). The Placing Shares are not being offered generally and no applications have or will be accepted other than under the terms of the Placing Agreement and in the Placing Letters. The Placing Shares have been conditionally placed. The Placing is not being guaranteed or under-written by any person.
- 19.10 The Ordinary Shares are in registered form and are capable of being held in certificated or uncertificated form. No temporary documents of title will be issued. It is expected that the Placing Shares will be issued on 6 June 2008. It is expected that definitive share certificates will be despatched by hand or first class post by 11 June 2008. In respect of uncertificated shares, it is expected that Shareholders' CREST stock accounts will be credited on 6 June 2008.
- 19.11 Where information in this document has been sourced from a third party, such information has been accurately reproduced and as far as the Company is aware from information published by the relevant third parties, no facts have been omitted from this document which would render the information inaccurate or misleading. The information sourced from a third party to which this paragraph relates are as follows:
- 19.11.1 the report prepared by Gemworld International, Inc. set out in Part IV extracts of which are set out in Part I, paragraph 6;
- 19.11.2 sources listed in Part V in relation to information on Zambia.

**13 May 2008**

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## NOTICE OF EGM

# GEMFIELDS RESOURCES PLC (the “Company”)

(incorporated in England and Wales with registered number 05129023)

## NOTICE OF EXTRAORDINARY GENERAL MEETING

NOTICE is hereby given that an extraordinary general meeting of the Company (the “EGM”) will be held at the offices of Reed Smith Rambaud Charot, 42 Avenue Raymond Poincaré, 75782, Paris at 10.00 a.m. (CET)/9.00 a.m. (BST) on 5 June 2008 for the purpose of considering and, if thought fit, passing the following ordinary resolutions (in the case of resolutions 1, 2 and 3) and special resolutions (in the case of resolutions 4 and 5):

### ORDINARY RESOLUTIONS

1. THAT, the proposed acquisition by the Company of the entire issued share capital of each of Greentop International Inc (“**Greentop**”) and Krinera Group SA (“**Krinera**”) pursuant to the Acquisition Agreement dated 17 December 2007 and entered into between (1) Rox Limited and (2) Gemfields Resources Plc (as defined in and details of which appear in paragraph 10.1.2 of Part IX of the circular of the Company to shareholders dated 13 May 2008 of which this Notice forms a part and comprising an AIM admission document (the “**Admission Document**”)), be and is hereby approved in accordance with Rule 14 of the AIM Rules and the execution of the same by the Company be and is hereby approved and ratified and the directors of the Company (or a duly constituted committee thereof) be and they are hereby authorised to cause the Acquisition Agreement and all documents and matters provided in it and related to it to be completed and at their discretion to amend, waive, vary and/or extend any of the terms of the Acquisition Agreement and/or any other document referred to in it or connected with it in whatever way they consider to become necessary or desirable, and to do all such things as they may consider necessary, expedient or appropriate (provided that any modifications to the Acquisition Agreement or other documents are not material modifications in the context of the proposed transaction as a whole).
2. THAT, subject to and conditional upon the Acquisition Agreement and the Placing Agreement (as defined in the Admission Document) becoming unconditional in all respects (other than in respect of Admission) and to resolution 1 above being passed (but such that the resolution takes effect immediately prior to Admission):
  - (a) the authorised share capital of the Company be increased by £4,000,000 from £2,000,000 to £6,000,000 by the creation of 400,000,000 ordinary shares of £0.01 each, to rank pari passu in all respects with the existing ordinary shares of £0.01 each in the capital of the Company (the “**Ordinary Shares**”); and
  - (b) in substitution for all existing authorities to the extent unused, the directors be and are hereby generally and unconditionally authorised for the purposes of section 80 of the Companies Act 1985 (as amended) (the “**Act**”) to exercise all the powers of the Company to allot relevant securities (as defined in section 80(2) of the Act):
    - (i) pursuant to the Acquisition and the Placing (as defined in the Admission Document) up to an aggregate nominal amount of £2,045,770.07; and
    - (ii) otherwise than in connection with the Acquisition and the Placing up to an aggregate nominal amount of £1,000,000,

provided that such authorities shall expire on the earlier of the conclusion of the next annual general meeting of the Company after the passing of this resolution and the date falling 15 months after the passing of this resolution save that the Company may before such expiry make an offer or agreement which would or might require relevant securities to be allotted after such expiry and the directors may allot relevant securities in pursuance of such offer or agreement notwithstanding that the authority conferred hereby has expired and in this resolution the expression “relevant securities” and references to the allotment of any relevant securities shall bear the same respective meanings as in section 80 of the Act.

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3. THAT the share options over 1,275,000 Ordinary Shares granted to Peter Kitchen, Sanjay Khandelwal and Valentine Chitalu, being directors of the Company who resigned from the Board immediately prior to the publication of the Admission Document, pursuant to the Company's unapproved share scheme (details of which are set out in paragraph 7 of Part IX of the Admission Document) will be exercisable by Messrs Kitchen, Khandelwal and Chitalu from Admission and at any time prior to the third anniversary of Admission.

### **SPECIAL RESOLUTIONS**

4. THAT, subject to and conditional upon the Acquisition Agreement and Placing Agreement becoming unconditional in all respects (save for Admission) and to resolutions 1 and 2 above being passed, pursuant to section 95 of the Act and in substitution for all existing authorities under that section to the extent unused, the directors of the Company be and are hereby empowered to allot equity securities (within the meaning of sections 94(2) to 94(3A) of the Act) for cash pursuant to the authority conferred by resolution 2 as if section 89(1) of the Act did not apply to any such allotment, provided that this power shall be limited to:
- (a) the allotment of equity securities up to an aggregate nominal amount of £2,045,770.07 in connection with the Acquisition and the Placing;
  - (b) any allotment of equity securities where such securities have been offered (whether by way of a rights issue, open offer or otherwise) to holders of Ordinary Shares where the equity securities respectively attributable to the interests of all holders of Ordinary Shares are proportionate (as nearly as may be practicable) to the respective numbers of Ordinary Shares held by them, subject to such exclusions and other arrangements as the Directors may deem necessary or expedient to deal with fractional entitlements or legal or practical problems under the laws of, or the requirements of any recognised regulatory body or any stock exchange in, any territory or otherwise howsoever;
  - (c) any allotments (otherwise than pursuant to sub-paragraphs (a) or (b) above) of equity securities up to an aggregate nominal value not exceeding £650,000,
- and (unless previously revoked, varied or renewed) this power shall expire on the earlier of the conclusion of the next annual general meeting of the Company after the passing of this resolution and the date falling 15 months after the passing of this resolution, save that the Company may make an offer or agreement before the expiry of this power which would or might require equity securities to be allotted for cash after such expiry and the directors of the Company may allot equity securities for cash pursuant to any such offer or agreement as if the power conferred by this resolution had not expired.
5. THAT, the name of the Company be changed to Gemfields plc.

*By order of the Board*  
Richard James  
*Company Secretary*

12 May 2008

*Registered Office:*  
Beaufort House  
Tenth Floor  
15 St Botolph Street  
London EC3A 7EE

#### Notes:

1. A member of the Company entitled to attend and vote at the EGM may appoint one or more proxies to attend, to speak and (on a poll) vote instead of him. A member may appoint more than one proxy in relation to the EGM provided that each proxy is appointed to exercise the rights attached to a different share or shares held by that member. A proxy need not be a member of the Company.
2. Completion and return of a form of proxy does not preclude a member from attending and voting at the EGM or at any adjournment thereof in person should he so wish.
3. A form of proxy is enclosed with this Notice for use in connection with the business set out above. To be valid, forms of proxy (together with a letter or power of attorney or other written authority, if any, under which it is signed or a notarially certified or office copy of such power or written authority) must be completed and returned so as to reach the Company's registrars, Capita Registrars, The Registry, 34 Beckenham Road, Beckenham, Kent, BR3 4TU, not later than 48 hours before the time fixed for holding the EGM or any adjournment thereof.

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4. In accordance with regulation 41(1) of the Uncertificated Securities Regulations 2001 and the Company's articles of association, the Company specifies that only those shareholders registered in the Company's register of members at close of business on 3 June 2008 (or in the case of adjournment, in the register of members at close of business on the second business day prior to the date on which any adjourned meeting is to be held) will be entitled to attend or vote at the EGM and that number of votes which any shareholder may cast, upon a poll, will be determined by reference to the number of shares registered in such shareholder's name at such time.
  5. In the case of joint holders, the signature of only one of the joint holders is required on the form of proxy but the vote of the first named on the register of members will be accepted to the exclusion of the other joint holders.
  6. CREST members wishing to appoint one or more proxies or to give an instruction to a proxy (whether previously appointed or otherwise) via the CREST system must ensure that, in order for such CREST Proxy Instruction to be effective, it is received by the Company's agent, Capita Registrars (ID number RA10) no later than 48 hours before the time appointed for holding the Meeting or any adjournment thereof, together with any power of attorney or other authority under which it is sent. For this purpose, the time of receipt will be taken to be the time (as determined by the timestamp applied to the message by the CREST Applications Host) from which Capita Registrars is able to retrieve the message by enquiry to CREST in the manner prescribed by CREST. The Company may treat as invalid a proxy appointment sent by CREST in the circumstances set out in Regulation 35(5)(a) of the Uncertificated Securities Regulations 2001. For further information relating to the CREST proxy system, please refer to the CREST Manual.
  7. In order to facilitate voting by corporate representatives at the meeting, arrangements will be put in place at the meeting so that (i) if a corporate shareholder has appointed the chairman of the meeting as its corporate representative to vote on a poll in accordance with the directions of all of the other corporate representatives for that shareholder at the meeting, then on a poll those corporate representatives will give voting directions to the chairman and the chairman will vote (or withhold a vote) as corporate representative in accordance with those directions; and (ii) if more than one corporate representative for the same corporate shareholder attends the meeting but the corporate shareholder has not appointed the chairman of the meeting as its corporate representative, a designated corporate representative will be nominated, from those corporate representatives who attend, who will vote on a poll and the other corporate representatives will give voting directions to that designated corporate representative. Corporate shareholders are referred to the guidance issued by the Institute of Chartered Secretaries and Administration on proxies and corporate representatives ([www.icsa.org.uk](http://www.icsa.org.uk)) for further details of this procedure. The guidance includes a sample form of appointment letter if the chairman is being appointed as described in (i) above.
  8. Terms referred to in this Notice have the meaning given to them in the Admission Document.