THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in any doubt about the contents of this document or the action you should take you should obtain your own financial advice immediately from your stockbroker, bank manager, solicitor, accountant or other independent financial adviser duly authorised under the Financial Services and Markets Act 2000 who specialises in advising on the acquisition of shares and other securities.

Application has been made for the Ordinary Shares, issued and to be issued pursuant to the Placing, to be admitted to trading on the AIM Market of the London Stock Exchange plc ("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.

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.

#### The London Stock Exchange has not itself examined or approved the contents of this document.

This document is an admission document prepared in accordance with the AIM Rules for Companies in connection with the proposed admission to trading of the Ordinary Shares on AIM. This document contains no offer to the public within the meaning of the FSMA and, accordingly, it does not comprise a prospectus for the purposes of the Prospectus Rules and has not been approved by or filed with the Financial Services Authority.

The Company and the Directors (whose names appear on page 8 of this document) accept responsibility for the information contained in this document including, individual and collective responsibility, for the Company's compliance with the AIM Rules. To the best of the knowledge and belief of the Company and the 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 makes no omission likely to affect the import of such information.

# Zanaga Iron Ore Company Limited

(Incorporated and registered in the British Virgin Islands with registered number 1557213)

#### Placing of 39,815,258 Ordinary Shares at 156 pence per share

and

#### Admission to trading on AIM

#### Liberum Capital Limited

Nominated adviser and broker

#### **ISSUED ORDINARY SHARES IMMEDIATELY FOLLOWING ADMISSION**

Authorised Unlimited ordinary shares of no par value Issued and fully paid 280,415,976

The attention of investors is drawn to the risk factors set out in Part VI of this document. Notwithstanding this, prospective investors should read the whole text of this document. All statements regarding the Group's business, financial position and prospects should be viewed in light of the risk factors set out in Part VI of this document.

The New Shares will, on Admission, rank *pari passu* in all respects with the existing Ordinary Shares, including the Sale Shares, and rank in full for all dividends and other distributions declared, made or paid on Ordinary Shares after Admission. It is expected that Admission will become effective and that dealings will commence in the Ordinary Shares on 18 November 2010.

Liberum Capital Limited ("Liberum") is regulated by the Financial Services Authority and is acting exclusively for the Company and for no one else in connection with the Placing and Admission. Liberum will not be responsible to anyone other than the Company for providing the protections afforded to customers of Liberum or for advising any other person on the contents of this document or the Placing and Admission. The responsibility of Liberum as nominated adviser and broker to the Company is owed solely to the London Stock Exchange and is not owed to the Company or the Directors or any other person. No representation or warranty, express or implied, is made by Liberum or any of its directors, officers, partners, employees, agents or advisers as to the contents of this document (without limiting the statutory rights of any person to whom this document is issued). No liability whatsoever is accepted by Liberum or any of its directors, officers, partners, employees, agents or opinions contained in this document or for the omission of any material information or opinions contained in this document or for the omission of any material information for which it is not responsible.

This document does not constitute an offer to issue or sell, or the solicitation of an offer to subscribe for or acquire, any Ordinary Shares to any person in any jurisdiction to whom it is unlawful. Subject to certain exceptions, the Ordinary Shares are being offered and sold outside the United States to non-US persons in reliance on Regulation S under the U.S. Securities Act of 1933, as amended ("Securities Act"). The Ordinary Shares have not been, nor will they be, registered or qualified for sale under the applicable securities laws of Australia, Canada, Japan or the Republic of South Africa and may not be offered or sold to any national, resident or citizen of Australia, Canada, Japan or the Republic of South Africa. Neither this document, nor any copy of it, may be sent to or taken into Australia, Canada, Japan or the Republic of South Africa. Neither this document in certain jurisdictions may be restricted by law and therefore persons into whose possession this document comes should inform themselves about and observe any such restrictions. In particular, this document may not be forwarded to any US Person or U.S. address. Any failure to comply with these restrictions may constitute a violation of the securities laws of any such jurisdiction.

#### **United Kingdom**

This document is being distributed only to, and is directed only at, persons who are both: (A)(i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the FPO; (ii) high net worth companies, unincorporated associations and other bodies within the meaning of Article 49 of the FPO, or (iii) persons to whom it is otherwise lawful to distribute it; and (B) "Qualified Investors" as defined in s. 86(7) of FSMA (persons meeting criteria "A" and "B" are referred to herein as "Relevant Persons"). It is not directed at and may not be acted on by anyone other than a Relevant Person. Persons who do not fall within the definition of "Relevant Persons" above should not rely on this document, nor take any action upon it, but should return it immediately to the Company.

#### European Economic Area

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any Shares may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any Ordinary Shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to legal entities which are authorised or regulated to operate in the financial markets or, if not so authorised or regulated, whose corporate purpose is solely to invest in securities;
- (b) to any legal entity which has two or more of: (i) an average of at least 250 employees during the last financial year; (ii) a total balance sheet of more than €43,000,000; and (iii) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
- (c) to fewer than 100 natural or legal persons (other than "qualified investors" as defined in the Prospectus Directive); or
- (d) in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of Ordinary Shares shall result in a requirement for the publication by the Company or Liberum of a prospectus pursuant to Article 3 of the Prospectus Directive and each person who initially acquires or subscribes for any Ordinary Shares or to whom any offer is made will be deemed to have represented, warranted and agreed to and with Liberum Capital and the Company that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive.

For this purpose, the expression "an offer of any Ordinary Shares, to the public in relation to any Ordinary Shares, in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the Placing and any Ordinary Shares, to be offered so as to enable an investor to decide to acquire or subscribe for any Ordinary Shares, as the same may be varied in that relevant member state by any measure implementing the Prospectus Directive in that relevant member state and "Prospectus Directive" means the Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

In the case of any Ordinary Shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, such financial intermediary will also be deemed to have represented, warranted and agreed to and with Liberum and the Company that (i) the Ordinary Shares acquired by it have not been acquired or subscribed for on behalf of, nor have they been acquired or subscribed for with a view to their offer or resale to, persons in any Relevant Member State other than qualified investors, or in circumstances in which the prior consent of Liberum has been obtained to each such proposed offer or resale, or (ii) where Ordinary Shares have been acquired or subscribed for by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of those Ordinary Shares to it is not treated under the Prospectus Directive as having been made to such persons.

#### **United States**

This document is not, save in certain limited circumstances pursuant to applicable private placement exemptions, for distribution in or into the United States. The Ordinary Shares have not been and will not be registered under the Securities Act or with any securities regulatory authority of any state or other jurisdiction in the United States, and may not be offered, sold, pledged or otherwise transferred within the United States or for the account or benefit of US Persons, as defined in Regulation S under the Securities Act ("US Persons"), except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in compliance with any applicable states execurities laws.

The Ordinary Shares are being offered and sold (i) outside the United States to non-US Persons in reliance on Regulation S and (ii) inside the United States to US Persons reasonably believed to be institutional accredited investors ("Institutional Accredited Investors" or "IAIs") as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act who are also qualified institutional buyers ("QIBs") within the meaning of Rule 144A of the Securities Act, and who are also qualified purchasers ("Qualified Purchasers" or "QPs") as defined in the U.S. Investment Company Act of 1940, as amended (the "Investment Company Act"). Prospective investors are hereby notified that sellers of the Ordinary Shares may be relying on the exemption from the provisions of Section 5 of the Securities Act provided by an exemption from the registration requirements of the Securities Act.

Any reproduction or distribution of this document, in whole or in part, and any disclosure of its contents or use of any information herein by any person other than the addressee for any purpose other than considering an investment in the Placing Shares hereby is prohibited. Each offere of the Placing Shares, by accepting delivery of this document, agrees to the foregoing. The offer and sale of the Ordinary Shares and distribution of this document are subject to the restrictions set out in paragraph 20 of Part X of this document.

Prospective investors are also notified that, although the Company has not made a determination as to whether it is a PFIC (as defined in paragraph 20 of Part X of this document) for U.S. federal income tax purposes, there is a significant likelihood that it will be classified as a PFIC for U.S. federal income tax purposes. An investment in a PFIC may have materially adverse U.S. federal income tax consequences to a U.S. Holder, including subjecting the U.S. Holder to a greater tax liability than may otherwise apply and subjecting U.S. Holders to tax on amounts in advance of when tax would otherwise be imposed. A U.S. Holder generally may be able to make elections to avoid certain of the adverse U.S. federal income tax consequences derived from the PFIC regime, including making the "qualified electing fund" ("QEF") election or the "mark-to-market" ("mark-to-market") election in respect of an investment in certain PFICs. For further information, please see paragraph 4 of Part VI under the heading "There is a significant likelihood that the Company will be treated as a passive foreign investment company".

The Ordinary Shares have not been approved or disapproved by the SEC, any state securities commission in the United States or any other regulatory authority in the United States, nor have any of the foregoing authorities passed on or endorsed the merits of the Placing or the accuracy or adequacy of the information contained in this document. Any representation to the contrary is a criminal offence in the United States.

The Ordinary Shares are subject to restrictions on transferability and resale and may not be transferred or resold in the United States or to US Persons except as permitted under applicable US federal securities laws and as permitted as set forth in paragraph 20 of Part X of this document. Hedging transactions in the United States involving the Ordinary Shares may not be conducted unless in compliance with the Securities Act. Prospective investors should understand that they may be required to bear the financial risks of their investment for an indefinite period of time.

Section 4 of Part VI of this document contains details of certain risk factors which are relevant to prospective U.S. investors. Paragraph 20 of Part X also contains a detailed summary of certain other relevant U.S. considerations. Prospective U.S. investors should read these sections carefully.

#### **Notice to New Hampshire Residents**

NEITHER THE FACT THAT A REGISTRATION STATEMENT OR AN APPLICATION FOR A LICENCE HAS BEEN FILED UNDER CHAPTER 421-B OF THE NEW HAMPSHIRE REVISED STATUTES ("RSA 421-B") WITH THE STATE OF NEW HAMPSHIRE NOR THE FACT THAT A SECURITY IS EFFECTIVELY REGISTERED OR A PERSON IS LICENSED IN THE STATE OF NEW HAMPSHIRE CONSTITUTES A FINDING BY THE SECRETARY OF STATE OF NEW HAMPSHIRE THAT ANY DOCUMENT FILED UNDER RSA 421-B IS TRUE, COMPLETE AND NOT MISLEADING. NEITHER ANY SUCH FACT NOR THE FACT THAT AN EXEMPTION OR EXCEPTION IS AVAILABLE FOR A SECURITY OR A TRANSACTION MEANS THAT THE SECRETARY OF STATE OF NEW HAMPSHIRE HAS PASSED IN ANY WAY UPON THE MERITS OR QUALIFICATIONS OF, OR RECOMMENDED OR GIVEN APPROVAL TO, ANY PERSON, SECURITY OR TRANSACTION. IT IS UNLAWFUL TO MAKE, OR CAUSE TO BE MADE, TO ANY PROSPECTIVE PURCHASER, CUSTOMER OR CLIENT, ANY REPRESENTATION INCONSISTENT WITH THE PROVISIONS OF THIS PARAGRAPH.

#### Switzerland

The Placing Shares may not and will not be publicly offered or sold in Switzerland and neither this document nor any other solicitation for investments relating to the Company or the Placing Shares may be communicated or distributed in Switzerland in any way that could constitute a public offering within the meaning of Swiss law, in particular Article 652a of the Swiss Code of Obligations. The Placing Shares may be offered or sold in Switzerland only to selected individual investors in a way that will not result in the Placing Shares being publicly offered within the meaning of Swiss law. This document is not a prospectus within the meaning of Article 652a of the Swiss Code of Obligations and may not comply with the information standards required thereby. The Placing Shares will not be listed on any Swiss stock exchange or any other Swiss regulated market and this document may not comply with the information required or passed on to third parties without the Company's and Liberum's prior written consent. The Placing Shares have not been and will not be registered with the Swiss Financial Supervisory Market Authority (FINMA) or any other Swiss authority for any purpose whatsoever.

#### Australia

This document does not constitute a disclosure document under Chapter 6D of the Australian *Corporations Act 2001* ("Corporations Act") or a product disclosure statement under Chapter 7 of the Corporations Act and will not be lodged with the Australian Securities and Investments Commission. Notwithstanding the above, if this document is received in Australia any offer pursuant to it is void and incapable of acceptance to the extent that it has been received by any person who is not:

- (a) a 'sophisticated investor' under section 708(8) (a) or (b) of the Corporations Act;
- (b) a 'sophisticated investor' under section 708(8) (c) or (d) of the Corporations Act who has provided an accountant's certificate to the Company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act;
- (c) a 'professional investor' within the meaning of section 708(11) of the Corporations Act; or
- (d) a 'wholesale client' for the purposes of section 761G(7) of the Corporations Act (and related regulations) who has complied with all relevant requirements in this respect.

Ordinary Shares must not be offered for resale within Australia within 12 months of them being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

#### Forward looking statements

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 Company's intentions, beliefs or current expectations concerning, among other things, the Group's results of operations, financial position, liquidity, prospects, growth, strategies and expectations.

By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances. Forwardlooking 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, changes in regulation or government, changes in its business strategy, political and economic uncertainty and other factors discussed in Part VI.

Any forward-looking statements in this document reflect the Company'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 Company undertakes no obligation publicly to release the result of 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.

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# **KEY INFORMATION**

The following is a brief summary only and should be read together with the more detailed information and the financial data and statements and risk factors appearing elsewhere in this document.

# THE COMPANY AND ITS BUSINESS

The Company is a BVI registered holding company for the Group which is focused on managing, developing and constructing a world class iron ore project capable of mining, processing, transporting and exporting 45 Mtpa of iron ore from the Republic of Congo at full production. The Group owns two exclusive exploration licences for iron ore in the Lekoumou District, in the south west of the Republic of Congo; the Zanaga–Madzoumou Exploration Licence (500 sq km in area) and the Zanaga-Bambama Exploration Licence (500 sq km in area). The Company is currently completing a PFS, which it expects to complete in Q1 2011.

# **RESOURCE STATEMENT**

Based on drilling work carried out on a 25km stretch of the ore body up to 30 June 2010, SRK has calculated a JORC compliant resource for the Zanaga Project of approximately 3.34 billion tonnes.

The resource figures set out below have been extracted without material adjustment from the CPR contained at Part VII of this document and are presented in accordance with JORC.

	Resources					
	Indicated in	Fe	Inferred in	Fe	TOTAL in	Fe
	millions of	grade	millions of	grade	millions of	grade
	tonnes	(%)	tonnes	(%)	tonnes	(%)
North Zone	538	38.9	1,592	31.1	2,130	33.1
Central Zone	64	42.4	661	30.4	724	31.5
South Zone	-	-	483	33.1	483	33.1
Total	602	39.3	2,735	31.3	3,337	32.8

# **KEY STRENGTHS**

The Directors believe that the Zanaga Project has the following key strengths which differentiate it and help to position the Group's business for future success:

- large scale iron ore resource with significant upside potential;
- shallow, soft and rippable haematitic itabirite cap;
- potential to produce high quality products (including sinter fines);
- potential strategic partnership with Xstrata;
- experienced board and key group employees and consultants;
- supportive government and favourable investment climate;
- advantageous proposed port site; and
- low cost energy options.

# THE XSTRATA TRANSACTION

Xstrata currently holds, through one of its subsidiaries, an option to purchase a 50 per cent. plus one share interest in Jumelles BVI, the Company's subsidiary that currently holds 100 per cent. of the beneficial interest in the Zanaga Exploration Licences. As consideration for this option, Xstrata has committed up to US\$106 million to the Company, to be used to complete a PFS for the Zanaga Project. On completion of a PFS, Xstrata has 45 business days in which to exercise the option, the cost of which will be to fund a full BFS to be delivered to an international best practice standard and

in accordance with Xstrata's internal guidelines at a cost of at least US\$100 million or complete the BFS itself. Within 90 days of completion of a BFS, Xstrata has a right to acquire the Company's remaining 49.99 per cent. interest in Jumelles BVI and the Zanaga Project, at a price based on net present value, as determined in accordance with the Xstrata Transaction documents. The exercise of this right is not subject to Shareholder approval. Part II of this document contains a detailed summary of the Xstrata Transaction and section 3 of Part VI sets out the risk factors associated with the Xstrata Transaction.

# THE PLACING

The Company is seeking to raise approximately £31.06 million (before expenses) by way of the Placing of the New Shares. The Placing will comprise the issue by the Company of 19,907,629 New Shares and the sale of 19,907,629 Sale Shares by the Selling Shareholders. The Directors intend that the Placing and Admission will raise the Company's international profile and provide contingency funding in the event Xstrata does not exercise the Call Option. This will ensure the Group can satisfy the expenditure requirements of the Zanaga Exploration Licences for the near to medium term. For further information on the Placing, please refer to paragraph 11 of Part I of this document.

## THE BOARD AND KEY GROUP EMPLOYEES AND CONSULTANTS

The Company has one executive Director, Colin Harris, who is Project Director, and four nonexecutive Directors; Clifford Elphick, who is non-executive chairman, Michael Haworth, Clinton Dines and Dave Elzas. In addition, the Group has recruited a team of senior employees and consultants with significant experience working on exploration stage development projects. Each member of the team has a proven track record in the evaluation of iron ore projects in francophone Africa. For further information on the Board and key Group employees and consultants, please refer to Part III of this document.

## SUBSTANTIAL SHAREHOLDERS

Garbet and Guava are substantial shareholders of the Company. As a result of their substantial shareholding, Garbet and Guava will be able to exercise significant influence over all matters requiring Shareholder approval, including the composition of the Board, the timing and amount of dividend payments and the approval of general corporate transactions. Accordingly, Garbet and Guava have entered into a Relationship Agreement with the Company which regulates the relationship between them and the Company. The terms of the Relationship Agreement are summarised in paragraph 13.18 of Part X of this document.

# LOCK-INS

Each of the Directors and Garbet and Guava has undertaken to the Company and Liberum that, save in specified circumstances, they will not dispose of any interest in Ordinary Shares held by each of them for a period of twelve months from Admission. For further information on the lock-in arrangements please refer to paragraph 11 of Part X of this document.

# **RISK FACTORS**

Investors should note the risks associated with an investment in the Company as set out in Part VI of this document.

# PLACING STATISTICS

Placing Price	156 pence
Number of Ordinary Shares in issue prior to the Placing and Admission	254,934,212
Number of New Shares being issued pursuant to the Placing	19,907,629
Number of Sale Shares being placed on behalf of Selling Shareholders	19,907,629
Total number of Ordinary Shares being placed pursuant to the Placing	39,815,258
Number of Ordinary Shares to be issued to the LTIP on Admission	5,574,135
Number of Ordinary Shares in issue immediately following the Placing and Admission	280,415,976
Gross proceeds of the Placing	£62,111,802
Gross proceeds of the Placing to be received by the Company	£31,055,901
Gross proceeds of the Placing to be received by Selling Shareholders	£31,055,901
Market capitalisation of the Company following Admission at the Placing Price	£437,448,923

# EXPECTED TIMETABLE OF PRINCIPAL EVENTS

Admission expected to occur and dealings expected to commence in the Ordinary Shares	8.00 a.m. on 18 November 2010
Depositary Interests credited to CREST stock accounts	8.00 a.m. on 18 November 2010
Despatch of definitive share certificates for the Placing Shares	by 26 November 2010

# DIRECTORS, SECRETARY AND ADVISERS

Directors:	Clifford Thomas Elphick Colin John Harris Clinton James Dines Michael John Haworth Dave John Elzas
	all of:
	2nd Floor Wickham's Cay II PO Box 2221 Road Town Tortola British Virgin Islands
Company Secretary:	Elysium Fund Management Limited PO Box 650 2nd Floor No. 1 Le Truchot St Peter Port Guernsey Channel Islands GY1 3JX
Assistant Company Secretary:	GMG Secretarial Limited 2nd Floor Wickham's Cay II PO Box 2221 Road Town Tortola British Virgin Islands
Registered Office:	2nd Floor Wickham's Cay II PO Box 2221 Road Town Tortola British Virgin Islands
Nominated Adviser, Bookrunner and Broker:	Liberum Capital Limited Ropemaker Place, Level 12 25 Ropemaker Street London EC2Y 9LY
Legal adviser to the Company as to English law:	Charles Russell LLP 5 Fleet Place London EC4M 7RD
Legal adviser to the Company as to French and OHADA law:	Jeantet & Associes AARPI 87, Avenue Kléber 75784 16th Arrondissement Paris France

Legal adviser to MPD Congo S.A.U. as to French and OHADA law:	Frilet - Société d'Avocats 94 Boulevard Flandrin 75116 16th Arrondissement Paris France
Legal adviser to the Company as to Congolese law:	Maître Celestin M'foutou B.P. 5321 Pointe-Noire The Republic of Congo
Legal adviser to the Company as to BVI law:	Ogier LLP 41 Lothbury London EC2R 7HF
Legal adviser to the Company as to Mauritian law:	De Comarmond & Keonig 5th Floor, Chancery House Lislet Geoffrey Street Port Louis, Mauritius
Legal adviser to the Nominated Adviser:	Norton Rose LLP 3 More London Riverside London SE1 2AQ
Legal adviser to the Selling Shareholders:	Linklaters LLP One Silk Street London EC2Y 8HZ
Auditors and Reporting Accountants:	KPMG Audit plc 15 Canada Square London E14 5GL
Competent Person:	SRK Consulting Limited 5th Floor Churchill House 17 Churchill Way Cardiff CF10 2HH
Registrars:	Computershare Investor Services (BVI) Limited, Woodbourne Hall PO Box 3162 Road Town Tortola British Virgin Islands
Depositary:	Computershare Investor Services plc The Pavilions Bridgwater Road Bristol BS99 6ZZ
Website address:	www.zanagairon.com

# DEFINITIONS

The following definitions apply throughout this document, unless the context requires otherwise:

"2007 Mining Convention"	the mining convention entered into between the Republic of Congo and MPD Congo on 14 May 2007
"2010 Addendum"	Addendum n° 1 to the 2007 Mining Convention dated 8 September 2010 between the Republic of Congo and MPD Congo relating to the Zanaga Exploration Licences and the Zanaga Project
"Admission"	the admission of the Ordinary Shares, issued and to be issued pursuant to the Placing, to trading on AIM and such admission becoming effective in accordance with the AIM Rules for Companies
"AIM"	the AIM market operated by the London Stock Exchange
"AIM Rules"	the AIM Rules for Companies and the AIM Rules for Nominated Advisers
"AIM Rules for Companies"	the AIM Rules for Companies issued by the London Stock Exchange governing admission to and the operation of AIM, as amended or re-issued from time to time
"AIM Rules for Nominated Advisers"	the AIM Rules for Nominated Advisers issued by the London Stock Exchange setting out the eligibility, ongoing responsibilities and certain disciplinary matters in relation to nominated advisers, as amended or re-issued from time to time
"Amendment Agreements"	the amended and restated Call Option Deed and the amended and restated JVA dated 3 December 2009 between Xstrata, Garbet, Guava, Jumelles BVI and the Company
"Articles"	the articles of association of the Company, further details of which are set out in paragraph 6 of Part X of this document
"BFS"	a bankable feasibility study on the economic, financial and technical viability of developing an iron ore mine and related infrastructure in the Republic of Congo on the mineral deposits contained within the Zanaga Licence Area
"BVI"	the territory of the British Virgin Islands
"BVIBC"	a BVI business company incorporated under the BVI Act
"BVI Act"	the BVI Business Companies Act 2004, as amended from time to time
"Call Option"	the call option granted to Xstrata under the Call Option Deed to subscribe for 50 per cent. plus one share of the fully diluted and outstanding shares of Jumelles BVI
"Call Option Deed"	the call option deed dated 16 October 2009 between Garbet, Guava, Jumelles BVI and Xstrata (Schweiz), as amended by the relevant Amendment Agreement and including the Deed of Adherence and the Deed of Novation, further details of which are set out in Part II of this document

"Call Option Premium"	the aggregate sum of US\$50 million payable to Jumelles BVI by Xstrata under the Call Option Deed, which was utilised by the Company to finance phase I of the agreed work programme for the PFS plus any additional funding received in relation to phase II of the PFS
"Call Option Price"	has the meaning given to it in paragraph 3 of Part I of this document
"CEMAC"	the Central African Monetary and Economic Community
"City Code"	the City Code on Takeovers and Mergers, as amended from time to time
"Code"	the Internal Revenue Code of 1986, as amended, of the United States
"Company"	Zanaga Iron Ore Company Limited, a company incorporated in accordance with the laws of the BVI
"CPR"	the competent person's report prepared by SRK contained at Part VII of this document
"CREST"	the computerised settlement system to facilitate the transfer of title to or interests in securities in uncertificated form, operated by Euroclear United Kingdom and Ireland Limited
"CREST Regulations"	the Uncertificated Securities Regulations 2001 (SI 2001 No. 3755), as amended
"CRU Strategies"	CRU Strategies Ltd of 31 Mount Pleasant, London WC1X OAD
"Custodian"	Computershare Investor Services plc or a subsidiary or third party appointed by the Depositary under the terms of the Depositary Agreement summarised in paragraph 19.2 of Part X of this document
"Deed Poll"	a deed poll executed by the Depositary in favour of the holders of Depositary Interests from time to time
"Deeds of Adherence"	the deeds of adherence to the JVA and the Call Option Deed executed by the Company on 26 November 2009, further details of which are set in paragraph 4 of Part II of this document
"Deed of Novation"	the deed of novation dated 3 December 2009 between Garbet, Guava, Jumelles BVI, Xstrata (Schweiz) and Xstrata, further details of which are set out in paragraph 6 of Part II of this document
"Depositary"	Computershare Investor Services plc
"Depositary Interest Holder"	a holder of Depositary Interests
"Depositary Interests"	the dematerialised depositary interests representing the Ordinary Shares issued or to be issued by the Depositary
"Directors" or "Board"	the directors of the Company whose names are set out on page 8 of this document

"DTR"	the Disclosure Rules and Transparency Rules published by the Financial Services Authority
"DUP"	Déclaration d'Utilité Publique, which is a declaration of public benefit
"EGIS"	EGIS Engineering, a company registered in France
"EITI"	the World Bank's Extractive Industries Transparency Initiative
"Existing Ordinary Shares"	Ordinary Shares in issue prior to Admission
"Further Funding Letter"	the letter co-signed by the Zanaga Project director, Colin Harris, and Xstrata, to Garbet, Guava, Jumelles BVI and the Company regarding the agreed budget reallocation for phase II of the PFS, further details of which are set out in paragraph 7 of Part II of this document
"Garbet"	Garbet Limited, a company incorporated in accordance with the laws of the BVI
"Group"	the Company and its subsidiaries
"Guava"	Guava Minerals Limited, a company incorporated in accordance with the laws of the Republic of Mauritius
"Institutional Accredited Investors" or "IAIs"	has the meaning given by Rule 501(a)(1), (2), (3) or (7) of the Securities Act
"Investment Company Act"	the Investment Company Act of 1940, as amended, of the United States
"Heads of Agreement"	the heads of agreement dated 17 September 2009 entered into between Xstrata (Schweiz), Garbet and Guava in contemplation of the Xstrata Transaction
"JTS"	Jumelles Technical Services (UK) Limited, a company incorporated in accordance with the laws of England and Wales
"Jumelles BVI"	Jumelles Limited, a company incorporated in accordance with the laws of the BVI
"Jumelles M Limited"	Jumelles M Limited, a company incorporated in accordance with the laws of the Republic of Mauritius
"JVA"	the joint venture agreement dated 16 October 2009 between Garbet, Guava, Jumelles BVI and Xstrata (Schweiz), as amended by the relevant Amendment Agreement and including the Deed of Adherence and the Deed of Novation, further details of which are set out in Part II of this document
"Kew Gardens"	Royal Botanical Gardens, Kew, United Kingdom
"Liberum"	Liberum Capital Limited
"London Stock Exchange"	London Stock Exchange plc
"LTIP"	the ZIOC Long Term Incentive Plan, further details of which are set out in paragraph 12 of Part X of this document
"Member State"	a member state of the European Union

"Memorandum"	the Memorandum of Association of the Company, further details of which are set out in paragraph 6 of Part X of this document
"Mining Code"	the Congolese Mining Code, enacted by law $n^\circ$ 4-2005 dated 11 April 2005, and its decree of application, Decree $n^\circ$ 2007-274 dated 21 May 2007
"MPD Congo"	Mining Project Development Congo S.A.U, a company incorporated in the Republic of Congo
"New Proposed Port Area"	has the meaning given to it in paragraph 8 of Part I of this document
"New Shares"	the 19,907,629 new Ordinary Shares to be issued at the Placing Price by the Company pursuant to the Placing
"Official List"	the Official List of the UKLA
"OHADA"	Organisation pour "Harmonisation en Afrique du Droit des Affaires", which can be translated as "Organisation for the Harmonisation of Business Law in Africa"
"OoM Study"	Order of Magnitude Study conducted in respect of the Zanaga Project
"Ordinary Shares"	ordinary shares of no par value each in the Company
"PAPN"	Port Antonome de Point Noire Authority
"PFIC"	a passive foreign investment company, as defined in the Code
"Placees"	those persons subscribing for or purchasing Placing Shares at the Placing Price
"Placing"	the conditional placing by Liberum, as agent for the Company and the Selling Shareholders, of the Placing Shares at the Placing Price, pursuant to the terms of the Placing Agreement
"Placing Agreement"	the conditional agreement dated 17 November 2010 and made between the Company, the Directors, the Selling Shareholders and Liberum relating to the Placing, details of which are set out in paragraph 13.1 of Part X of this document
"Placing Price"	156 pence per Placing Share
"Placing Shares"	the 39,815,258 New Shares and Sale Shares which are the subject of the Placing
"PFS"	means a pre-feasibility study on the economic, financial and technical viability of developing an iron ore mine and related infrastructure in the Republic of Congo within the Zanaga Licence Area
"ProMet"	ProMet Engineers Pty Ltd
"Qualified Purchaser" or "QP"	has the meaning given by Section 2(a)(51) of the Investment Company Act
"R&H"	R&H Railway Consultants (Pty) Ltd

"Registrar"	Computershare Investor Services (BVI) Limited
"Sale Shares"	the 19,907,629 Ordinary Shares to be sold by the Selling Shareholders pursuant to the Placing
"Securities Act"	the Securities Act of 1933, as amended, of the United States
"SEC"	the US Securities and Exchange Commission
"Shareholder"	a holder of Ordinary Shares
"Selling Shareholders"	Garbet and Guava
"SGIO"	Société Générale d'Intérim et Opérations
"Subscription Agreement"	the subscription agreement dated 10 December 2009, further details of which are set out in paragraph 13.13 of Part X of this document
"SRK"	SRK Consulting Limited
"Synergy"	Synergy Global Consulting Ltd
"UK"	the United Kingdom of Great Britain and Northern Ireland
"UK Act"	the UK Companies Act 2006, as amended from time to time
"UK Corporate Governance Code"	the UK Corporate Governance Code published by the Financial Reporting Council in June 2010
"UKLA"	the United Kingdom Listing Authority, being the Financial Services Authority acting in its capacity as the competent authority for the purposes of Part VI of the Financial Services and Markets Act 2000
"uncertificated" or "in uncertificated form"	recorded on the register of Ordinary Shares as being held in uncertificated form in CREST, entitlement to which, by virtue of the CREST Regulations, may be transferred by means of CREST
"United States" or "US"	the United States of America, its territories and possessions, any State of the United States, and the District of Columbia
"U.S. Holder"	a Shareholder who, for U.S. federal income tax purposes, is a beneficial owner of Ordinary Shares and is (i) a citizen or resident of the United States; (ii) a corporation, or other entity taxable as a corporation, created or organised in or under the laws of the United States, any state therein or the District of Columbia; or (iii) an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source
"VAT"	UK value added tax
"Waiver Letter"	the letter dated 3 December 2009 from Garbet and Guava to Xstrata Services (UK) Limited in respect of certain matters of waiver and consent under the Call Option Deed and the JVA, further details of which are set out in paragraph 5 of Part II of this document

"Xstrata"	Xstrata Projects Pty Limited, a company incorporated in accordance with the laws of Australia
"Xstrata Offer"	an offer by Xstrata to the Company to sell all of its ordinary shares in Jumelles BVI in accordance with the provisions of the JVA
"Xstrata (Schweiz)"	Xstrata (Schweiz) AG, a company incorporated in accordance with the laws of Switzerland
"Xstrata Transaction"	the transaction between Garbet, Guava, Jumelles BVI, the Company and Xstrata, which primarily consists of the Call Option Deed and the JVA, further details of which are set out in Part II of this document
"Zanaga Mining Convention"	the 2007 Mining Convention, as amended by the 2010 Addendum
"Zanaga Exploration Licences"	the Zanaga-Madzoumou Exploration Licence and Zanaga-Bambama Exploration Licence
"Zanaga Licence Area"	the area of land in the Republic of Congo delineated by the co-ordinates set out in the Zanaga Exploration Licences
"Zanaga Project"	the business and operations of the Group in relation to the Zanaga Exploration Licences and related planned infrastructure, including the port and railway line
"Zanaga-Bambama Exploration Licence"	the exploration licence granted to MPD Congo pursuant to Decree n° 2007-263, dated 8 May 2007, and renewed pursuant to Decree n° 2010-338, dated 14 June 2010, designated as the "Bambama Permit" for iron ore, also in the department of Lekoumou, Republic of Congo; and
"Zanaga-Madzoumou Exploration Licence"	the exploration licence granted to MPD Congo pursuant to Decree n° 2007-263, dated 8 May 2007, and renewed pursuant to Decree n° 2010-339, dated 14 June 2010, designated as the "Zanaga-Madzoumou Permit" for iron ore, in the department of Lekoumou, Republic of Congo.

#### **TECHNICAL TERMS**

For interpretation of technical terms please see the glossary set out in the CPR on page 247 in Part VII of this document.

# CURRENCIES

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 currencies of the United States and the British Virgin Islands and references to "CFA franc" or "franc" is to the lawful currency of the Republic of Congo.

# PART I

# **INFORMATION ON THE GROUP**

# 1. INTRODUCTION

The Company is the holding company of the Group which, subject to the Xstrata Transaction, owns 100 per cent. of the Zanaga Project in the Republic of Congo. The Zanaga Project comprises the Zanaga Exploration Licences, being two exclusive exploration licences for iron ore: the Zanaga–Madzoumou Exploration Licence (500 sq km in area) and the Zanaga–Bambama Exploration Licence (500 sq km in area). The Zanaga Licence Area is approximately 250 km north-west of the capital Brazzaville and approximately 300 km north-east of Pointe Noire.

Based on drilling conducted to 30 June 2010, the Company has a JORC compliant Indicated and Inferred mineral resource of 3.34 billion tonnes at an average grade of 32.75% Fe. This includes 843 million tonnes of haematitic itabirite with an average grade of 38.45% Fe and 2.49 billion tonnes of magnetite with an average grade of 30.82% Fe. The Company intends to develop a 45 Mtpa iron ore production business to begin exporting from a newly constructed port at Pointe Noire by the end of 2016. Based on metallurgical testing conducted on the ore body to date, the Company is targeting the production of two high quality products: a 65% sinter product and a 67% Fe concentrate product, both with low deleterious elements.

A full PFS on the Zanaga Project and its associated infrastructure projects is being conducted and is expected to be completed by the end of Q1 2011. The PFS is being funded by Xstrata pursuant to the Call Option Deed, which grants Xstrata an option to purchase 50 per cent. plus one share in Jumelles BVI, the Company's 100 per cent. subsidiary that owns the Zanaga Exploration Licences. Phase I of the PFS cost US\$50 million and Xstrata has agreed to fund phase II of the PFS up to US\$56.49 million. Should Xstrata choose to exercise its option it shall be required to fund a full BFS to be delivered to an international best practice standard and in accordance with Xstrata internal guidelines or to carry out such a BFS at its own cost (if all shareholders in Jumelles BVI other than Xstrata consent and neither they nor Jumelles BVI nor any of its subsidiaries are prejudiced (financially or legally) as a result). Should Xstrata not exercise its option, the Company intends to use the Placing proceeds to continue development of the Zanaga Project in order to fulfil its agreed work programme expenditure commitments under the Zanaga Exploration Licences and the Zanaga Mining Convention although the Company would need to source additional funds in order to complete a BFS.

# 2. BACKGROUND TO THE GROUP

On 8 May 2007, MPD Congo, a Group company, was granted the Zanaga Exploration Licences, which were subsequently renewed for a further two years to 8 May 2012.

The Company was incorporated by Garbet and Guava in the BVI under the BVI Act on 19 November 2009 under the name of Jumelles Holdings Limited to act as the holding company of their respective interests in Jumelles BVI, which owns 100 per cent. of the Zanaga Exploration Licences through its subsidiaries, including MPD Congo, which was acquired by the Group in May 2007. On 1 October 2010, the Company changed its name to Zanaga Iron Ore Company Limited.

In addition to Jumelles BVI and Jumelles M Limited, both of which are intermediate Group holding companies, the Company has established an additional subsidiary, Jumelles Technical Services (UK) Limited, for the provision of technical and related services to the Group.

The structure of the Group's operations is set out below in Figure 1, together with details of the relevant countries of incorporation and the percentage of voting rights or securities beneficially owned or over which control or discretion is exercised, subject to the Xstrata Transaction as described in more detail in paragraph 3 below and Part II of this document.



Figure 1: Structure of the Group's operations

Between November 2008 and January 2009 a team of key employees and consultants, led by Colin Harris, was recruited to oversee the further development of the Zanaga Project. The majority of the Group's key employees and consultants are former Rio Tinto employees who worked on the Simandou iron ore project in Guinea.

Between January and September 2009, the Group undertook a detailed OoM Study (scoping study), the object of which was to carry out work programmes in all of the major facets of the Zanaga Project in order to be able to:

- make an informed decision on which options to assess in preparation for the commissioning of a pre-feasibility study; and
- identify any resource, infrastructure, product, processing, commercial, legal, environmental or social / community issues likely to delay or impact the development of the Zanaga Project.

Work commenced on the PFS in September 2009 and is expected to be finalised in Q1 2011.

In October 2009, Garbet, Guava and Jumelles BVI entered into the Xstrata Transaction (further details of which are contained in paragraph 3 below and in Part II of this document), pursuant to which Xstrata has an option (but not an obligation) to call for 50 per cent. plus one share in Jumelles BVI in return for financing the BFS.

In December 2009, the Company conducted a private placement with certain institutional investors, raising a total of US\$25 million, of which US\$16 million was used to re-purchase 10,526,315 Ordinary Shares from Guava (which were subsequently cancelled) with the balance being used to satisfy certain Group tax liabilities and for the general working capital requirements of the Company.

# 3. THE XSTRATA TRANSACTION

# Introduction

In October 2009, Garbet and Guava (Jumelles BVI's major shareholders at the time) and Jumelles BVI (the Company's wholly owned subsidiary) entered into a transaction with Xstrata comprising of two principal transaction documents:

• the Call Option Deed which gives Xstrata an option to subscribe for 50 per cent. plus one share of the fully diluted and outstanding shares of Jumelles BVI in return for funding a BFS with a minimum expenditure of US\$100 million; and

• the JVA which governs the operation, conduct and development of Jumelles BVI and the relationship between the Company and Xstrata, gives Xstrata the right to purchase the Company's interest in Jumelles BVI following completion of the BFS on an agreed valuation basis and sets out the terms on which Jumelles BVI will be funded following completion of the BFS.

Following the transfer by Garbet and Guava of their interests in Jumelles BVI to the Company, the Company executed the Deeds of Adherence to the Xstrata Transaction agreements.

This paragraph 3 contains only a brief outline of the Xstrata Transaction. Part II of this document contains a detailed summary of the Xstrata Transaction and section 3 of Part VI of this document sets out the risk factors associated with the Xstrata Transaction; prospective investors should read those sections carefully.

## Call Option Deed

Pursuant to the Call Option Deed, Xstrata acquired an option to subscribe for 50 per cent. plus one share of the fully diluted and outstanding shares of Jumelles BVI in consideration for investing the Call Option Premium, being an aggregate sum of US\$50 million to be utilised by the Company to finance phase I of the agreed work programme for the PFS of the Zanaga Project.

In general terms, phase I of the PFS covered the period up to the date the Call Option Premium was spent (that is, from September 2009 to June 2010). Phase II covers the period from the end of phase I to the completion of the PFS. Phase II of the PFS is expected to last from July 2010 to the end of Q1 2011.

After phase I, Xstrata could either (i) exercise the Call Option at any time from 16 October 2009 until 45 business days following completion of the PFS by paying the Call Option Price (defined below); (ii) confirm to Jumelles BVI that it is willing to contribute any additional amount required to complete phase II of the PFS; or (iii) notify Jumelles BVI that it is not willing to contribute the additional amount required to complete the PFS, in which case the Call Option Deed shall terminate with immediate effect.

Pursuant to the Further Funding Letter, and following completion of phase I of the PFS, Xstrata confirmed its decision to fund phase II of the PFS up to an agreed amount of US\$56.49 million, by way of additional Call Option premium. Xstrata will fund the costs of completing phase II of the PFS, although it may subsequently decide that it does not wish to exercise the Call Option and, in such circumstances it would not be required to fund the full US\$56.49 million.

If the Call Option is exercised, the amount payable upon the exercise of the Call Option by Xstrata (the "Call Option Price") will be:

- the aggregate costs of completing the BFS, in accordance with international best practice and Xstrata's internal guidelines, provided that such amount shall be greater than US\$100 million (excluding the Call Option Premium); or, alternatively, the costs associated with carrying out such a BFS itself (if all shareholders in Jumelles BVI other than Xstrata consent and neither they nor Jumelles BVI nor any of its subsidiaries are prejudiced (financially or legally) as a result); plus
- sums to repay all outstanding shareholder loans up to US\$25 million. Further details of the shareholder loans are set out in paragraph 13.15 of Part X of this document.

The Call Option Price must not exceed an amount that would result in it being a Class 2 Transaction for Xstrata plc for the purposes of the Listing Rules of the Financial Services Authority at the time of the exercise of the Call Option.

# JVA

If Xstrata exercises the Call Option, the JVA will become fully effective and Xstrata will be required to fund the costs associated with completing the BFS in accordance with international best practice and Xstrata's internal guidelines. Under the JVA, Xstrata has the right to buy all of the Company's shareholding in Jumelles BVI following completion of the BFS.

Pursuant to the JVA, Xstrata has undertaken to use its reasonable endeavours to complete the BFS at least three months prior to the expiry of the Zanaga Exploration Licences, assuming a second extension, subject to there not being a material adverse change.

Within 90 days of completion of the BFS (the "Xstrata Offer Period"), Xstrata may require the Company to sell all of its ordinary shares in Jumelles BVI in accordance with the provisions of the JVA. The exercise of this right is not subject to Shareholder approval. The offer notice must specify a cash price and the Company may elect to accept or reject the price stated in the offer notice. In the event that the price is rejected, the Company and Xstrata shall have 15 business days in which to agree on a price. If the parties are unable to reach agreement, they may refer the matter to an independent valuer who will determine a price based on the net present value of the Zanaga Project in accordance with the valuation terms of reference set out in the JVA and summarised in Part II of this document and the Company will be obliged to sell its shares in Jumelles BVI at this price.

After completion of the BFS and until the earliest of (i) the completion of an Xstrata Offer, (ii) the expiry of the Xstrata Offer Period, or (iii) confirmation from Xstrata that it will not make an Xstrata Offer, Xstrata will (for so long as a material adverse change has not occurred and is not continuing at that time) provide all funding required by Jumelles BVI.

Following this date, funding required by Jumelles BVI will, so far as possible, be provided out of (i) Jumelles BVI's available cash resources and project cash flows, (ii) external debt finance, or (iii) additional finance from the shareholders on arms' length commercial terms.

If the board of Jumelles BVI determines that shareholder finance is required, it may request such finance from the shareholders. If a shareholder fails to contribute the pro rata amount it is requested to contribute by Jumelles BVI, the other shareholders are entitled to meet any such shortfall and the shareholder who fails to contribute their pro rata amount will be diluted at Project NPV (as summarised in paragraph 3 of Part II of this document).

In the event of dilution, the Company will receive a preferred right, as summarised in Part II of this document, in the form of a note instrument, which ensures that the Company is not economically disadvantaged if an Xstrata entity issues debt by granting the Company the right to receive dividends which equal, pro-rata to its holding of ordinary shares from time to time, the interest payable on or the repayment of principal amount of any debt issued to the Xstrata entity.

If no Xstrata Offer has been made within the prescribed time limits, the marketing arrangements set out in the JVA (and described further in paragraph 3 of Part II of this document) will become effective once the Zanaga Project has reached the production phase. In such event the Company has the right to nominate or assign its equity share of production at market prices to an eligible customer.

# 4. IRON ORE ASSETS

# Overview

The Zanaga Project is located in the Lekoumou District, in the south west of the Republic of Congo. The deposit is close to the border with Gabon, approximately 300 km northeast of the port city of Pointe Noire and 250km northwest of the Congolese capital Brazzaville. Access to the deposit is possible from both Pointe Noire and Brazzaville by air, to the Group's laterite runway close to the mine site, and by road, via the national R9 road that runs through the Zanaga Licence Area and on to Gabon.



Figure 2: Location of the Zanaga Licence Area

Iron occurrences are believed to have first been discovered at the Zanaga Project in 1939 and were officially reported by a French geological survey in 1954. During the 1950s and 1960s, a number of exploration programmes were undertaken within the current Zanaga Licence Area. These were conducted by the Bureau Minier de la France d'Outre Mer in 1955, Erzkontur Ruhr between 1962 and 1964, the Bureau Minier Congolais in 1965, International Planning und Consulting G.m.b.H between 1966 and 1967 and the United Nations Development Agency ("UNDP") between 1967 and 1969. In 1983, Le Bureau de Recherches Géologiques et Minières reviewed all the previous work completed, but primarily focused on the UNDP programme.

#### **Geological Overview**

The Zanaga Licence Area is located within a (metamorphic) Precambrian "greenstone" belt in the eastern part of the Chaillu Massif in South Western Republic of Congo. The belt trends north-south and extends for over 47km in length, and is typically 0.5 to 3km in width. The mineralisation is hosted by metamorphosed volcano-sedimentary itabirites, and is interbedded with amphibolites and mafic schists. The contact with the crystalline basement is typically faulted and sheared. Regional metamorphism has resulted in the banded iron formation being transformed into magnetite itabirites with an enriched haematite dominated weathering "cap" and the basic volcanics into amphibolites.

The Zanaga Licence Area is composed mainly of itabirite/BIF lithologies, which is thought to originate from exhalative silica and iron-oxide-rich sediments. The magnetic itabirite has a very clear north-south trend, with easterly dips. The haematitic enrichment cap was formed as the result of the weathering and secondary enrichment of the itabirite/BIF. This process has led to the development of a number of types of iron enriched lithologies within the itabirites.

#### Licences

MPD Congo is the registered legal and beneficial titleholder of the Zanaga Exploration Licences, being two exclusive exploration licences for iron ore. At the appropriate time the Group intends to seek to convert the Zanaga Exploration Licences into exploitation licences. At this time the Group will be required to conclude an agreement with the government of the Republic of Congo and separately, pursuant to the Congolese Mining Code, the government is entitled to a minimum 10 per cent. free carried participating interest in the Zanaga Project. For further information please refer to paragraph 5 of section B of Part V.

## **Exploration History**

In May 2007, following the Group's acquisition of MPD Congo, the holder of the Zanaga Exploration Licences, the Group initiated an exploration programme aimed at confirming the historical work and assessing the mineral potential within the Zanaga Licence Area. Work undertaken between May 2007 and December 2008 included evaluation of Landsat Enhanced Thematic Mapper Satellite and SRTM Elevation data of the entire Zanaga Licence Area, select pitting and trenching, detailed ground mapping, diamond drilling totalling 4,758 metres and an airborne magnetic survey and interpretation. Results indicated a strong 47km long, north south trending magnetic anomaly with a source in the underlying magnetic itabirite, as illustrated in Figure 3 below.



Figure 3: Airborne magnetic anomaly map generated on the Zanaga Licence Area

The positive results from this initial exploration programme were sufficient to justify a more detailed exploration programme to better define the economic potential of the deposits. Consequently the Group completed its initial conceptual study in February 2009 and the OoM Study in September 2009. During these studies ground geophysical test work was carried out, which included utilisation of a ground resistivity technique that was shown to accurately define the contacts of the mineralised limbs.

Using the data from both the aeromagnetic and ground resistivity surveys to help determine drill site locations, the Company has drilled, as at 30 June 2010, approximately 31,482 metres in 388 reverse circulation (RC) boreholes and 11,224 metres in 80 diamond drill (DD) boreholes, including re-drilled holes, in three main areas covering 25km of the Zanaga Project (illustrated in Figure 4 below). As at 30 September 2010, the Group had drilled an additional 18,700 metres, which have not yet been included in the Zanaga Project's JORC resource but will be included in the PFS resource statement calculations.



Figure 4: Illustration of the Zanaga Project and the drilling zones

#### **Resource Statement and Metallurgy**

Based on drilling work carried out on a 25km stretch of the ore body up to 30 June 2010, SRK has calculated a JORC compliant resource for the Zanaga Project of approximately 3.34 billion tonnes.

The resource figures set out below have been extracted without material adjustment from the CPR contained at Part VII of this document and are presented in accordance with JORC.

	Resources						
	Indicated in	Fe	Inferred in	Fe	TOTAL in	Fe	
	millions of	grade	millions of	grade	millions of	grade	
	tonnes	(%)	tonnes	(%)	tonnes	(%)	
North Zone	538	38.9	1,592	31.1	2,130	33.1	
Central Zone	64	42.4	661	30.4	724	31.5	
South Zone	–	–	483	33.1	483	33.1	
Total	602	39.3	2,735	31.3	3,337	32.8	

Exploration work to date has indicated that the Zanaga Project is characterised by a cap of enriched haematitic itabirite mineralisation, which is on average 60 to 70 metres thick and overlies magnetite banded iron formation (BIF) protore, which, based on present drilling, appears to be open at depth. The mineralised sequence is comprised of canga, which is a hard compact haemetite goethite cap and is only present in a few areas, colluvium (COL), and the weathered itabirite units: Goethitic itabirite (ITG), friable itabirite (ITF), compact itabirite (ITC) and transitional itabirite (ITT). The weathered sequence observed at the Zanaga Project is typical of iron ore deposits with the surficial material showing an enrichment in iron above the protore due to a mass reduction and associated leaching of the silicate layers. Based on the preliminary metallurgical test work carried out to date, the Group is targeting a 65%. Fe sinter product and a 67% Fe concentrate product.

The Group is targeting total production of 45 Mtpa, 15 Mtpa of which is targeted to be a sinter product. The remaining 30 Mtpa of production is targeted to be a concentrate product, analysis of which suggests it will include ore with a top grain size of 300µm. Consequently, the Directors believe that the Group can produce and sell this as either a sinter blend concentrate or as pellet feed (which would require additional grinding). This provides the Group with optionality with respect to its concentrate product. As the haematite weathering profile and the mineralisation of the magnetite BIF are generally consistent along the 25km ore drill zone, the Directors believe it will be able to produce consistent sinter and concentrate products.

# 5. STRATEGY

The Group's long term strategy is to manage, develop and construct a world class iron ore project capable of mining, processing, transporting and exporting at a rate of 45 Mtpa of iron ore from the Republic of Congo at full production. The Group's next developmental milestone is the completion of the PFS, which it expects to accomplish by the end of Q1 2011. Further information on the PFS is set out below in "Work Programmes – PFS".

Following completion of the PFS, and subject to funding, the Company plans to proceed with a BFS to further define the technical and economic viability of the Zanaga Project to international bankable standards. If Xstrata exercises its Call Option it shall control Jumelles BVI and it shall be required to fund and implement a BFS (US\$100 minimum) as per the provisions of the Xstrata Transaction documents, which the Company will oversee as a significant investor in the Zanaga Project.

If Xstrata does not exercise its Call Option, the Company plans to fund and implement a BFS itself. In preparation for such circumstances, the Company, in conjunction with SRK, has prepared a detailed indicative work programme for completion of a BFS (the "BFS Work Programme"). It is estimated that this will cost US\$255.27 million. Further information on the BFS Work Programme". To implement the BFS Work Programme without Xstrata, it is envisaged that the Company will require further funding or a partnership with a strategic investor. In such circumstances, the Company intends to use the proceeds from the Placing to continue development of the Zanaga Project in order to fulfil its agreed expenditure commitments under the Zanaga Exploration Licences and the Zanaga Mining Convention. The Company, in conjunction Work Programme"). Further information on the Continuation Work Programme is set out in paragraph 6 below in "Work Programme".

In the event that an Xstrata Offer is made to the Company for all of the issued share capital of Jumelles BVI, the Company would, following completion of the Xstrata Offer, seek Shareholder approval for an appropriate course of action, be that a winding up and return of capital to Shareholders or a conversion of status to an investing company.

In addition, it should be noted that, subject to eligibility, the Company will seek to have its Ordinary Shares admitted to the Official List of the UKLA and to trading on the London Stock Exchange's Main Market for listed securities.

# 6. WORK PROGRAMMES

# PFS

The Group commenced the PFS in September 2009 which has resulted in total PFS related expenditures to 30 September 2010 of US\$64.37 million. It is expected to be completed by the end of Q1 2011 at a total PFS cost of up to US\$106.00 million. The PFS is being completed to Xstrata's internal standards which the Directors believe is in line with internationally accepted best practice.

The PFS was subdivided into two key phases. Phase I which was completed in June 2010 and phase II which is expected to be completed in Q1 2011. The CPR, contained in Part VII of this document, has been drafted on the basis of the Phase I drilling programme completed up to 30 June 2010. This includes a total drilled length of 42,706 metres, 11,224 metres of which came from 80 DD holes and

31,482 metres came from 388 RC holes. Further technical work is underway based on additional exploration activities completed up to 30 September 2010 comprising an additional 18,700 metres and an updated mineral resource statement will be published in the PFS in Q1 2011.

In addition to work on the mineral resource, the PFS will include an assessment of the economic and technical viability of the processes and infrastructure required by the Zanaga Project. In particular, SRK have produced a summary of the anticipated capital expenditures required for the Group to begin transporting and exporting iron ore at a rate of 45Mtpa. These estimates are being revised and updated as part of phase II of the PFS and are subject to change.

# Preliminary Capital Expenditure Estimate (excluding BFS costs)

	Capex (US\$m)
Mine site	2,644
Transport Corridor	2,074
Port	896
Power/Energy Transmission	214
TOTAL	5,828

Note: The capital expenditure estimates set out above have been extracted without material adjustment from the CPR contained in Part VII of this document. The estimated expenditures are based on studies, which are preliminary in nature and have a significantly lower level of accuracy and confidence associated with them than bankable feasibility studies. The Capital expenditure estimates set out above exclude contingencies of US\$986 million and EPCM costs of US\$634 million. The total including contingency and EPCM is US\$7,448 million.

# Post PFS

Should Xstrata not exercise the Call Option, the Group plans to commence the Continuation Work Programme as set out below, which it will implement while it seeks to raise additional funding for a BFS.

# BFS Work Programme

The Company intends, subject to the results of the PFS and subsequent funding, to complete a multidisciplinary BFS to bankable standards. The Company, in conjunction with SRK, has prepared the BFS Work Programme. It should be noted that this work programme is preliminary in nature and may be subject to significant change. In particular it does not reflect the views of Xstrata. Should Xstrata choose to exercise the Call Option and therefore be required to fund the BFS, there may be fundamental changes to the proposed BFS Work Programme to meet Xstrata's internal guidelines for feasibility studies.

The BFS Work Programme is focussed on the completion of the BFS in a 24 month period and will include the Zanaga ESIA study, which will be prepared in accordance with international standards and best practice. The estimated total required expenditure for the BFS Work Programme is US\$255.27 million, as set out further below. The BFS Work Programme includes a significant drilling programme focused on defining further resources in the Zanaga Licence Area, particularly to improve the reportable mineral resource category. The programme includes 68,400 metres of new drilling, 51,300 metres of which will be DD drilling and 17,100 will be RC drilling. Such a drilling campaign is estimated to cost US\$27.93m which includes all associated activities including preparation and assay, other consumables and labour.

The other major component of the BFS Work Programme includes the engineering studies to investigate the potential mine site, transport corridor and power related infrastructure costs required to bring the Zanaga Project to production of 45 Mtpa.

The table below sets out the anticipated costs of all the proposed elements of the BFS Work Programme. The figures have been extracted without material adjustment from the CPR contained at Part VII of this document.

	Costs (US\$m)
Operating Expenditure	
Exploration Drilling	27.93
Labour	34.44
Zanaga Camp	24.60
Engineering Studies	64.43
Environment/Community	10.00
Health and Safety	4.38
Commercial	8.46
Office/Travel	22.82
Subtotal	197.05
Contingencies	25.40
Total Operating Expenditure	226.61
Other Expenditure	
Capital Expenditure	19.37
Admission Costs	6.38
Subtotal	25.75
Contingencies	2.91
Total Other Expenditure	28.66
TOTAL	255.27

## **Continuation Work Programme**

The Continuation Work Programme is focused on ensuring the Company carries out the minimum development work required to comply with the current terms of the Zanaga Exploration Licences and the Zanaga Mining Convention and includes associated expenditures scheduled over an 18 month period. Accordingly, the development milestones achieved on completion of the Continuation Work Programme will be substantially limited when compared to those included in the BFS Work Programme.

The total estimated costs of the Continuation Work Programme are US\$57.3 million of which US\$50.3 million is classified as operating expenditures and US\$7.0 million provides for capital expenditures and costs related to Admission. The main focus of the Continuation Work Programme is to carry out further exploration drilling on the Zanaga Licence Area. It is planned that the Company will drill a further 19,344 metres, 3,900 metres of which shall be DD drilling and 15,444 metres shall be RC drilling, which is expected to cost US\$7.9 million in total. Labour costs for the Continuation Work Programme are expected to be US\$16.9 million.

# 7. MINE DEVELOPMENT

A PFS assessment of the Company's mine infrastructure requirements is currently being undertaken by WSP, EGIS, ProMet and SRK. The PFS will include the development of preliminary infrastructure layouts at each of the pit locations as well as developing infrastructure layout for the central pit administration area, worker village, processing plants and equipment workshops, together with appropriate capital expenditure and operating expenditure costs to PFS level.

The base case mining method for the Zanaga Project is a conventional truck and shovel methodology with standard open pit operations: drill and blast, excavate and load and haul. Free dig techniques are assumed to be applicable for the COL, ITC and ITF, with all other material requiring drilling and blasting. When the ore is crushed, sized and stockpiled it will then be transported on a series of conveyors to the pit's central processing facility. Waste will be transported by haul truck to the waste dumps for each pit.

The mining site's planned central processing facility has been designed to process two products: a haematite sinter product (65% Fe) and a high ferrous (67% Fe) predominantly magnetite concentrate. Based in the initial laboratory test results, preliminary assessments suggest two distinct process routes: a haemetite circuit to treat the COL, ITG and ITF and an itabirite circuit to treat the ITC, ITT and BIF. For further information on the haematite and itabirite processes please refer to the CPR in Part VII of this document.

# 8. INFRASTRUCTURE

## Mine Site Infrastructure

The Zanaga camp was first established to support the initial conceptual study and the OoM Study and has been significantly expanded to support the PFS work programme. It is located just off the national R9 road that runs north to the border with Gabon. The camp currently comprises accommodation, offices, kitchen facilities, equipment maintenance facilities, a sample processing laboratory, a niton analytical facility, core storage and assessment facilities, medical facilities, generators, fuel storage, potable water system, sewerage system and communication systems. The camp can accommodate up to 120 people, made up of management, medical, catering, drillers, geologists, machinery operators, maintenance staff and visitors who are assisted by a local workforce of up to 350 people. As part of the development plan for the Zanaga Project, the camp will be relocated in 2011 to a site away from the ore body and closer to the Group's Lefoutou airstrip. Construction of the new camp is planned to begin in 2011.

The Group has upgraded, developed and continues to maintain in excess of 60km of road network across the mineralised zone and the surrounding areas. The Group has also rehabilitated a fully certified and audited 1200 metre laterite airstrip, approximately 3km west of the current camp. Presently there are 2-3 supply flights a week carrying personnel and freight from Pointe Noire. Runway landing lights and a visual PAPI landing system are being installed to allow for 24 hr emergency flights. All aircraft used by the Group are audited on a regular basis to international standards.

# **Offices and logistics Bases**

The Group's Congolese head office is located in the central town area of Pointe Noire, the Republic of the Congo's main harbour town and import–export centre. In close proximity to its head office, the Group has a logistical support base to ensure as far as possible that project related equipment and supplies are transported and delivered to the Zanaga Project in an ongoing and uninterrupted manner, which is especially important during the wet season. The Group also has a representative office in the central town area of the capital of Brazzaville, close to where the relevant central government ministries and departments are situated.

#### Rail

It is expected that the iron ore mined at the Zanaga Project will be processed on site and then transported by train to the Group's proposed port site near Pointe Noire. As part of the OoM Study that was finalised in September 2009, R&H were retained to undertake a high level study for the transportation of iron ore from the town of Zanaga to a new port near Pointe Noire via either existing or newly developed rail infrastructure. The objective was to evaluate the technical viability of the required infrastructure as well as to determine preliminary capital and operating cost estimates. R&H reviewed a total of eight options on four different routes and it was concluded that it would be in the best interests of the Company to construct a new railway rather than to use or upgrade any existing railway infrastructure in the Republic of Congo.

EGIS have consequently been engaged to carry out a detailed study into a standalone railway project as part of the PFS and have proposed the preliminary rail layout set out in Figure 5 below.



Figure 5: Proposed preliminary rail layout

The proposed length of the railway from process plant to port is approximately 350km, although this figure is expected to change as EGIS continues with their optimising process based on the receipt of more accurate LIDAR topographic data. It is currently envisaged that the railway construction will involve approximately:

- 385 km of standard, single track standard gauge rail line;
- 88 million m<sup>3</sup> of earthworks;
- 1050 hydraulic structures with 350 box culverts, 700 spiral wound steel culverts and approximately 700 km of ditches and concrete gutters; and
- 49 bridges totalling approximately 7,900 metres.

It is proposed that eight trains will travel the route daily comprising 136 bottom dumping ore wagons each hauled by four 4,300 HP diesel locomotives. With the railway expected to be operational 350 days per annum, it is proposed that the railway will support the transport of 51 million tonnes wet of iron ore per annum. The Zanaga Mining Convention envisages that the Zanaga Project will be declared a project of national benefit and the government of the Republic of Congo has undertaken, amongst other things, to take all steps required in order to declare the land areas within the transport corridor to be of public benefit. Such a declaration would enable the government to carry out a process to expropriate the land required by the Zanaga Project and place such land at the disposal of the Group in order to build the infrastructure, including the railway line, required for the realisation of the Zanaga Project.

EGIS has estimated the capital costs of the current planned railway route, taking into account worldwide construction, maintenance and operating costs for heavy haul railways. Allowance has been made for the expected difficulties of terrain and vegetation although more detailed topographical and geotechnical surveys are required to produce a more accurate cost estimate. The total Capex estimate for the Zanaga Project transport corridor (excluding contingencies and EPCM) is currently approximately US\$1,746 million. In addition, rolling stock costs are estimated at US\$266 million including contingencies and EPCM. Operating and maintenance costs are estimated to be approximately US\$4.91 per tonne. The following table summarises the major proposed cost items for the railway project and the figures have been extracted without material adjustment from the CPR contained at Part VII of this document.

	Capex (US\$m)
Mobilisation/demobilisation	173
Preliminary works/ground preparation	37
Earthworks	605
Pavement/foundation layers	101
Drainage and hydraulic structures	297
Structure	326
Railway track	207
Subtotal	1,746
Contingencies (15%)	262
EPCM (5%)	87
Total	2,095

Note: The capital expenditure estimates set out above have been extracted without material adjustment from the CPR contained in Part VII of this document. The estimated expenditures are based on studies, which are preliminary in nature and have a significantly lower level of accuracy and confidence associated with them than bankable feasibility studies. The estimates above exclude the cost of rolling stock, estimated to be US\$266 including contingency and EPCM.

#### Port

In February 2008, the Port Autonome de Pointe Noire Authority ("PAPN") granted the Group provisional "occupational reservation rights" in respect of a surface area of approximately 150 hectares of land situated approximately 3km north of the existing public port at Pointe Noire (the "Initial Port Area"). EGIS was subsequently commissioned in the course of 2010 as part of the PFS to evaluate the possible port infrastructure options for the Zanaga Project. Based on the geotechnical and bathymetric studies conducted for the Group it appears that the Initial Port Area and adjacent seashore is not the optimal location for the proposed port area. As a result, the Group is seeking an allocation of a larger, more suitable port area (and adjacent seashore) of approximately 700 hectares situated 9km north of the existing public port at Pointe Noire (the "New Proposed Port Area"). The PAPN is in the process of finalising the formal expropriation procedures for the purposes of enlarging the Pointe Noire Industrial Development Zone in respect of a land area that incorporates the New Proposed Port Area. In the meantime, the PAPN has granted the Group authority to conduct onshore and offshore seismic surveys, some geophysical and geotechnical testwork as well as oceanographic and meteorological sampling studies in the New Proposed Port Area. The PAPN has requested that the results of such studies be communicated to them on a timely basis. Once the PAPN's formal expropriation of the New Proposed Port Area is finalised, it is the Group's intention to then formally request that it be granted "occupational reservation rights" in respect of the New Proposed Area wherafter it will be necessary to transform such rights over the area into an Authorisation d'Occupation Temporaire, which would form part of a broader port concession agreement to be entered into between the Group and the PAPN. The proposed port layout for the New Proposed Port Area is set out in Figure 6 below:



Figure 6: Proposed port layout for the New Proposed Port Area

The Directors believe the New Proposed Port Area offers the Zanaga Project a number of advantages. The port site is located close to the existing public port at Pointe Noire and, subject to the expropriation procedure outlined above, will be under the jurisdiction of the PAPN. The site is also protected by a natural headland, removing the need to construct a breakwater. Marine mapping has suggested that limited dredging and a 2km trestle will be required in order to access water with a depth in excess of 20 metres. As the area is currently largely uninhabited, development of the site should only involve minimal community displacement and there is significant potential for further industrial development on surrounding sites should it be deemed economically advantageous to further process the iron ore.

EGIS has estimated the capital costs of the development of the New Proposed Port Area, taking into account world wide construction, maintenance and operating costs for such projects. Allowance has been made for the expected difficulties although further topographical and geotechnical surveys are required to produce a more accurate cost estimate. EGIS have prepared a two phase construction programme for the port infrastructure. On completion of phase 1, the port will be capable of loading 180,000 dwt ships and handling 45 Mtpa of dry ore. Phase 2 will upgrade the port facilities to accommodate 250,000 dwt ships and is expected to cost US\$25 million. With additional dredging, the Directors believe that the New Proposed Port Area could be upgraded in order to accommodate larger VLOCs, although to date no reports have been commissioned. The total current Capex estimate for phase 1 of the port (excluding contingencies and EPCM) is approximately US\$316 million, while operating costs are estimated to be approximately US\$1.31 per tonne. The following table summarises the major proposed capital expenditure for phase 1 of the port project. The figures have been extracted without material adjustment from the CPR contained at Part VII of this document.

Capex (US\$m)
221
43
52
316
47
73
436

Note: The capital expenditure estimates set out above have been extracted without material adjustment from the CPR contained in Part VII of this document. The estimated expenditures are based on studies, which are preliminary in nature and have a significantly lower level of accuracy and confidence associated with them than bankable feasibility studies.

## Energy

The Republic of Congo is a significant petroleum exporter but suffers from a lack of investment in infrastructure, particularly in regard to energy distribution. Consequently, the Company has analysed the power requirements of the Zanaga Project and its related infrastructure to investigate the potential for a secure in-country power supply to fulfil its needs. In doing so, the Company has retained both Landa Consulting Limited and, more recently, EGIS to evaluate technical feasibility of the conceptual mining infrastructure facilities (mine, transportation and processing) from an energy viewpoint.

Initial estimates indicate that the power demands at the mine site will be approximately 300MW at full production capacity. EGIS has focussed particularly on identifying a secure cost effective power supply for the mine site while meeting the lead time requirements for the proposed increase in mining operations. In selecting the optimum supply options, EGIS has had to bear in mind the necessary trade-off between the Company's desire for security of supply and the actual cost of supply.

For the mine site, the principal options comprise:

- power generation by heavy fuel oil or diesel oil using either gas combustion turbines or diesel engines, with the latter probably favoured due to their enhanced efficiency on part load and also the de-rating of gas turbines in warm climates; or
- electric grid power supply through purchase from Compagnie Electrique du Congo.

The estimated power requirement for the port is 20MW. The preferred option is grid supply from Societe National d'Electricite, the national power authority in the Republic of Congo, to a dedicated substation at the site.

There have been a number of plans to upgrade the Republic of Congo's power infrastructure in recent years. An example of this is Eni's plans to upgrade its 150MW gas fired power station in Port Noire to 300MW, and then 450MW (subject to demand). The Directors believe that this, together with the availability of stranded natural gas, will help provide the Zanaga Project with low cost power options.

#### 9. ENVIRONMENTAL, SOCIAL AND COMMUNITY CONSIDERATIONS

The Group places the highest priority on the health and safety of its employees, respect for the environment and active engagement with the local communities in which it operates. The Group strives to act as a good corporate citizen and its policies reflect and will continue to reflect its commitment to social responsibility and sustainable development. In particular, the Group has committed, under the 2010 Addendum, to undertake an Environmental and Social Impact Assessment (ESIA) of the Zanaga Project which not only satisfies the requirements of the regulations of the Republic of Congo but also meets the standards of best international social and environmental impact assessment practice, as developed by the International Finance Corporation.

Over the past two years the Group has appointed a number of internationally recognised companies and organisations to prepare for the ESIA and to monitor the effects of the Group's activities on the environment and communities surrounding the Zanaga Project site. The environmental and social baseline studies programme for the Zanaga Project began in 2008 and have included the 2009 OoM Study and the PFS. These investigations focussed on the socio-economic and biodiversity characteristics of the area around the ore deposit and have included: social studies; studies on terrestrial biodiversity; water studies; freshwater aquatic studies at the mine site and along the transport corridor; marine studies at the port site; soil mapping; a noise baseline study; and an air quality baseline study. In general, the studies at the mine site have been detailed while those of the port area and along the transport corridor have been at a desk-top level coupled with limited field work for social, water (surface and groundwater), soil and sediments and freshwater aquatic aspects.

In September 2010, the Group embarked on the formal environmental authorisation process as required by the 2010 Addendum. This was marked by the Group's submission of a framework terms of reference for the ESIA to the Congolese Minister for the Environment. The Directors believe it will take approximately six months to finalise the ESIA terms of reference as both a consultation with the government and a public review are required. The current schedule for completion of the ESIA assumes a 10 month programme after which the ESIA will be subject to a public review and a technical review commissioned by the government of the Republic of Congo. It is anticipated the ESIA will be completed during Q4 2012.

# **Environmental matters**

As part of its commitment to environmental matters, the Group engaged Kew Gardens in 2008 to undertake a botanical inventory at the Zanaga Project. Their baseline studies have identified about 900 plant species in the vicinity of the mine site. Many of these have not been recorded before, which can be attributed to the fact the Republic of Congo is probably the most poorly botanically known forested country in Tropical Africa and there is a paucity of previous botanical survey work in the Chaillu Massif forest area. The botanists currently consider that it is unlikely that any of the species identified are actually endemic to the Zanaga Licence Area, but further work is required to confirm this.

Habitats in the Republic of Congo are considered to be important for the conservation of large mammals in Africa. They feature an abundance of mammals including primates, such as gorillas and chimpanzees, forest elephants and African buffalo. They are also important for the conservation of small mammals, birds, amphibians, reptiles, and invertebrates. The moist forests that occur on the Chaillu Mountains and the Mayombé Mountains are known to be areas of high biodiversity and particularly rich in animal life. In 2009, the Group commissioned an independent expert to carry out a wildlife survey for the Zanaga Licence Area which provided insight on the conservation status of the mine site, habitat quality and human impact. Twenty-one species of mammals have been recorded in these studies, including several on the Red List (internationally threatened species) of the IUCN (International Union for the Conservation of Nature) such as gorilla, chimpanzee, elephant, and giant pangolin. Other species included four monkey species, various forest antelopes, forest buffalo, and red river hog. The results of the ornithological inventory showed that at least 180 bird species in 39 families occur in the Zanaga Licence Area. The human impact on habitats in the Zanaga Licence Area is high: previous and current logging activities have created a network of access roads in much of the area, which has facilitated access by commercial hunters. It has been found that the hunting, which is mainly for commercial gain, is most abundant near villages and along the Ogooué river. The survey has recommended a number of steps to implement to mitigate this threat and the threat of increased water pollution. Surveys of the marine and coastal habitats around the proposed site of the port terminal north of Pointe Noire have indicated the site appears to be important to the nesting of Olive Ridley turtles, which are an endangered species.

The governments of both Gabon and the Republic of Congo recognise the conservation importance of the Batéké Plateau on which the Zanaga Licence Area is located: the government of Gabon having created the Batéké Plateau National Park in 2002, and the government of the Republic of Congo is currently going through the process of creating another National Park on the Congolese side of the border, which will be named as the Ogooué-Leketi National Park. The Zanaga Exploration Licences lie close to the west of the easternmost boundary of the proposed Ogooué-Leketi National Park. The two National Parks will form a contiguous trans-boundary area of over 6,000 sq km. The government of the new national park. The proposed creation of this park is viewed as a positive for the Zanaga Project and is expected to provide a number of additional options to the Zanaga Project's environmental strategy.

# Social and Communities

The Group recognises the critical importance of the social and community aspects of the Zanaga Project. In 2009, the Group engaged Synergy to develop a social study to determine the Zanaga Project's effect on local communities. The study's four main objectives were to:

- provide a baseline to monitor changes and impacts;
- identify fatal flaws/high and extreme risks;
- develop a management plan for the Zanaga Project's work program; and
- provide a basis for ongoing community engagement.

The focus of the study was to assess the impact on the directly affected communities located in and around the Zanaga Licence Area. Studies of the communities likely to be affected by the transport route and marine terminal developments will commence when decisions on preferred alignment of the railway line have been taken.

The communities in the vicinity of the mine site are located along the Sibiti (Republic of Congo) to Franceville (Gabon) laterite road along the crest of the ridge that runs through the Zanaga Licence Area. There are 8 villages, with a total population of between 3,000 and 3,500, in the possible footprint of the mine. The total population of the villages has increased by about 4% in the last year.

The Zanaga Licence Area is located in an area with high levels of poverty, which is compounded by weak public services. There is limited access to schools and healthcare locally. There is also lack of proper sanitation facilities. However, there is relatively good access to adequate drinking water. Each village has at least three springs which provide drinking water throughout the year. Education levels in the communities are low. Very few individuals have secondary, high school, university or vocational qualifications. Despite these difficulties, the Directors believe the Zanaga Project has the potential to be a driver for significant positive development locally and nationally and significant risk areas can be managed relatively easily.

In order to better manage interaction with local communities in and around the Zanaga Licence Area, the Group has implemented a number of social programs including water utilisation and capacity and the rehabilitation of local schools. In addition, the Group has developed a standard Social Investment Agreement to be signed by the chiefs of the local villages defining responsibilities of both parties related to the community programmes. This voluntary contract allows the local communities to fully understand what the Company intends to do in the Zanaga Licence Area and surrounding areas and how it proposes to benefit local communities in a co-operative reciprocal, rather than unilateral, manner. This contract was developed in conjunction with both local and foreign sociologists.

# 10. KEY STRENGTHS

The Directors believe that the Zanaga Project has a number of key strengths which differentiate it and help to position the Group's business for future success.

#### Large Scale Iron Ore Resource with Significant Upside Potential

The Group has a JORC iron ore mineral resource classification of 3.34 billion tonnes at an average grade of 32.75% Fe. This includes 843 million tonnes of haematitic itabirite with an average grade of 38.45% Fe and 2.49 billion tonnes of magnetite with an average grade of 30.82% Fe. This JORC iron ore resource has been calculated by SRK based on the exploration work completed to 30 June 2010, which has been conducted on only 25km of a known 47km strike length of magnetite mineralisation. In addition, the average depth (thickness) of mineralisation used for the calculation of the present JORC resource is on average approximately 250 metres below surface, whereas geological correlations and deeper diamond drill holes strongly indicate that the main limbs are open at depth giving potential for increased resources over the currently targeted 25km strike length. Consequently, the Directors believe there is significant potential for JORC resource enlargement at the Zanaga Project. However, even without this additional resource, the Directors believe that the Zanaga Project's JORC resource will support their targeted production of 45 Mtpa for at least 30 years.

## Shallow, Soft and Rippable Haematitic Itabirite Cap

The haematatic itabirite mineralisation, which can be found within the Zanaga Licence Area, is present below a thin soil horizon and based on the current resource model, the average depth of the COL, ITG, ITF, ITC and ITT is approximately 60 metres. SRK's assessment is that the haematitic weathered oxide layer containing COL, ITG and ITF could be excavated by ripping to an average vertical depth below surface of approximately 40 metres. The ITC may be excavated by heavy ripping to some depth below these levels; however the abrasive nature of the materials may determine that it is best to loosen the materials by light blasting before digging. Conventional drilling and blasting of the BIF, ITT and a proportion of the ITC is envisaged.

# Potential to Produce High Quality Products (including Sinter Fines)

Preliminary metallurgical testwork completed by ProMet provides an indication that the mineralisation can target production of both a high quality and consistent sinter fines product and an iron ore concentrate with marketing optionality. The Group is targeting 15 Mtpa of a sinter fines product with 65% Fe content and low deleterious elements. The Group is also targeting production of 30Mtpa of an iron ore concentrate with 67% Fe content and low deleterious elements, which it is thought will include material with a top size of 300µm, which are generally coarser than those found in most pellet feed products. Consequently the Company anticipates it will be possible to use this product for either blending into sinter feed or as a pellet feed (which would require additional grinding).

# Potential Strategic Partnership with Xstrata

In the event that Xstrata exercises the Call Option to acquire 50 per cent. plus one share of Jumelles BVI, the Company will have a strategic partnership in respect of the Zanaga Project with a major mining company. In addition, Xstrata will be responsible for financing the BFS of the Zanaga Project and if the Zanaga Project proceeds to production, and the Company maintains an equity stake in the Zanaga Project, the Company has the right to assign to eligible customers the Company's proportionate equity share of production at market related prices and contract terms.

#### Experienced Board and Key Group Employees and Consultants

The Zanaga Project team is led by Colin Harris, who was previously the Project Director for Rio Tinto's Simandou iron ore project in Guinea, West Africa. He has built a team of key employees and consultants with significant experience working on exploration stage development projects. Each member of the team has a proven track record in the evaluation of iron ore projects in francophone Africa. In addition, the Company has a well balanced Board with experience in the evaluation and development of mining projects and of managing public companies listed in London.

#### Supportive Government and Favourable Investment Climate

The Republic of Congo has a well-developed hydrocarbon industry and is actively encouraging international investment and the further development of its natural resources sector through its participation in the EITI. Eni S.p.A and Total S.A. have been operating in the Republic of Congo for 30 years and Eni S.p.A has built a 150MW gas fired power station near Pointe Noire.

Presidential elections were held in July 2009 and the incumbent President of the Republic of Congo, Denis Sassou Nguesso, was re-elected with a large majority for an additional seven-year term. The Directors believe that the Group has an open and constructive relationship with all levels of government and that it has the support of the government for its activities relating to the Zanaga Project. The Zanaga Mining Convention envisages that the Zanaga Project will be declared a project of national benefit and the government of the Republic of Congo has undertaken, amongst other things, to take all steps required in order to declare the land areas within the transport corridor to be of public benefit. Such a declaration would enable the government to carry out a process to expropriate the land required by the Zanaga Project and place such land at the disposal of the Group in order to build the infrastructure, including the railway line, required for the realisation of the Zanaga Project. This illustrates the importance the government places on the Group's investment in the Zanaga Project.

#### Advantageous New Proposed Port Site

As discussed in paragraph 8 above, the New Proposed Port Site is located 9km north of the existing public port at Pointe Noire and, subject to the expropriation procedure outlined in paragraph 8, it will be under the jurisdiction of the PAPN. From a cost perspective, the site is protected by a natural headland, removing the need to construct a breakwater. Marine mapping has suggested that limited dredging and a 2km trestle will be required in order to access water with a depth in excess of 20 metres. Access trestles and channel dredging have both been major issues on other new port developments in West Africa. As the area is currently largely uninhabited, development of the site should only involve minimal community displacement and there is significant potential for further industrial development on surrounding sites should it be deemed economically advantageous to further process the iron ore.

## Low Cost Energy Options

Until recently, the majority of the Republic of Congo's natural gas has had to be vented or flared due to a lack of infrastructure. However, as a result of the government's "zero flaring" programme, projects such as Eni's new 150MW power station in Pointe Noire, together with the proposed enlargement to 300MW or 450MW (subject to demand), have been promoted to utilise the country's gas production. The Directors believe that Eni's new power station will result in excess power production capacity in the Republic of Congo and may provide for relatively low cost power options in the future. In addition, the Directors are aware that the country's gas reserves could also provide a steady supply of one of the key components of iron ore pellet production, at relatively low cost, should further beneficiation of the iron ore be deemed economically advantageous to the Group.

# 11. THE PLACING

The Company is seeking to raise approximately £31.06 million (before expenses) and the Selling Shareholders are seeking to raise approximately £31.06 million by way of the Placing. The Placing will comprise the issue by the Company of 19,907,629 New Shares and the sale of 19,907,629 Sale Shares by the Selling Shareholders (9,953,814 of which are being sold by Garbet and 9,953,815 by Guava). Liberum has agreed, pursuant to the Placing Agreement and conditional, *inter alia*, upon Admission, to use its reasonable endeavours to place the Placing Shares at the Placing Price with investors. The Placing has not been underwritten.

Admission and dealings in the Ordinary Shares are expected to commence at 8.00 a.m. on 18 November 2010.

The New Shares will be in registered form and will be issued credited as fully paid and will, when issued, rank in full for all dividends and other distributions declared, paid or made on the Ordinary Shares (including the Sale Shares) after Admission.

Further details of the Placing Agreement are set out in paragraph 13.1 of Part X of this document.

# 12. REASONS FOR THE OFFER AND USE OF PROCEEDS

The Company intends to seek Admission to increase its international profile and to raise contingency funding in the event that Xstrata does not exercise the Call Option to ensure the Group can satisfy the expenditure requirements of the Zanaga Exploration Licences for the near to medium term. The net proceeds of the Placing of the New Shares will be used by the Company to ensure that if Xstrata does not exercise the Call Option on completion of the PFS, the Company will be able to fund the Continuation Work Programme to fulfil its work programme commitments under the Zanaga Exploration Licences and the Zanaga Mining Convention. It is estimated that the Continuation Work Programme will cost US\$50.3 million, excluding capital expenditures and IPO costs (US\$7 million). If Xstrata exercises its Call Option following completion of the PFS, the net proceeds of the Placing will be used by the Company for its ongoing working capital requirements and in overseeing the development of the Zanaga Project.

# 13. CURRENT TRADING AND PROSPECTS

On Admission, the Company will have cash resources of approximately US\$57.3 million. The Company does not currently generate operating revenue. The Directors believe that the Company is well placed to enhance the value of the Group through further exploration and development of the Zanaga Project.

In the event that Xstrata exercises the Call Option, the principal business of the Group will comprise managing the Group's interest in the Zanaga Project, which will be controlled by Xstrata at both a shareholder and director level, and monitoring the preparation of the BFS. In the event that Xstrata does not fund the completion of the PFS or the BFS, the Group will need to finance the costs associated with the PFS, the BFS and any ongoing costs of the Zanaga Project, for which it will need to raise additional funds. In the event that Xstrata ceases to fund the PFS, this will be funded from the Group's cash resources following the Placing.

# 14. DIVIDEND POLICY

The Directors do not intend to declare or pay a dividend in the foreseeable future but, subject to the availability of sufficient distributable profits, intend to commence the payment of dividends when it becomes commercially prudent to do so and will adopt a progressive dividend policy thereafter.

# **15. EQUITY INCENTIVES**

The Directors consider that an important part of the Group's remuneration policy should include equity incentives through the grant of share incentive awards. Accordingly, the Company has adopted a long term incentive plan, as described in paragraph 12 of Part X of this document. Awards over 5,574,135 Ordinary Shares will be made on Admission. It is the intention of the Directors to grant further awards. The maximum number of Ordinary Shares which will be subject to awards granted under the long term incentive plan and any other share schemes adopted by the Company will not exceed 5 per cent. of the Company's issued shares, from time to time. Options have also been granted over 398,153 Ordinary Shares outside of the LTIP pursuant to a call option, further details of which are set out in paragraph 13.27 of Part X of this document.

# 16. LOCK-IN ARRANGEMENTS

Each of the Directors and Garbet and Guava has undertaken to the Company and Liberum that, save in specified circumstances, they will not dispose of any interest in Ordinary Shares held by each of them for a period of twelve months from Admission. For further information on the lock-in arrangements please refer to paragraph 11 of Part X of this document.

# 17. RELATIONSHIP AGREEMENT AND MAJOR SHAREHOLDERS

On Admission, Garbet and Guava will own 115,671,186 and 88,730,397 Ordinary Shares, respectively, representing 41.25 and 31.64 per cent. of the Company's issued Ordinary Shares. As a result of their significant shareholdings, both Garbet and Guava will be able to exercise significant influence over all matters requiring Shareholder approval, including the composition of the Board, approving the timing and amount of dividend payments and approving general corporate transactions. In addition, as part of the Xstrata Transaction, they will be able to affect the relationship the Company has with Xstrata. Accordingly, Garbet and Guava have entered into a Relationship Agreement with the Company which regulates the relationship between them and the Company and in which they agree to and will procure that their holding companies abide by the terms of the Call Option Deed. The terms of the Relationship Agreement are summarised in paragraph 13.18 of Part X of this document.

# 18. TAKEOVERS

There are no provisions governing takeover offers analogous to the City Code applicable in the BVI. The Company's Articles of Association, however, incorporate provisions similar to those contained in Rule 9 of the City Code. For further information please see paragraph 6.19 of Part X of this document.

The change of control provisions contained in the JVA could act as an impediment to a takeover of the Company as in such circumstances Xstrata would have the right to acquire all of the shares which it does not hold in Jumelles BVI. Similarly, all of the rights attaching to the preferred right contained in the JVA shall lapse if there is a change of control in respect of the Company and this could also act as an impediment to a takeover. For further information on the controls which have been put in place to help mitigate this risk, please refer to the summary of the Relationship Agreement at paragraph 13.18 of Part X of this document. For further information on the change of control provisions contained in the JVA, please refer to section 3 of Part II.

#### 19. ADMISSION, SETTLEMENT AND DEALINGS

The Placing Shares comprise 39,815,258 Ordinary Shares of no par value of the Company, being 19,907,629 New Shares and 19,907,629 Sale Shares. The Placing Shares were created under the BVI Act and can be issued in certificated or uncertificated form. The ISIN number for the Ordinary Shares is VGG9888M1023.

Application has been made to the London Stock Exchange for all of the Ordinary Shares, issued and to be issued pursuant to the Placing, to be admitted to trading on AIM. It is expected that Admission will become effective and dealings will commence in the Ordinary Shares at 8.00 a.m. on 18 November 2010. No application has or will be made for the Ordinary Shares to be admitted to trading or to be listed on any other stock exchange.

No temporary documents of title will be issued. All documents sent by or to a Placee, or at his direction, will be sent through the post at the Placee's risk. Pending the despatch of definitive share certificates, instruments of transfer will be certified against the register of members of the Company.

The Ordinary Shares are in registered form. CREST is a computerised paperless share transfer and settlement system, which allows shares and other securities, including depositary receipts, to be held in electronic rather than paper form. Foreign securities cannot be held electronically or traded in the CREST system. To enable investors in the Ordinary Shares to settle their transactions in CREST, the Company has entered into depositary arrangements.

Further details of the depositary arrangements, including the Deed Poll, Depositary Agreement and the Registrar Agreement are set out in paragraph 19 of Part X of this document.

#### 20. FURTHER INFORMATION

Your attention is drawn to Part II of this document which contains a summary of the Xstrata Transaction, Part VI of this document which contains certain risk factors relating to any investment in the Company and to Part X of this document which contains further additional information on the Group.
#### PART II

#### THE XSTRATA TRANSACTION

#### 1. XSTRATA TRANSACTION OVERVIEW

On 17 September 2009, Xstrata (Schweiz), Garbet and Guava entered the Heads of Agreement in contemplation of the Xstrata Transaction. The Heads of Agreement is not legally binding save for the obligation for Xstrata (Schweiz) to advance a loan to Jumelles BVI prior to entry into the Call Option Deed and the JVA.

On 16 October 2009, Garbet and Guava and the Company's 100 per cent. held subsidiary Jumelles BVI entered into the Xstrata Transaction with Xstrata (Schweiz), a 100 per cent. held Swiss subsidiary of Xstrata plc which comprised of two principal transaction documents, namely the Call Option Deed and the JVA.

On 26 November 2009, the Company executed the Deeds of Adherence in respect of both of the Call Option Deed and the JVA following the transfer by Garbet and Guava of their interests in Jumelles BVI to the Company.

On 3 December 2009, Garbet and Guava sent the Waiver Letter, which was counter-signed by Xstrata (Schweiz) in relation to the waiver of certain rights granted to Xstrata (Schweiz) under the Call Option Deed and the JVA, including the ability to force a re-transfer of shares in the Company following the private placement conducted by the Company in December 2009.

On 3 December 2009, the parties to the Call Option Deed and Xstrata entered into the Deed of Novation and the Xstrata Transaction was novated such that Xstrata (Schweiz) was substituted by Xstrata, a 100 per cent. held Australian Xstrata group company.

On 3 December 2009, Xstrata, Garbet, Guava and Jumelles BVI entered into the Amendment Agreements, consisting of an amended and restated Call Option Deed and an amended and restated JVA. Save for some minor drafting changes, the substantive terms of the Call Option Deed and JVA were unchanged by the Amendment Agreements.

On 2 September 2010, the project director, Colin Harris, served the Further Funding Letter, which was co-signed by Xstrata, to Garbet, Guava, Jumelles BVI and the Company regarding the agreed budget reallocation for phase II of the PFS.

#### 2. CALL OPTION DEED

The key terms of the Call Option Deed are:

#### Call Option

Xstrata has acquired the Call Option to subscribe for 50 per cent. plus one share of the fully diluted and outstanding shares of Jumelles BVI in consideration for committing to invest the Call Option Premium, an aggregate sum of US\$50 million, in accordance with the terms of the Call Option Deed.

Unless the Call Option Deed is terminated, for example owing to Xstrata failing to keep up its funding obligations, the Call Option may be exercised at any time from 16 October 2009 until 45 business days following completion ("PFS Completion Date") of the PFS.

#### **Call Option Price**

The amount payable for the exercise of the Call Option by Xstrata ("Call Option Price") will be:

 the aggregate costs of completing the BFS in accordance with international best practice and Xstrata's internal guidelines, provided that such amount shall be greater than US\$100 million (excluding the Call Option Premium); or, alternatively, the costs associated with carrying out such a BFS itself (if all shareholders in Jumelles BVI other than Xstrata consent and neither they nor Jumelles BVI nor any of its subsidiaries are prejudiced (financial or legally) as a result); plus  sums to repay all outstanding shareholder loans, provided that the outstanding loans are less than US\$25 million. Sums paid by Xstrata in this respect must be used to repay outstanding shareholder loans. Further details of the shareholder loans are set out in paragraph 13.15 of Part X of this document.

The Call Option Price must not exceed an amount that would result in it being a Class 2 Transaction for Xstrata plc for the purposes of the Listing Rules of the Financial Services Authority at the time of the exercise of the Call Option.

#### **Feasibility Studies**

The Call Option Premium is to be utilised by the Company to finance phase I of the agreed work programme for the PFS phase of the Zanaga Project ("PFS Phase").

Phase I of the PFS covers the period up to the date the Call Option Premium has been spent by Jumelles BVI in connection with the Zanaga Project and in accordance with the Call Option Deed and work programme and deals with certain other costs.

After phase I, Xstrata may either (i) exercise the Call Option, (ii) confirm to Jumelles BVI that it is willing to contribute any additional amount that is required in order to complete phase II of the PFS, or (iii) notify Jumelles BVI that it is not willing to contribute the additional amount required to complete the PFS.

Pursuant to the Further Funding Letter (see paragraph 7 below), Xstrata has confirmed its decision to fund phase II and phase II funding has been agreed. This funding is treated as additional Call Option premium. Phase II of the PFS covers the period from the end of phase I to the PFS Completion Date.

As such, Xstrata will be obliged to fund the costs of completing phase II of PFS. It may, however, subsequently decide that it does not wish to exercise the Call Option and, in such circumstances, after having given reasonable notice, it would not be required to contribute any further funding in respect of the PFS from the end of the notice period and would not be obliged to fund the total phase II PFS costs.

If Xstrata exercises the Call Option, the JVA will become fully effective and Xstrata will be required to fund the costs associated with completing the BFS, as set out in further detail above under the heading "Call Option".

#### Material Adverse Change

All requirements on Xstrata to fund Jumelles BVI under the Call Option Deed are subject to a material adverse change provision, which allows Xstrata to suspend any funding obligations until the material adverse change has ceased.

Xstrata's funding obligations will also be suspended in the event that there is a material breach by Garbet or Guava of the tax covenant, the covenant relating to existing employee incentive plans and certain warranties contained in the Call Option Deed (see further information below under the headings "Warranties" and "Covenants").

#### Warranties

Save as disclosed in the Call Option Deed, Guava, Garbet and Jumelles BVI gave various representations and warranties (the "Warranties") under the Call Option Deed, including as to the capacity and authority, their title to shares in Jumelles BVI, the assets, liabilities and business of Jumelles BVI, its operation in accordance with laws and the truthfulness and accuracy of a private placement memorandum prepared by Jumelles BVI in September 2009.

The Warranties are deemed to be repeated by Garbet, Guava, Jumelles BVI and the Company immediately before completion of the transfer of shares pursuant to the exercise of the Call Option, subject to matters which have subsequently arisen and which are fairly disclosed prior to the exercise of the Call Option.

Claims against Garbet, Guava and Jumelles BVI under the Warranties need to be brought by Xstrata within one month of the publication of Jumelles BVI's accounts for the financial year ending after completion. The liability of each of Garbet and Guava in connection with the Warranties (other than certain fundamental warranties) is subject to certain limitations and is capped at a total of US\$1 million. Jumelles BVI's liability for the same is capped at the amount contributed to Jumelles BVI by Xstrata at the date of a warranty claim. The aggregate liability of Jumelles BVI, Garbet and Guava shall not exceed the amount paid by Xstrata by way of Call Option Premium and the Option Price. Any payments under the Warranties are subject to a gross up for any tax or withholding.

#### Covenants

Garbet and Guava and the Company have also covenanted with Jumelles BVI to pay Jumelles BVI (at its or Xstrata's demand) an amount to cover any liability of Jumelles BVI and its subsidiaries for tax on events prior to entry into the Call Option Deed or for sums attributable to Garbet and Guava.

Garbet and Guava and the Company also covenant with Jumelles BVI to pay it (at its or Xstrata's demand) an amount equal to any liability of Jumelles BVI or its subsidiaries arising from employee claims under any employee incentive plan and any other payments to employees in respect of the period of employment before the date of the Call Option.

#### **Restrictions on Jumelles BVI**

The Call Option Deed sets out a number of decisions and actions that may not be taken by Jumelles BVI without receiving Xstrata's prior consent, with such consent not to be unreasonably withheld or delayed.

These matters include the following:

- alterations to constitutional documents;
- changes to share capital;
- changes in the nature of the business;
- making acquisitions or disposals;
- taking steps towards insolvency;
- the entry into connected party transactions;
- material amendments to or deviations from the work programme and budget;
- making material financial decisions, including any expenditure or commitment in excess of US\$100,000 which is outside the work programme or budget;
- making certain decisions in respect of its employees; and
- dealings with freehold or leasehold property.

There are also a number of actions that Jumelles BVI and its subsidiaries are required to take under the Call Option Deed, including:

- ensuring that Jumelles BVI remains duly incorporated, validly existing and in good standing at all times;
- keeping proper books and records in accordance with good accounting practice, including the preparation of monthly expenditure accounts, and protecting the confidential information of Jumelles BVI and its subsidiaries;
- taking all such action as may be reasonably required of Jumelles BVI by Xstrata to protect the property or assets of Jumelles BVI and its subsidiaries;
- taking all reasonable steps to ensure that the Zanaga Exploration Licences, the Zanaga Mining Convention and the port concession continue to be valid, in full force and effect and held by a member of Jumelles BVI and its subsidiaries;

- providing Xstrata with all agendas and papers for board meetings of Jumelles BVI and minutes of all such minutes and allowing an Xstrata representative to attend board meetings;
- the appointment of a chief financial officer nominated by Xstrata;
- undertaking the work contemplated by the work programme and budget in accordance with industry best practice; and
- taking into account Xstrata's reasonable requests in relation to the work programme and budget and the managers.

#### Admission

Garbet and Guava are entitled to seek the admission to a stock exchange of shares of a company that has acquired all of their shares in Jumelles BVI, i.e. the Company.

#### **Pre-emption Rights**

Xstrata is granted pre-emption rights over the ordinary shares in Jumelles BVI and the shares in any of its subsidiaries. These pre-emption rights do not apply in the context of a sale or transfer of ordinary shares to a permitted transferee in accordance with the Call Option Deed, for example a transfer to an associate of Garbet and Guava or to a wholly owned special purpose vehicle formed to hold the combined interests of Garbet and Guava.

#### Change of Control

A change of control is triggered where an interest of greater than 50 per cent. in the Company, Garbet, Guava, or in any holding company of Garbet or Guava, is sold or transferred to a third party. Save in respect of an Admission, in such circumstances, Xstrata must be given the opportunity to acquire the ordinary shares in Jumelles BVI held by the relevant shareholder (the "Change of Control Option").

The price payable for exercise of the Change of Control Option will be either (i) the amount which the third party has agreed to pay for the shares, as reflected in the sale agreement or (ii) where there is a sale of shares in a company whose assets or interests are not related to the Zanaga Exploration Licences or Jumelles BVI or its subsidiaries, the amount which the third party has agreed to pay for the shares, as reflected in the sale agreement, provided that the total purchase price for the relevant shares and the non-Zanaga Exploration Licences or Jumelles BVI related interests or assets is allocated between the two on a fair market value basis as determined by an independent valuer.

#### Assignment

Xstrata, Garbet, Guava and the Company are restricted from assigning or otherwise dealing with their rights under the Call Option. However, Xstrata is permitted to transfer its rights to other members of the Xstrata plc group (who may also transfer their rights). Subject to giving notice to Xstrata and such person signing a deed of adherence, Garbet and Guava may transfer their shares and also assign them to an associate or a special purpose vehicle which is wholly owned. In addition, a holding company of Garbet or Guava can transfer their holdings in Garber and/or Guava to an associate.

#### Non-compete

Xstrata, Garbet, Guava and the Company are restricted for a period of two years following execution of the Call Option Deed from becoming involved in a competing business located within 20 kilometres of the boundaries of the land owned by Jumelles BVI or its subsidiaries as of 16 October 2009 and which is the subject of the Zanaga Exploration Licences and will first offer any such opportunities to Jumelles BVI.

#### Termination

In the event that the Call Option is exercised, the Call Option Deed will terminate (save in respect of antecedent breach or under the covenant in relation to tax) and the relationship between the parties will become governed by the JVA.

If Xstrata (i) fails to exercise the Call Option within the prescribed period, (ii) notifies Garbet and Guava in writing that it does not intend to exercise the Call Option, or (iii) notifies Jumelles BVI that it is unwilling to fund any amounts in excess of US\$50 million that are required for completion of the PFS, the Call Option and the Call Option Deed will terminate (save in relation to certain limited clauses including the covenants referred to above and in respect of antecedent breach).

Upon termination, Xstrata must pay to Jumelles BVI an amount equal to any outstanding amount of the Call Option Premium.

#### 3. JOINT VENTURE AGREEMENT

With the exception of certain provisions (including the change of control and non-compete provisions), the JVA shall only become effective in the event that Xstrata exercises the Call Option. The JVA shall regulate the conduct and development of the business of the Jumelles BVI group of companies and the relationship between the Company and Xstrata (and any permitted transferees), as the then majority controlling shareholder in Jumelles BVI, and includes the following key terms:

#### Feasibility Study

Xstrata undertakes to fund the BFS and all associated costs in accordance with the provisions of the Call Option Deed. Xstrata undertakes to use its reasonable endeavours to complete the BFS at least three months prior to the expiry of the Zanaga Exploration Licences assuming a further extension, subject to there not being a material adverse change.

Xstrata has the option to undertake the BFS itself (rather than funding a third party to do so), if all shareholders in Jumelles BVI (other than Xstrata) ("Non-Xstrata Shareholders") consent and neither the Non-Xstrata Shareholders nor Jumelles BVI nor any of its subsidiaries are prejudiced (financially or legally) as a result.

#### **Material Adverse Change**

The funding obligation on Xstrata under the Call Option Deed is subject to a material adverse change provision which will allow Xstrata to suspend its funding obligations until the material adverse change has ceased.

#### Offer by Xstrata

Within 90 business days following completion of the BFS, Xstrata may require the Non-Xstrata Shareholders to sell all, but not some only, of their ordinary shares in Jumelles BVI (the "Xstrata Offer"). The exercise of this right is not subject to Shareholder approval. The offer notice will specify a cash price and the Non-Xstrata Shareholders may elect to accept or reject the price stated in the offer notice. In the event that the price is rejected, the Non-Xstrata Shareholders and Xstrata shall have 15 business days in which to agree on a price based on the application of the valuation terms of reference as set out in the JVA. If the parties are unable to reach agreement, they may refer the matter to an independent valuer who will determine a price per ordinary share of no par value in Jumelles BVI based on the net present value of the Zanaga Project in accordance with the valuation terms of reference set out in the JVA. The valuer shall make its determination within 45 business days of appointment. The costs of the valuer will be paid by Xstrata or the Non-Xstrata Shareholder in the event that the price is equal to or less than that offered by Xstrata.

The valuation terms of reference include that:

• the price per ordinary share will be determined as at the date of deemed receipt by the Non-Xstrata Shareholders of the offer notice;

- no premium or discount will be applied;
- on the assumption that the Jumelles BVI group is carrying on business as a going concern and will continue to do so;
- the relevant ordinary shares are capable of being transferred without restriction;
- technical and operational assumptions shall be taken from the BFS, unless otherwise approved by the board of Jumelles BVI;
- all commodity price assumptions shall be based on the average of FOB benchmark forecasts prepared by AMU Mineral Economics and CRU Strategies, unless an index price is generally applied across the industry; and
- forecast real cash flows shall be on an unlevered basis and discounted at a 10 per cent. discount rate (real).

Revaluation provisions could apply in relation to the price determined by the independent valuer in connection with the Xstrata Offer. These provisions will be triggered where the production capacity of the Zanaga Project exceeds the figure used by the independent valuer within a period of three years following the date on which the offer notice is served by Xstrata. The Company shall have 30 days from the date on which it becomes aware of the fact that the proposed production capacity of the Zanaga Project exceeds that used in the calculation for an actual offer price to exercise their right to request that the adjusted offer price be determined. Broadly similar provisions regarding the appointment of the valuer in relation to the Xstrata Offer apply in relation to the valuer to determine the adjusted offer price.

#### Tag Along

The Company enjoys tag along rights if Xstrata transfers or sell 50 per cent. or more of its beneficial holding to a third party. The tag-along rights are proportionate to the percentage of ordinary shares that Xstrata is proposing to sell or transfer. The tag-along rights do not extend to any other shareholders of Jumelles BVI, except for the Company. Where the tag-along rights are triggered, the right of first refusal will not apply.

#### Change of Control of the Company

A change of control is triggered where an interest of greater than 50 per cent. in the Company or any subsequent shareholder, or in any holding company of the Company or any subsequent shareholder, is transferred to a third party. In such circumstances, Xstrata must be given the opportunity to acquire the ordinary shares in Jumelles BVI held by the Company. This provision does not apply in relation to an admission of the Company's shares to a stock exchange.

The price payable by Xstrata for those shares shall be (i) the amount which the third party has attributed to those shares, as reflected in the sale agreement or (ii) where there is a sale of shares in a company whose assets or interests are not related to the Zanaga Exploration Licences or Jumelles BVI or its subsidiaries, the amount which the third party has agreed to pay for the shares, as reflected in the sale agreement, provided that the total purchase price for the relevant shares and the non-Zanaga or Jumelles BVI related interests or assets is allocated between the two on a fair market value basis as determined by an independent valuer.

If these change of control provisions are breached and as a result a transferee acquires shares in Jumelles BVI, the relevant ordinary shares in Jumelles BVI will not carry any votes at a general meeting, the transferee will be deemed to grant any consents to matters which the majority of shareholders in Jumelles BVI agree to and any economic benefit attached to the shares may not be distributed and will be held on trust by Jumelles BVI for the entity entitled to benefit had the change control provisions been complied with.

#### **Pre-emption Rights**

Reciprocal pre-emption rights apply on a sale or transfer of the ordinary shares in Jumelles BVI save in the event of an admission, pursuant to an Xstrata Offer, as a result of a change of control, in connection with the above tag-along right or any sale or transfer to a permitted transferee.

#### Ability to transfer and admission

The Company is permitted, at any time, to seek the admission of its shares to a stock exchange in which event the shares in the Company shall not be subject to any pre-emption rights or any change control provisions and shall be freely transferable.

#### Change of Control of Xstrata

A change of control is also triggered where a third party acquires an interest of greater than 50 per cent. in Xstrata (other than pursuant to reorganisations). In such circumstances, the Non-Xstrata Shareholders have the right from the later of (i) the completion of the BFS, and (ii) the date on which the change of control occurs, until the date falling 30 business days after the latter of (i) the completion of the BFS and (ii) the date on which the change of control occurs, until the date falling 30 business days after the latter of (i) the completion of the BFS and (ii) the date on which the change of control occurs, to request that Xstrata sells its ordinary shares in Jumelles BVI at a price determined by the relevant Non-Xstrata Shareholder. Xstrata may then elect to (i) sell the ordinary shares in Jumelles BVI held by it at the price set by the relevant Non-Xstrata Shareholder or (ii) buy the shares held by the relevant Non-Xstrata Shareholder at the price set by the relevant Non-Xstrata Shareholder or (iii) make an offer for the purchase of the Non-Xstrata Shareholders' shares in Jumelles BVI as set out above under the heading "Offer by Xstrata".

#### Funding

After completion of the BFS and until the earliest of (i) the completion of an Xstrata Offer, (ii) the expiry of the period in which an Xstrata Offer may be made, or (iii) confirmation from Xstrata that it will not make an Xstrata Offer, Xstrata will (for so long as a material adverse change has not occurred or is not continuing) provide all funding required by Jumelles BVI. This is subject to the proviso that there has been no material breach of certain warranties as to capacity and authority, title to shares, indebtedness, existence of share options and no material adverse impact on underlying mining rights and licences for the project. There will be no dilution of the shareholders' holdings in Jumelles BVI as a result of the funding provided by Xstrata in these circumstances.

Following the expiry of the period in which an Xstrata Offer may be made or confirmation from Xstrata that it will not make an Xstrata Offer, funding required by Jumelles BVI will, so far as possible, be provided out of (i) Jumelles BVI's available cash resources and Zanaga Project cash flows, (ii) external debt finance, or (iii) additional finance from the shareholders on arms' length commercial terms.

If the board of Jumelles BVI determines that shareholder finance is required, it may request such finance from the shareholders on arms' length terms. The time period in which the shareholders are required to contribute the finance to Jumelles BVI depends on the phase of the Zanaga Project. In general terms, all such shareholder finance shall be provided to Jumelles BVI within 30 days of receipt of the notice requesting finance. However, at the start of the construction phase of the Zanaga Project, Jumelles BVI will inform the shareholders of the full amount that it estimates will be required to fund the entire construction phase, which shall be calculated pro rata to their shareholdings. In the event of any material future expansion of the Zanaga Project which requires additional finance from the shareholders, Jumelles BVI will provide the shareholders with an estimate of the total amount requested. If one shareholder does not pay the entire amount requested from it, the other shareholder may elect to make such payment.

#### Emergency Funding

Where the board of Jumelles BVI considers that an emergency funding event has occurred (for example, financing is required more quickly than is otherwise available to Jumelles BVI in order to protect its financial condition), then Jumelles BVI may issue such amount of debt and/or ordinary shares as it considers necessary in order to enable Jumelles BVI to cure the emergency funding event.

Jumelles BVI may issue the entire amount of debt and/or ordinary shares to one shareholder, provided that the other shareholders are given the opportunity to subscribe for its pro rata portion before any dilution occurs.

#### Dilution

If a shareholder fails to contribute the amount it is requested to contribute by Jumelles BVI, which shall be calculated pro rata to its shareholding, the other shareholders are entitled to meet any such shortfall (in addition to their own contribution) and the non-contributing shareholder will be diluted through the issue of shares in Jumelles BVI to the contributing shareholders.

The issue of shares will be determined in accordance with the following formula:

 $X = ((A \times C) + B) \div (C + D)$ 

Where:

- X = the relevant shareholder's percentage shareholding of the fully diluted share capital of Jumelles BVI following the issue of the new ordinary shares.
- A = the relevant shareholder's percentage interest in the capital of Jumelles BVI on the date of issue of the relevant notice issued for funding.
- B = the total funding contribution actually paid by the relevant shareholder pursuant to the relevant request.

C = Project NPV.

D = the amount specified as the total amount to be received from all shareholders in the further funding notice.

Until the date on which the Zanaga Project has been operating at 90 per cent. of its total production capacity as envisaged in the BFS for 90 consecutive days (as evidenced by written notice) (the "Production Commencement Date"), the Project NPV is the higher of (i) the total of all amounts paid by Xstrata or Xstrata Schweiz to fund the PFS and BFS; and (ii) the price per ordinary share calculated in accordance with the terms of reference set out in Schedule 3 (as set out in the paragraph headed "Offer by Xstrata"), save that the date of determination shall be the date the board decides to proceed with construction following completion of the BFS), multiplied by the number of ordinary shares in issue at the date the board decides to proceed with construction following completion of the BFS, as agreed by the shareholders at the time of the first conversion, provided that if the shareholders are unable to reach agreement in respect of the Project NPV within 5 business days they shall have a further 5 business days to appoint an internationally recognised independent investment bank to calculate the Project NPV. In the event that the shareholders do not agree on a internationally recognised independent investment bank within 10 business days of the first conversion date, then one shall be appointed by the president of the London Investment Bankers' Association at the request of any of the shareholders.

From the Production Commencement Date, the Project NPV is the book value of the fixed assets depreciated in accordance with the accounting policies adopted by the Company from time to time.

#### **Preferred Rights**

In the event of dilution, the Company will receive a preferred right in the form of a note instrument, which will operate to ensure that it is not economically disadvantaged by virtue of the capital structure adopted by Jumelles BVI.

The preferred right will give the Company the right to receive dividends which equal, pro rata to its holding of ordinary shares, the interest payable on or repayment of principal amount of any debt issued to shareholders in connection with a shareholding funding request. The preferred right will not carry any voting rights and will not be transferable, except to a permitted transferee of the Company in accordance with the provisions of the JVA. The preferred right will rank *pari passu* on any winding up or liquidation (or equivalent) of Jumelles BVI with any such shareholder debt. All of the rights

attaching to the preferred right shall lapse if there is no outstanding shareholder debt or if there is a change of control in respect of the relevant shareholder.

#### **Dividends and Distributions**

Each financial year, Jumelles BVI and its subsidiaries shall distribute to its shareholders all available free cash flow, to the extent lawfully available for distribution.

#### Marketing Arrangements

If no Xstrata Offer has been made within the prescribed time limits, the marketing arrangements set out in the JVA will become effective once the Zanaga Project has reached the production phase. In such event the Company has the right to assign its equity share of production through a market priced off-take agreement.

The marketing arrangements include:

- marketing of all production will be conducted by Jumelles BVI and its subsidiaries on behalf of all shareholders;
- Jumelles BVI and its subsidiaries will enter into contracts with all customers and revenue will accrue to Jumelles BVI and its subsidiaries;
- each Non-Xstrata Shareholder will have the right to assign a proportion of production (based on its percentage shareholding in Jumelles BVI) to eligible customers;
- Jumelles BVI and its subsidiaries shall notify each Non-Xstrata Shareholder of its three year rolling production plans, the estimated production for the next calendar year and an estimate of the quality specification;
- at least 60 days before the end of each calendar year, the Non-Xstrata Shareholders shall notify Jumelles BVI and its subsidiaries of eligible customers to whom they wish to sell their share of production;
- Jumelles BVI and its subsidiaries shall act in good faith and use reasonable endeavours to conclude contracts with those eligible customers in a timely fashion at prices equivalent to the average price for similar volumes, duration and quality;
- if Jumelles BVI and its subsidiaries are unable to conclude a contract in the manner set out above, they shall provide full details of the reasons why not. In such case, Jumelles BVI and its subsidiaries shall be able to sell the relevant share of production as part of its overall marketing arrangements;
- if an eligible customer refuses to accept delivery of production or no longer qualifies as an eligible customer, Jumelles BVI and its subsidiaries may take all reasonable steps to re-sell such production; and
- an eligible customer is defined as a customer who in the opinion of Jumelles BVI (acting reasonably) is a creditworthy organisation who will consume the production for their own end use.

#### The Board

Under the terms of the JVA, each shareholder holding (directly or indirectly) ordinary shares in Jumelles BVI equal to at least 15 per cent. of the ordinary shares of Jumelles BVI then in issue shall be entitled to appoint one director. As Garbet and Guava have combined their shareholdings in Jumelles BVI by transferring them to the Company prior to the December 2009 placing, for as long as the Company owns at least 30 per cent. of the ordinary shares of Jumelles BVI, the Company will be entitled to appoint two directors to the Board.

The board of Jumelles BVI may be increased if, in the future, subsequent shareholders come to hold at least 15 per cent. of the ordinary shares in Jumelles BVI. The chief financial officer of Jumelles BVI will be appointed by Xstrata.

At any board meeting, each director shall have such number of votes as represent the voting rights held by the shareholder that appointed the director. Decisions at board meetings shall be taken with the approval of a director or directors whose votes represent voting rights in Jumelles BVI equal to at least a simple majority of the aggregate voting rights in Jumelles BVI.

The quorum for board meetings shall include the Xstrata director and the two directors appointed by the Company (for as long as each is entitled to be appointed). In the event that a subsequent shareholder becomes entitled to appoint a director under the JVA, the quorum shall also include any such director.

#### Shareholder Reserved Matters

The prior written approval of shareholders holding at least 95 per cent. of the aggregate voting rights in Jumelles BVI must be obtained in order for Jumelles BVI to take action in respect of an agreed list of reserved shareholder matters. The list of shareholder reserved matters includes the following: strategic decisions; acquisitions, disposals, joint ventures etc; any increase or reduction of number of directors; any transfer of any employee or manager of Jumelles BVI to any non-group company; decisions on funding and granting of collateral; changes to share capital; related party transactions; steps towards insolvency; and amendments to constitutional documents.

#### **Government Participation**

The shareholders and Jumelles BVI agree to co-operate to meet the requirements of the government of the Republic of Congo in relation to any economic participation by it in the Zanaga Project.

#### Non-compete

Xstrata, Garbet, Guava and the Company are restricted for a period of two years following the JVA becoming effective from becoming involved in a competing business located within 20 kilometres of the boundaries of the land owned by Jumelles BVI or its subsidiaries as of 16 October 2009 and which is the subject of the Zanaga Exploration Licences and will offer any such opportunities to Jumelles BVI.

#### 4. DEEDS OF ADHERENCE

The Company executed the Deeds of Adherence in the form prescribed by the JVA and the Call Option Deed on 26 November 2009 under which it covenanted to each of the parties to the JVA and the Call Option Deed to be bound by their terms and such that the Company would be deemed to be a party to them with effect from 26 November 2009.

#### 5. WAIVER LETTER

The Waiver Letter is a letter dated 3 December 2009 from Garbet and Guava to Xstrata Services (UK) Limited (taking receipt of notice on behalf of Xstrata (Schweiz), which was counter-signed by Xstrata (Schweiz), in respect of certain matters of waiver and consent relating to the transfer of Garbet and Guava's shareholdings in the Company and the proposed placing of up to 15 per cent. of the Company's shares.

Under the Waiver Letter, Xstrata (Schweiz) confirmed that following the private placement conducted by the Company in December 2009, it will not require the Company to re-transfer its shares in Jumelles BVI to another entity wholly owned by Garbet and Guava as a result of the fact that the Company will no longer be wholly owned by Garbet and Guava.

#### 6. DEED OF NOVATION

Pursuant to the Deed of Novation, Xstrata (Schweiz) was substituted by Xstrata in the Call Option Deed and the JVA and assumed all the rights and obligations of Xstrata (Schweiz) under the Call Option Deed and the JVA as if it had been one of the original parties thereto and Xstrata (Schweiz) was released from its obligations and waived any claims which it might have. As part of the novation, Xstrata (Schweiz) agreed to guarantee the performance of Xstrata of certain obligations to pay the phase I funding and phase II funding under the Call Option Deed

#### 7. FURTHER FUNDING LETTER

The Further Funding Letter is a requirement of the Call Option Deed at the time of phase I of the PFS drawing to a close and informs Xstrata Services (UK) Limited (taking receipt of notice on behalf of Xstrata, Garbet, Guava, the Company and Jumelles BVI) as to the project director's estimate of further funding required to complete the PFS. The requested amount was US\$56.49 million of further funding for phase II of the PFS, which was treated as additional Call Option premium.

Under the terms of the Call Option Deed, Xstrata could at its discretion determine whether to confirm its agreement to the further funding, exercise the Call Option or refuse both causing the Call Option Deed and the JVA to cease to have effect. By countersigning the Further Funding Letter, Xstrata confirmed in writing its agreement (subject to the provisions of the Call Option Deed) to contribute its share of further funding as set out in the Further Funding Letter and confirmed its approval of the phase II work program, budget and funding amount as set out in annexes to that letter.

#### 8. HEADS OF AGREEMENT

Prior to execution of the Call Option Deed and the JVA, on 17 September 2009 Xstrata (Schweiz), Garbet and Guava entered into the Heads of Agreement. The Heads of Agreement set out the proposed terms of the Xstrata Transaction, all of which are stated not to be legally binding.

The only effective terms of the Heads of Agreement related to the provision of a loan to Jumelles BVI by Xstrata (Schweiz). Xstrata (Schweiz) agreed that it or one its wholly-owned subsidiaries would provide a loan of US\$10 million to Jumelles BVI, payable on signature of the Heads of Agreement. This loan was drawn down, reclassified and treated as partial satisfaction of the Call Option Premium.

#### PART III

#### MANAGEMENT, EMPLOYEES AND CORPORATE GOVERNANCE

#### 1. DIRECTORS

Brief biographies of the Directors are set out below. Paragraph 9 of Part X of this document contains further details of the current and past directorships and certain other important information regarding the Directors.

#### Clifford Thomas Elphick, Non-Executive Chairman, 50 years

Clifford Elphick is the founder and CEO of Gem Diamonds Limited, a diamond mining company listed on the Main Market of the London Stock Exchange. Mr Elphick joined the Anglo American Corporation in 1986 and was seconded to E Oppenheimer & Son as Harry Oppenheimer's Personal Assistant in 1988. In 1990, he was appointed Managing Director of E Oppenheimer & Son, a position he held until his departure from the company in December 2004. During that time, Mr Elphick was also a director of Central Holdings, Anglo American and DB Investments. Following the buy-out of De Beers in 2000, Mr Elphick served on the De Beers executive committee until 2004. Mr Elphick formed Gem Diamonds Limited in July 2005.

#### Colin John Harris, Project Director, Executive, 63 years

Colin Harris has been working as an exploration geologist for over 40 years, and has a wealth of experience in the generation, exploration and evaluation of projects covering a variety of commodities and deposits. He has experience in over 25 countries, mainly in Africa and Europe, and has worked for major international mining companies including Anglo American plc, Cominco and Rio Tinto plc. During his time at Rio Tinto plc, which was between 1990 to 2008, Mr Harris managed multi-million dollar world class projects including the Simandou iron ore project in Guinea, which he and his team took from grass roots to preliminary feasibility study before handing over to Rio Tinto Iron Ore Group. Mr Harris is currently a non-executive director of AIM-listed Ncondezi Coal Company Limited. Since November 2008, Mr Harris has been leading the Zanaga Project as both the Administrator General of MPD Congo and Technical Director of Jumelles Technical Services (UK) Ltd, which renders technical services to the Group. He has a BSc in Geology from Rhodes University (South Africa).

#### Clinton James Dines, Non-Executive Director, 52 years

Clinton Dines has been involved in business in China since 1980, including senior positions with the Jardine Matheson Group, Santa Fe Transport Group and Asia Securities Venture Capital. In 1988 he joined BHP as their senior executive in China and, following the merger of BHP and Billiton in 2001, he became President, BHP Billiton China, a position from which he retired in 2009. Mr Dines is currently a non-executive director of Kazakhmys plc, which is listed on the Main Market of the London Stock Exchange.

#### Michael John Haworth, Non-Executive Director, 44 years

Michael Haworth is a director of Strata Limited, Garbet Limited and is the Managing Partner of Strata Capital UK LLP. Mr Haworth has 12 years investment banking experience, predominantly in emerging markets and natural resources. Prior to establishing Strata in 2006, Mr Haworth was a Managing Director at J.P. Morgan and Head of Mining and Metals Corporate Finance in London. During his 10 years at J.P. Morgan, Mr Haworth held a number of other positions, including Head of M&A for Central Eastern Europe, Middle East and Africa and, before that, Head of M&A in South Africa.

#### Dave John Elzas, Non-Executive Director, 44 years

Dave Elzas has over 15 years' experience in international investment banking. Between 1994 and 2000, Mr Elzas served as a senior executive and subsequently Managing Director of the Beny Steinmetz Group. Mr Elzas is currently the Senior Partner and CEO of the Geneva Management Group, an international wealth management and financial services company. Mr Elzas has been a non-executive director of Gem Diamonds Limited since October 2005.

#### 2. JUMELLES TECHNICAL SERVICES (UK) LIMITED

JTS, which is a wholly owned subsidiary of Jumelles BVI and based in Bristol, UK, employs a number of key Group employees and consultants that render technical, accounting and related services to the Group in order to develop the Zanaga Project. To this end, JTS has entered into arms length technical services agreements with MPD Congo and Jumelles BVI.

#### 3. KEY GROUP EMPLOYEES AND CONSULTANTS

In addition to Colin Harris, the Group has recruited a team of eight senior employees and consultants with significant experience working on exploration stage development projects. Each member of the team has a proven track record in the evaluation of iron ore projects in francophone Africa. Brief details of the Group's key employees are set out below:

#### Alain Pillevuit, Assistant Administrator General

Mr Pillevuit has over 15 years experience in the administration and evaluation of mining projects in francophone Africa, including 10 years at Rio Tinto's Simandou iron ore project.

#### Gary Vallerius, CFO

Prior to joining the Group, Mr Vallerius spent 19 years managing all aspects of the financial controls and reporting for all of Rio Tinto's African and European exploration projects. Mr Vallerius also managed all financial matters pertaining to expenditure in excess of US\$250 million on the Simandou iron ore project.

#### Jeremy Gibbs, GIS Manager

Mr Gibbs is a mining geologist who specialises in mining and exploration data management/GIS with over 25 years of experience in exploration and production mining.

#### Victor Kakebeeke, Joint Chief Geologist

Mr Kakebeeke has more than 10 years experience in iron ore exploration and evaluation in francophone Africa.

#### Vincent Morel, Joint Chief Geologist

Mr Morel has more than 17 years experience across a range of commodities, mainly in francophone Africa, and has been involved with the Zanaga Project since 2007.

#### John Merry, Environmental and Communities Manager

Mr Merry has more than 15 years experience in managing OoM, PFS, BFS, environmental and community programmes and permitting in Africa.

#### Paul Reed, Logistics Manager

Mr Reed was the head of Logistics for Rio Tinto's Simandou project for 10 years. Mr Reed has more than 20 years experience managing exploration logistics for major companies in remote locations in francophone west and central Africa.

#### Jacques Mamousse, Government Liaison Officer

Mr Mamousse has over 25 years international experience in project and financial management and advisory sectors, particularly in francophone African countries.

#### 4. OTHER EMPLOYEES

As at the end of September 2010, the Group employed 653 employees and contractor workers (370 as at 31 December 2009), of which 101 were expatriates and 552 Congolese nationals (66 and 304 respectively as at 31 December 2009). The Group employs 82 of its personnel directly, 367 are contracted through SGIO and the remaining 204 are other contractors (59, 257 and 54 respectively as at 31 December 2009). Nine of the Group's personnel are based in Bristol, UK, (five as at 31 December 2010) with the remaining personnel being situated in the Republic of Congo.

#### 5. CORPORATE GOVERNANCE AND INTERNAL CONTROLS

The Directors recognise the importance of sound corporate governance and the guidelines set out in the UK Corporate Governance Code. Whilst AIM companies are not obliged to comply with the UK Corporate Governance Code, the Directors do intend to comply with the UK Corporate Governance Code so far as is appropriate having regard to the size and nature of the various companies of which the Group is comprised. The Board intends to take such measures so far as practicable to comply with the UK Corporate Governance Code. Further, whilst there is no equivalent to the UK Corporate Governance Code. Further, whilst there is no equivalent to the UK Corporate governance Code in the BVI, the BVI Act brings with it a more formalised approach to corporate governance particularly in the area of the laws and the rules relating to directors' duties and liabilities and shareholder rights which apply to all BVI companies. See paragraphs 5 and 6 of Part X of this document for further details.

The Board retains full and effective control over the Company. The Company intends to hold regular Board meetings at which financial and other reports are considered and, where appropriate, voted on. Apart from regular meetings, additional meetings will be arranged when necessary to review strategy, planning, operational, financial performance, risk, capital expenditure, human resource and environmental management. The Board is also responsible for monitoring the activities of the executive management.

Under the UK Corporate Governance Code, none of the non-executive Directors would be viewed as independent. However, the Directors believe that independence is not a state of mind that can be measured objectively and, given the character, judgement and decision making process of the individuals concerned, the Directors believe that Clinton Dines and Dave Elzas can be considered independent. Clinton Dines and Dave Elzas would not be viewed as independent under the UK Corporate Governance Code by virtue of the share awards being made to them on Admission and, in the case of Mr Elzas, by virtue of him being on the board of directors of Gem Diamonds Limited with Clifford Elphick. The Company will review the independence of the Directors annually and all new appointments will be made after consideration of the independence of the Company's directors.

The Directors have established an audit committee and a remuneration committee with formally delegated duties and responsibilities to operate with effect from Admission. At this stage of the Company's development the Directors consider it is appropriate for the Board to retain responsibility for nominations to the Board.

The audit committee, which will initially comprise Dave Elzas (as Chairman) and Michael Haworth, will determine and examine any matters relating to the financial affairs of the Group including the terms of engagement of the Group's auditors and, in consultation with the auditors, the scope of the audit. In addition it will consider the financial performance, position and prospects of the Company and ensure they are properly monitored and reported on.

The remuneration committee, which will initially comprise Dave Elzas (as Chairman), Clifford Elphick and Michael Haworth, will review the performance of the executive Director and set his remuneration, determine the payment of bonuses to the executive Director and consider the Group's bonus and option schemes.

Details of each of the audit committee and the remuneration committee and their respective responsibilities will be available on Admission on the Company's website.

The 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 Company's applicable employees. The

Company has adopted and will operate a share dealing code for Directors and employees in accordance with the AIM Rules for this purpose.

#### 6. CORPORATE SOCIAL RESPONSIBILITY

The Company places the highest priority on the health and safety of its employees, respect for the environment and active engagement with the local communities in which it operates. The Company strives to act as a good corporate citizen and its policies reflect, and will continue to reflect and implement, the Company's strong commitment to corporate social responsibility and sustainable development.

As part of the PFS, the Company has appointed a social and environmental project team composed of internationally recognised companies and organisations to monitor the effects of the Company's activities on the environment and communities surrounding its projects. This project team is also formulating best practice performance standards for the Company that have been designed to satisfy the relevant Congolese regulations and comply with the World Bank's Equator Principles (primarily in terms of the International Finance Corporation performance standards).

For further information on the Group's environmental and social initiatives, please see paragraph 9 of Part I of this document.

#### HSSE committee

The Directors have established a health, safety, social and environment committee (the "HSSE Committee"), with formally delegated duties and responsibilities to operate with effect from Admission. The HSSE committee, which will initially comprise Clinton Dines (as Chairman), Colin Harris and Clifford Elphick, will be responsible, *inter alia,* for formulating and recommending to the Board a policy on health, safety, social and environmental issues related to the Group's operations, and will meet at least four times a year. The HSSE Committee is also responsible for reviewing management's investigation of any incidents or accidents that occur to assess whether policy improvements are required.

#### **PART IV**

#### FURTHER INFORMATION ON THE IRON ORE INDUSTRY

### CRU STRATEGIES

### **Iron Ore Market Report**

To:

and to:

The Directors Zanaga Iron Ore Company Limited Coastal Building 2nd Floor Wickham's Cay II P.O. 2221 Road Town Tortola British Virgin Islands Liberum Capital Limited Ropemaker Place, Level 12 25 Ropemaker Street London EC2Y 9LY

#### Introduction

CRU Strategies Ltd (CRU), a consultant with over 40 years' experience in the metals and mining industry, has been engaged by the Company to prepare an industry report for use, in whole or in part, in this admission document. CRU prepared its report based on CRU's in-house database, independent third-party reports and publicly available data from reputable industry organisations. Where necessary, CRU contacted companies operating in the industry to gather and synthesise information about market prices and other relevant information. CRU has assumed that the information and data which it relied on is complete and accurate.

The objective of this report is to provide: a general overview of the iron ore market; details of historical demand and CRU's opinion as to projected demand for iron ore; details of the current iron ore pricing mechanism and indicative pricing forecasts; a description of the main properties of iron ore that affect its value; and to provide a simplified netback calculation for the Zanaga Projects' iron ore based on its relative value-in-use to benchmark iron ore products in China and Europe.

CRU 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 Admission. CRU has no pecuniary or other interests that could be reasonably regarded as capable of affecting its ability to provide an unbiased opinion as to the matters covered in this report. CRU has no shareholding in the Company and considers itself to be independent of the Company.

Copyright of all text and other matter in this document is the exclusive property of CRU Strategies. It is an offence to publish this report or any part of it under a different cover, or to reproduce and/or use, without written consent of CRU.

CRU accepts responsibility for the information contained in this report for the purposes of the AIM Rules for Companies and consents to its inclusion in the AIM Admission Document of Zanaga Iron Ore Company Limited ("the Company), which is to be dated on or around the date of this report. To the best of the knowledge and belief of CRU (having taken all reasonable care to ensure that such is the case), the information contained in this report is in accordance with the facts and makes no omission likely to affect the import of such information.

Notwithstanding the above, all estimates and projections contained in this report are based on data obtained from the sources cited and are necessarily based on economic assumptions which are beyond the control of CRU and the Company and involve significant elements of subjective judgment and analysis, which may or may not be correct. In addition, the prices set out in this report are not warranted or guaranteed by CRU or the Company.

# **CRU** STRATEGIES

### The Iron Ore Market

#### Introduction to iron ore

Iron ore is used primarily as a raw material in the steel making process. Generally iron ore is produced from two types of iron ore mineral, haematite and magnetite. The amount of iron (Fe) contained in iron ore varies, Haematite ores are usually high grade (>60% Fe) and magnetite lower grade (<30% Fe). Sometimes deposits can be a mixture of the two ores. Haematite ores typically produce lump and fines through crushing and screening. Magnetite ores require upgrading so are beneficiated as well, this process decreases the grain size of the material and usually produces a pellet feed or concentrate product.

#### Iron ore and its main uses

Over 98% of iron ore is used in the steel industry. Iron ore is one of the key raw materials in the iron making process; the other raw materials being coke and limestone in a blast furnace (BF) and natural gas in a direct reduction furnace (DRI Furnace). Iron making is the conversion of primary iron units (ore) to a product that is around 96% iron; in a blast furnace this is known as hot metal / pig iron and in a direct reduction furnace Direct Reduced Iron (DRI) / Hot Briquetted Iron (HBI) is produced.

#### Introduction to iron ore products

Mineable deposits of iron are generally split into two types of ore: haematite and magnetite. A description of the products obtained from both types of ore deposit, and their relative values, is given below. Typical size intervals are given for the diameter of each product in brackets.

- Fines (150µm-6.8mm): The baseline product in the iron ore market, from which other products are priced. Fines are agglomerated into irregular blocks called 'sinter' at the sinter plant of a steel mill before use in a furnace. This process involves mixing the fines with a flux and baking; the resultant operating cost causing fines to have a lower relative value than lump ore and pellets, as the latter two can be directly charged to a furnace. Sinter is not commonly a traded product, although one merchant sinter plant does exist (in the Philippines).
- Lump (6.8mm-15mm): Irregularly sized lumps of iron ore which can be charged directly into a furnace, enabling a steel producer to avoid the cost of sintering iron ore fines. Lump therefore is sold at a premium to fines, in order to account for this cost saving. Generally this product is not obtained from magnetite ore.
- **Pellets (10mm):** Uniform size and composition give pellets the highest value in use, meaning they provide the most efficient source of iron units to a furnace, and as such they command a strong value position. The pellet premium is strongly linked to this value in use figure, but can be far greater in a tight market. Pellets are manufactured by the agglomeration of pellet feed in a pelletising plant, so the premium must be set against the cost of pelletisation.
- **DR grade pellets (10mm):** This grade of pellet contains lower than 2% combined silica and alumina, making it suitable for conversion to direct-reduced iron (DRI), a high value product used in certain types of steelmaking furnace. As such, it commands a 5-10% premium, as of 2010, over conventional (normally referred to as blast furnace or BF grade) pellets to account for superior quality.
- Pellet feed (60µm 150µm): This product is the lowest value form of iron ore, as the pelletizing process required to convert the pellet feed into useable pellets is more costly than the sintering process required for fines. DR grade pellets can only be produced from DR grade pellet feed, and therefore command a premium over BF pellet feed. CRU Strategies understand that this premium is the same percentage as commanded by



DR pellets over BF pellets. Approximately 1.02 tonnes of pellet feed are required to make one tonne of pellet. It should be noted that pellet feed with a diameter of less than  $60\mu m$  can present handling issues and increase transportation costs. Furthermore, pellet plants often prefer coarser grade pellet feed, as it can be ground to their own specifications.

• **Concentrate:** In addition to the terms in this list, it is worth noting that some iron ore products are referred to as 'concentrate'. Strictly speaking, this is a term used to describe a material that has undergone beneficiation at the mine, and can refer to either **pellet feed** or **fines**.

As 98% of mined iron ore is used as a raw material in the fabrication of steel, the value chain is dictated by the amount of processing each product must undergo before it can be used to make steel. The remaining 2% is used in marine-grade concrete, and in chemical and industrial applications.

#### Iron ore demand

Iron ore demand in 2009 was 1,917 million tonnes, a fall of 6.6% compared to 2008, but a 31.7% increase above 2005 levels according to CRU. The reason for the decrease was the impact of the global economic crisis on levels of industrial production and consequently crude steel production. Demand would have dropped further if it was not for a 1.1% growth in Chinese consumption. In 2010 demand is forecast to expand by 13.6%, a function of Chinese growth at 10.5% and a recovery in developed economies, such as North America (42.7%) and Europe (24.6%).

Sinter fines account for the majority of iron ore consumption, comprising 69.4% of iron ore consumption in 2009 at 1,331 million tonnes; in comparison pellet and lump commanded a 17.1% and a 13.5% share respectively. The reason for this is that almost all integrated steel mills (except in the USA) are built with a sinter plant to provide material for the blast furnace; this is a large capital investment and will always be run at capacity, even during a downturn, as a sinter plant is in many cases the only cost effective way to recycle waste products from the coke, iron and steel making process. Lump and pellet, on the other hand, are mostly purchased from outside sources as a product ready to charge into the furnace and hence are purchased in lower quantities. This is because a pellet plant, in contrast to a sinter plant, is more complicated and both the initial capital and operational energy costs are greater for a pellet plant than a sinter unit of equivalent size. In China the average conversion cost (excluding the cost of ore) to produce one tonne of sinter is US\$27.82 per tonne in 2010, for pellet this figure is US\$30.85 per tonne. A pellet plant is also far more sensitive to feedstock and is unable to recycle waste (crucial to any integrated steel mill) in the same way as a sinter operation.

The reliance upon sinter and hence sinter fines is best demonstrated by examining how the relative consumption of each changed in Europe over the past decade. Europe has been selected to remove the effect of rapid increases in crude steel production on furnace consumption and its role as the second largest consumer of imported ore behind Asia. The results of this analysis can be seen in the table and chart below:

# **CRU** STRATEGIES

#### Total European Consumption of Iron Ore Product by Type 2005 – 2015, (million tonnes) 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 **European Consumption** 119.7 105.7 107.0 108.2 108.9 Sinter 122.3 119.1 95.7 102.7 105.7 121.9 Lump 15.5 17.3 19.1 14.7 6.4 12.7 13.2 11.2 11.3 11.0 12.0 Pellet 53.0 57.2 58.0 54.2 36.4 54.5 53.5 60.0 63.3 65.9 66.3 Percentage Change in European Consumption -1% 0% Sinter 2% -2% -20% 7% 3% 0% 1% 1% 1% Lump -22% 12% 10% 98% 4% -15% -3% 8% -23% -56% 1% Pellet 1% -5% 8% -7% -33% 50% -2% 12% 6% 4% 1%

Data: CRU Strategies



Lump consumption in 2009 was 258 million tonnes globally, an increase of 11% above 2008 levels, driven by increased Chinese consumption, which rose from 87 million tonnes in 2008 to 145 million tonnes in 2009, according to CRU. Lump consumption is highest in Asia due to the close proximity of Australian and Indian lump supply.

Pellet consumption was 328 million tonnes in 2009, a global decrease of 12% on 2008 levels. As mentioned above pellets are the most expensive source of iron units in the majority of furnaces, hence were the first to experience a decline in demand during the recent downturn. However, in countries with large amounts of pellet capacity this was not the case, China saw a 13% rise in pellet consumption and the Middle East saw a similar rise of 13%.



According to CRU, global consumption of pellets, fines and lump is forecast to increase to 2,396 million tonnes by 2015. Pellet consumption will grow by 7.6% per year, on average, to reach 586 million tonnes in 2015. It is expected that most of the demand growth will come from China, where pellet consumption will increase by 57 million tonnes between 2010 and 2015, but India, the CIS and the Middle East will also experience strong consumption growth. Global consumption of lump ore is forecast to rise to 311 million tonnes in 2015. Sinter fines consumption is forecast to decrease slightly to 1,498 million tonnes in 2015, a reflection of higher grade imported material being used in China, in place of lower grade domestic ores.

The following table shows the ten countries or regions with the largest consumption levels of pellet, lump ore and fines in 2009:

tonnes)					
Pellets		Lump		Sinter/DRI Fines	
China	140.0	China	145.2	China	977.6
CIS	34.6	India	39.6	CIS	86.7
USA	26.2	Japan	25.1	Japan	75.8
Middle East	22.6	South Korea	16.7	India	34.5
India	15.9	Brazil	10.1	South Korea	24.0
Mexico	10.9	South Africa	5.2	Brazil	21.6
Canada	8.5	Taiwan	1.9	Germany	20.9
Eastern Europe	6.8	Venezuela	1.6	France	15.3
Germany	6.5	Turkey	1.5	Taiwan	11.7
Japan	5.7	Argentina	1.3	Eastern Europe	11.0
Rest of World	50.3	Rest of World	9.4	Rest of World	51.8
Total World	328.1	Total World	257.6	Total World	1,331.0

## Total Consumption of Iron Ore 2009, Top Ten Countries (million tonnes)



The following table sets forth total iron ore consumption by country or region for 2005 through 2009 and includes CRU estimates for 2010 to 2015:

#### Total Consumption of Iron Ore 2005 - 2015 by country or region (million tonnes) CAGR 2008 2005 2006 2007 2009 2005-2009 167 96 175 89 167 78 122 37 (7.6%) Europe 178.22 CIS 136.80 145.23 148.58 137.70 121.66 (2.9%) North America 86.59 87.00 88.42 84.42 51.11 (12.3%) South America 72.23 70.19 72.68 69.12 49.66 (8.9%) China 687.74 897.67 1,070.10 1,248.83 1,262.83 16.4% Middle East & 43.03 42.34 43.41 41.75 42.70 (0.2%) Africa Rest of Asia 251.45 260.43 299.14 293.90 259.90 0.8% Oceania 9.20 9.57 9.46 8.95 6.41 (8.7%) Total 1,455.01 1,688.32 1,910.00 2,052.45 1,916.64 7.1% CAGR 2010 2011 2012 2013 2014 2015 2010-2015 158 94 163 47 166 70 168 57 20% Europe 152.53 154 39 CIS 132.05 146.24 158.26 163.43 168.27 170.86 5.3% North America 72.91 76.88 82.38 86.11 91.29 93.68 5.1% South America 57.65 63.51 69.25 74.21 78.94 82.04 7.3% China 1,462.04 1,369.36 1,395.73 1,428.75 1,482.41 1,393.32 (0.0%)Middle East & 65.87 7.1% 50.64 58.04 62.27 67.87 71.47 Africa Rest of Asia 306.18 328.19 350.78 371.08 389.53 404.80 5.7% Oceania 8.94 9.27 9.76 10.28 10.82 10.93 4.1% 1.9% Total 2,176.62 2,265.27 2.353.68 2.416.87 2.342.79 2.395.68

Data: CRU Analysis

#### Iron ore supply

In 2009 global iron ore production totalled 1,927 million tonnes, 7.3% lower than in 2008, but 29.4% higher than in 2005. The three largest iron ore producing countries in 2009 were China Australia and Brazil, together accounting 69% of apparent production (Consumption plus imports, minus exports)

The following table sets forth iron ore production by country or region in 2009, splitting between pellets, lump ore and fines. It should be noted that concentrate material, which requires beneficiation, effectively becomes either fines or pellets (all pellet feed is used in pellet production so is excluded to avoid double counting). The concentrate is not reported separately in the table below in order to avoid double counting.



tonnes)					
Pellets		Lump		Sinter/DRI Fines	
China	111.3	Australia	105.6	China	560.0
CIS	56.8	India	58.5	Australia	290.2
Brazil	32.7	Brazil	31.5	Brazil	193.1
USA	26.9	South Africa	31.0	India	128.9
Canada	23.7	China	5.2	CIS	108.7
India	16.4	Venezuela	2.4	South Africa	22.7
Middle East	15.2	Turkey	1.5	Canada	12.1
Sweden	14.5	Mauritania	1.0	Mauritania	9.3
Mexico	11.6	Chile	0.8	Middle East	8.0
Venezuela	5.9	Other Africa	0.4	Indonesia	6.5
Rest of World	13.6	Rest of World	1.0	Rest of World	19.9
Total World	328.5	Total World	238.7	Total World	1,359.4
Data: CRU Analysis					

## Apparent Production of Iron Ore 2009, Top Ten Countries (million tonnes)

According to CRU, global production of pellets, fines and lump will increase by 13.5% in 2010, to 2,187 million tonnes, and is expected to increase to 2,396 million tonnes by 2015. However, during the period 2010-2015, China's iron ore production is forecast by CRU to level off (starting in 2011), and begin to decline. Chinese ore is low-grade (<30% contained iron "Fe" on average, some deposits are believed to be as low as 20%), and thus costly to mine and process. As tightness in the iron ore market eases, Chinese steelmakers are expected to rely increasingly on imported ore, particularly from Australia and Brazil according to CRU forecasts. Australian production of pellets, fines and lump is expected to increase by 6.5% per year, on average, between 2010 and 2015, while production in Brazil will grow by 5.7% per year.



The following table sets forth total apparent iron ore production by country or region for 2005 through 2009 and includes CRU estimates for 2010 to 2015:

Total Apparent Production of Iron Ore by country or region (million tonnes)							
	2005	2006	2007	2008	2009		CAGR 2005- 2009
Europe	32.67	32.73	37.30	36.89	30.62		(1.6%)
CIS	171.77	186.13	190.28	177.54	165.86		(0.9%)
North America	99.48	102.44	103.76	100.16	76.28		(6.4%)
South America	278.84	296.22	318.46	322.73	278.11		(0.1%)
China	427.00	588.00	708.70	824.00	676.50		12.2%
Middle East & Africa	70.97	73.80	78.42	78.31	89.71		6.0%
Rest of Asia	148.79	161.38	188.51	196.94	210.67		9.1%
Oceania	259.23	272.84	294.69	341.30	398.85		11.4%
Total	1,488.76	1,713.54	1,920.13	2,077.86	1,926.61		6.7%
	2010	2011	2012	2013	2014	2015	CAGR 2010- 2015
Europe	36.54	39.98	41.84	43.33	43.58	44.92	4.2%
CIS	177.25	190.01	204.46	210.33	220.24	224.18	4.8%
North America	94.19	102.53	111.98	118.36	123.60	125.52	5.9%
South America	318.12	346.52	376.64	401.62	415.69	428.23	6.1%
China	801.50	761.50	736.50	706.50	546.50	546.50	(7.4%)
Middle East & Africa	106.10	116.93	124.23	128.03	128.49	137.24	5.3%
Rest of Asia	226.67	232.66	247.54	262.67	266.85	277.31	4.1%
Oceania	426.49	475.31	510.51	546.05	597.86	611.82	7.5%
Total	2,186.87	2,265.44	2,353.71	2,416.89	2,342.81	2,395.71	1.8%

# **CRU** STRATEGIES

#### The traded market for iron ore

Global imports of pellet, pellet feed, fines and lump were 954.2 million tonnes in 2009, according to CRU, with Australia and Brazil being the leading exporters according to Global Trade Information Systems (GTIS). China imported approximately 66% of all iron ore traded globally; the Rest of Asia accounted for a further 19% and Europe just fewer than 12%. Between Vale, Rio Tinto and BHP Billiton these three companies accounted for just under 60% of the traded market in 2009, according to CRU.

In 2010, global trade in pellet, pellet feed, fines and lump is forecast to rise by 8.3%, to 1,033 million tonnes, according to CRU. Of this, China is expected to import 629 million tonnes – six times the volume of any other single country and accounting for 61% of global seaborne trade. Global seaborne trade is forecast to rise to 1.42 billion tonnes in 2015, an average increase of 6.6% per year from 2010. According to CRU, China's imports are expected to rise to 927 million tonnes, or 65% of global seaborne trade, by 2015.

The table below shows the 10 largest importers of iron ore by product in 2009:

### Top iron ore importers 2009 (million tonnes)

Pellets		Lump		Sinter/DRI Fines		Pellet Feed	Pellet Feed	
China	28.6	China	140.0	China	417.7	China	42.0	
Middle East	11.1	Japan	25.1	Japan	75.8	Middle East	3.4	
Eastern Europe	6.8	South Korea	16.7	South Korea	24.0	Japan	3.3	
Germany	6.5	Taiwan	1.9	Germany	20.9	Netherlands	2.8	
Other Africa	5.7	Argentina	1.3	France	15.3	Australia	1.2	
Turkey	4.3	Austria	1.2	Taiwan	11.7	Mexico	1.1	
Malaysia	3.3	Italy	1.1	Eastern Europe	9.5	USA	0.3	
USA	3.1	Middle East	0.8	UK	8.9			
Italy	3.0	Netherlands	0.7	Other Asia	8.7			
Canada	3.0	France	0.6	Italy	5.0			
Rest of World	19.5	Rest of World	2.0	Rest of World	16.3	Rest of World	-	
Total World	94.9	Total World	191.4	Total World	613.7	Total World	54.2	



The table below summarises the global imports, by country and region, for 2005 through 2009 and includes CRU estimates for 2010 to 2015:

Global import tonnes)	ts of iron	ore, cou	intries a	nd regio	ns, 2005	- 2015	(million
	2005	2006	2007	2008	2009		CAGR 2005- 2009
Europe	156.48	164.74	165.13	152.60	110.18		(8.4%)
CIS	0.10	0.00	0.41	0.87	0.10		(0.9%)
North America	28.38	25.91	27.07	26.81	10.74		(21.6%)
South America	6.72	7.20	6.56	7.09	3.69		(13.9%)
China	275.23	326.32	383.70	444.13	628.35		22.9%
Middle East & Africa	21.21	19.23	19.68	21.86	21.29		0.1%
Rest of Asia	199.16	204.06	223.58	220.96	178.32		(2.7%)
Oceania	1.52	1.87	1.75	1.18	1.53		0.2%
Total	688.79	749.33	827.89	875.51	954.19		8.5%
	2010	2011	2012	2013	2014	2015	CAGR 2010- 2015
Europe	137.64	137.99	142.68	146.72	149.70	150.43	1.8%
CIS	-	-	-	-	-	-	N/A
North America	18.79	21.29	23.42	24.41	25.22	26.92	7.5%
South America	6.21	6.33	6.98	7.51	7.64	7.89	4.9%
China	628.78	705.94	771.15	836.42	900.94	927.07	8.1%
Middle East & Africa	26.90	38.26	45.55	51.36	52.10	56.33	15.9%
Rest of Asia	213.02	221.86	231.81	241.52	246.54	251.09	3.3%
Oceania	1.60	1.40	1.40	1.40	1.40	1.43	(2.3%)
Total	1,032.94	1,133.07	1,222.99	1,309.33	1,383.54	1,421.15	6.6%

# **CRU** STRATEGIES

Top iron ore exporters 2009 (million tonnes)								
Pellets		Lump		Sinter/DRI Fines		Pellet Feed	Pellet Feed	
Brazil	30.3	Australia	104.5	Australia	286.6	Brazil	43.1	
CIS	22.2	South Africa	25.8	Brazil	171.4	Chile	5.6	
Canada	18.2	Brazil	21.3	India	95.0	Peru	2.0	
Sweden	11.8	India	18.8	CIS	22.1	Venezuela	2.0	
USA	3.8	Mauritania	1.0	South Africa	19.5	Mexico	1.1	
Middle East	3.6	Venezuela	0.8	Canada	11.7	Norway	0.2	
Chile	2.1	Chile	0.3	Mauritania	9.3	USA	0.2	
Australia	1.6			Indonesia	6.5	Australia	0.1	
Mexico	0.9			Middle East	5.4			
Peru	0.8			Other Asia	4.1			
Rest of World	1.0	Rest of World	0.0	Rest of World	10.4	Rest of World	-	
Total World	96.2	Total World	172.5	Total World	642.1	Total World	54.2	

The table below shows the 10 largest exporters of iron ore by product in 2009:



The table below summarises global exports, by country and region, for 2005 through 2009 and includes CRU estimates for 2010 to 2015:

Global export tonnes)	s of iron	ore, cou	ntries a	nd regior	ns, 2005	– 2015 (ı	nillion
	2005	2006	2007	2008	2009		CAGR 2005- 2009
Europe	17.49	18.36	19.83	17.35	16.08		(2.1%)
CIS	35.07	40.90	42.12	40.70	44.30		6.0%
North America	38.13	37.92	39.14	39.98	35.68		(1.6%)
South America	244.11	265.97	290.30	294.92	285.48		4.0%
China	-	-	-	-	-		N/A
Middle East & Africa	44.63	46.19	51.31	53.15	64.87		9.8%
Rest of Asia	91.12	100.08	108.08	117.92	129.74		9.2%
Oceania	252.08	265.21	287.21	333.93	393.53		11.8%
Total	722.63	774.63	837.99	897.95	969.68		7.6%
	2010	2011	2012	2013	2014	2015	CAGR 2010- 2015
Europe	17.75	19.45	21.05	22.05	22.05	22.18	4.6%
CIS	45.20	43.77	46.20	46.90	51.96	53.31	3.4%
North America	40.04	46.93	53.18	56.81	57.68	58.16	7.8%
South America	312.55	345.66	378.38	409.91	431.96	444.65	7.3%
China	-	-	-	-	-	-	N/A
Middle East & Africa	77.80	85.10	91.06	93.99	93.19	100.72	5.3%
Rest of Asia	135.20	127.79	130.19	131.81	121.72	120.30	(2.3%)
Oceania	420.25	469.95	508.69	553.73	611.00	624.56	8.2%
Total	1,048.79	1,138.66	1,228.75	1,315.20	1,389.56	1,423.89	6.3%

Data: CRU Analysis

The global iron ore industry is highly consolidated, with Vale, Rio Tinto (which owns Hamersley Iron and the majority shares of Robe River Iron Associates (Robe) and Iron Ore Company of Canada (IOC)) and BHP Billiton accounting for 60% of total iron ore exports in 2009, according to CRU.

The table overleaf presents the top ten major iron ore exporters from 2005 until 2009 and includes CRU estimates for 2010 to 2015.



Global exports of iron ore, top ten major companies 2005 - 2015,
(million tonnes)

	2005	2006	2007	2008	2009		CAGR 2005-2009
Vale	207.64	229.04	244.51	238.80	217.89		1.2%
Rio Tinto	158.84	167.35	176.84	188.35	220.33		8.5%
Hamersley Iron	90.09	98.10	109.50	110.29	128.85		9.4%
Robe River	52.96	52.02	51.24	50.27	54.58		0.8%
Hope Downs	-	-	-	10.94	20.63		N/A
Rio Tinto Brazil	1.41	1.98	1.80	1.80	2.03		9.5%
IOC	14.38	15.25	14.30	15.06	14.25		(0.2%)
BHP Billiton Iron Ore	100.48	102.61	106.69	124.42	128.70		6.4%
Kumba (Anglo American)	21.78	21.17	23.69	24.96	34.22		12.0%
Fortescue Metals Group	-	-	-	14.82	32.76		N/A
Samarco (Vale:BHP 50:50)	15.48	15.96	16.42	17.31	18.82		5.0%
CSN	-	-	5.50	14.30	16.30		N/A
LKAB-Sweden	17.80	18.25	19.73	17.61	15.56		(3.3%)
ArcelorMittal Mines Canada	7.47	10.27	10.52	9.83	14.23		17.5%
SNIM-Mauritania	10.64	10.66	11.82	10.97	10.30		(0.8%)
Total	540.13	575.30	615.72	661.37	709.10		7.0%
% of exports	75%	74%	73%	74%	73%		(0.5%)
	2010	2011	2012	2013	2014	2015	CAGR 2010-2015
Vale	<b>2010</b> 235.00	<b>2011</b> 254.00	<b>2012</b> 266.50	<b>2013</b> 282.50	<b>2014</b> 290.50	<b>2015</b> 300.00	CAGR 2010-2015 5.0%
Vale Rio Tinto	<b>2010</b> 235.00 227.00	<b>2011</b> 254.00 249.50	<b>2012</b> 266.50 257.50	<b>2013</b> 282.50 268.50	<b>2014</b> 290.50 270.50	<b>2015</b> 300.00 274.50	CAGR 2010-2015 5.0% 3.9%
Vale Rio Tinto <i>Hamersley Iron</i>	<b>2010</b> 235.00 227.00 <i>130.00</i>	<b>2011</b> 254.00 249.50 141.00	<b>2012</b> 266.50 257.50 144.00	<b>2013</b> 282.50 268.50 151.00	<b>2014</b> 290.50 270.50 <i>153.00</i>	<b>2015</b> 300.00 274.50 <i>157.00</i>	CAGR 2010-2015 5.0% 3.9% 3.8%
Vale Rio Tinto Hamersley Iron Robe River	<b>2010</b> 235.00 227.00 130.00 58.00	<b>2011</b> 254.00 249.50 141.00 64.00	<b>2012</b> 266.50 257.50 <i>144.00</i> 66.00	<b>2013</b> 282.50 268.50 151.00 70.00	<b>2014</b> 290.50 270.50 <i>153.00</i> <i>70.00</i>	<b>2015</b> 300.00 274.50 157.00 70.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8%
Vale Rio Tinto Hamersley Iron Robe River Hope Downs	<b>2010</b> 235.00 227.00 130.00 58.00 25.00	<b>2011</b> 254.00 249.50 141.00 64.00 29.00	2012 266.50 257.50 144.00 66.00 30.00	2013 282.50 268.50 151.00 70.00 30.00	2014 290.50 270.50 153.00 70.00 30.00	<b>2015</b> 300.00 274.50 157.00 70.00 30.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7%
Vale Rio Tinto Hamersley Iron Robe River Hope Downs Rio Tinto Brazil	<b>2010</b> 235.00 227.00 130.00 58.00 25.00	<b>2011</b> 254.00 249.50 141.00 64.00 29.00	<b>2012</b> 266.50 257.50 144.00 66.00 30.00	<b>2013</b> 282.50 268.50 151.00 70.00 30.00	<b>2014</b> 290.50 270.50 <i>153.00</i> <i>70.00</i> <i>30.00</i>	<b>2015</b> 300.00 274.50 <i>157.00</i> 70.00 30.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A
Vale Rio Tinto Hamersley Iron Robe River Hope Downs Rio Tinto Brazil IOC	<b>2010</b> 235.00 227.00 130.00 58.00 25.00 - 14.00	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50	<b>2012</b> 266.50 257.50 144.00 66.00 30.00 - 17.50	<b>2013</b> 282.50 268.50 151.00 70.00 30.00 - 17.50	<b>2014</b> 290.50 270.50 153.00 70.00 30.00 - 17.50	<b>2015</b> 300.00 274.50 <i>157.00</i> 70.00 30.00 - <i>17.50</i>	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6%
Vale Rio Tinto Hamersley Iron Robe River Hope Downs Rio Tinto Brazil IOC BHP Billiton Iron Ore	<b>2010</b> 235.00 227.00 130.00 58.00 25.00 - 14.00 133.60	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60	<b>2012</b> 266.50 257.50 144.00 66.00 30.00 - 177.50 160.60	<b>2013</b> 282.50 268.50 151.00 70.00 30.00 - 177.50 176.60	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60	<b>2015</b> 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9%
Vale Rio Tinto Hamersley Iron Robe River Hope Downs Rio Tinto Brazil IOC BHP Billiton Iron Ore Kumba (Anglo American)	<b>2010</b> 235.00 227.00 130.00 58.00 25.00 - 14.00 133.60 38.40	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90	2012 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40	2013 282.50 268.50 151.00 70.00 30.00 - 175.50 176.60 43.40	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10	<b>2015</b> 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00 45.50	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5%
Vale Rio Tinto Hamersley Iron Robe River Hope Downs Rio Tinto Brazil IOC BHP Billiton Iron Ore Kumba (Anglo American) Fortescue Metals Group	<b>2010</b> 235.00 227.00 130.00 58.00 25.00 - 14.00 133.60 38.40 42.00	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00	2012 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00	2013 282.50 268.50 151.00 70.00 30.00 - 17.50 176.60 43.40 55.00	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00	2015 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00 45.50 70.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8%
Vale Rio Tinto Hamersley Iron Robe River Hope Downs Rio Tinto Brazil IOC BHP Billiton Iron Ore Kumba (Anglo American) Fortescue Metals Group Samarco (Vale:BHP 50:50)	2010 235.00 227.00 130.00 58.00 25.00 - 14.00 133.60 38.40 42.00 21.60	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00 21.30	<b>2012</b> 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00 21.30	2013 282.50 268.50 151.00 70.00 30.00 - 17.50 176.60 43.40 55.00 22.80	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00 22.80	2015 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00 45.50 70.00 22.80	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8% 1.1%
Vale Rio Tinto <i>Hamersley Iron</i> <i>Robe River</i> <i>Hope Downs</i> <i>Rio Tinto Brazil</i> ////////////////////////////////////	<b>2010</b> 235.00 227.00 130.00 58.00 25.00 - 14.00 133.60 38.40 42.00 21.60 19.70	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00 21.30 25.70	2012 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00 21.30 37.70	2013 282.50 268.50 151.00 70.00 30.00 - 175.00 176.60 43.40 55.00 22.80 41.70	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00 22.80 43.70	2015 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00 45.50 70.00 22.80 45.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8% 1.1% 18.0%
Vale Rio Tinto Robe River Hope Downs Rio Tinto Brazil IOC BHP Billiton Iron Ore Kumba (Anglo American) Fortescue Metals Group Samarco (Vale:BHP 50:50) CSN	<b>2010</b> 235.00 227.00 130.00 25.00 14.00 133.60 38.40 42.00 21.60 19.70 17.45	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00 21.30 25.70 19.15	<b>2012</b> 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00 21.30 37.70 20.75	2013 282.50 268.50 151.00 70.00 30.00 - 17.50 176.60 43.40 55.00 22.80 41.70 21.75	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00 22.80 43.70 21.75	<b>2015</b> 300.00 274.50 157.00 30.00 - 17.50 205.00 45.50 70.00 22.80 45.00 21.70	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8% 1.1% 18.0% 4.5%
Vale Rio Tinto Robe River Hope Downs Rio Tinto Brazil I/OC BHP Billiton Iron Ore Kumba (Anglo American) Fortescue Metals Group Samarco (Vale:BHP 50:50) CSN LKAB-Sweden	<b>2010</b> 235.00 227.00 130.00 25.00 25.00 133.60 38.40 42.00 21.60 19.70 17.45 11.80	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00 21.30 25.70 19.15 11.30	<b>2012</b> 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00 21.30 37.70 20.75 11.40	2013 282.50 268.50 151.00 70.00 30.00 - 17.50 176.60 43.40 55.00 22.80 41.70 21.75 11.40	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00 22.80 43.70 21.75 11.40	2015 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00 45.50 70.00 22.80 45.00 21.70 11.40	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8% 1.1% 18.0% 4.5% (0.7%)
Vale Rio Tinto Amersley Iron Robe River Hope Downs Rio Tinto Brazil IOC IOC BHP Billiton Iron Ore BHP Billiton Iron Ore GHP Billiton Iron Ore Samarco (Vale:BHP 50:50) CSN IKAB-Sweden ArcelorMittal Mines Canada SNIM-Mauritania	<b>2010</b> 235.00 227.00 130.00 58.00 25.00 - 14.00 133.60 38.40 42.00 21.60 19.70 17.45 11.80 11.00	<b>2011</b> 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00 21.30 25.70 19.15 11.30 12.00	2012 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00 21.30 37.70 20.75 11.40 13.00	2013 282.50 268.50 151.00 70.00 30.00 - 17.50 176.60 43.40 55.00 22.80 41.70 21.75 11.40 13.00	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00 22.80 43.70 21.75 11.40 13.00	2015 300.00 274.50 157.00 70.00 30.00 - 17.50 205.00 45.50 70.00 22.80 45.00 21.70 11.40 13.00	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8% 1.1% 18.0% 4.5% (0.7%) 3.4%
Vale Rio Tint∪ Amersley Iron Robe River Hope Downs Rio Tinto Brazil IOC IOC BHP Billiton Iron Ore Kumba (Anglo American) Fortescue Metals Group Samarco (Vale:BHP 50:50) CSN CSN LKAB-Sweden ArcelorMittal Mines Canada SNIM-Mauritania	2010 235.00 227.00 130.00 25.00 14.00 133.60 38.40 42.00 21.60 19.70 17.45 11.80 11.00 <b>757.55</b>	2011 254.00 249.50 141.00 64.00 29.00 - 15.50 146.60 39.90 48.00 21.30 25.70 19.15 11.30 12.00 <b>827.45</b>	2012 266.50 257.50 144.00 66.00 30.00 - 17.50 160.60 41.40 53.00 21.30 37.70 20.75 11.40 13.00 <b>883.15</b>	2013 282.50 268.50 70.00 30.00 - 17.50 176.60 43.40 55.00 22.80 41.70 21.75 11.40 13.00 <b>936.65</b>	2014 290.50 270.50 153.00 70.00 30.00 - 17.50 190.60 44.10 65.00 22.80 43.70 21.75 111.40 13.00 <b>973.35</b>	2015 300.00 274.50 157.00 70.00 205.00 45.50 70.00 22.80 45.00 21.70 11.40 13.00 1,008.90	CAGR 2010-2015 5.0% 3.9% 3.8% 3.8% 3.7% N/A 4.6% 8.9% 3.5% 10.8% 1.1% 18.0% 4.5% (0.7%) 3.4% 5.9%

# **CRU** | STRATEGIES

#### **Prices and Costs**

#### Iron ore pricing mechanism

- c/dmtu: Iron ore is priced in cents per Dry Metric Tonne Unit (c/dmtu). Effectively this is the same as US\$ per tonne of iron contained, divided by 100. This method accounts for different iron concentrations and free moisture contents in the ore produced from different mines.
- **Benchmark prices:** Prices were historically set on an annual basis, after several months of negotiations between the three major iron ore producers, and major steel customers. Brazilian (Vale) iron ore is represented by the Itabira fines and Tubarao pellet benchmarks, and Australian (BHP Billiton and Rio Tinto) iron ore by Hamersley lump and fines.
- Quarterly, monthly and spot pricing: Recently, there has been a shift towards quarterly pricing; anecdotal evidence also exists of monthly contracts. In addition a spot market has developed, based on exports of Indian ore to China, with daily quotations. CRU expects this trend to continue with the end result being an established quarterly pricing mechanism linked formally or informally to spot prices.
- **Netback value:** Iron ore producers, other than Vale, BHP Billiton and Rio Tinto, have little pricing power. Consequently, their prices are set using *benchmark prices* and adjusting for *value-in-use* and freight costs. This calculation is called a netback.
- Value-in-use (VIU): This is a term used to describe the adjustments made to benchmark prices to account for differences in chemistry between a particular product and the relevant benchmark product against which it is being priced. Different ore chemistries may lead differing to costs at the steel mill. For example, an ore with higher levels of silica and/or alumina may incur a larger coke consumption cost and slag formation in the blast furnace, and this additional cost may be accounted for in the form of a discount from the benchmark price.

#### **Benchmark prices**

Iron ore prices increased strongly between 2005 and 2008; the Hamersley fines price (given by Rio Tinto for their Australian ore sales), for example, exhibited a 134% increase. Historically the price of iron ore has been set at four benchmark locations on an annual basis, usually in April. Since the advent of the spot market, spot prices tend to dictate the level of the benchmark settlement. The increase was driven by increased demand from China, following a period of underinvestment in the iron ore mining due to prolonged low prices. This led to a very tight market and enabled iron ore miners to push through larger price increases each year.

Iron ore prices collapsed after the global financial crisis, a result of depressed steel demand caused by the reduction in spending and fixed asset investment. This reduction led to a drop in iron ore prices; the price of Hamersley fines dropped by 33%, whilst lump and pellet dropped by 44% and 48% respectively. The reason for the larger drop in lump and pellet prices is that these are premium products purchased over and above the sinter fines base load in a steel mill.

As the global economy recovered in late 2009 and 2010, the spot price for iron ore increased and as spot prices are an indicator of the quarterly contract price this led to an increase of around 90% in the contract price for the April-June quarter of 2010. CRU believes that the spot price will continue to lead the quarterly contract price throughout 2010 and into the first half of 2011. At this point prices are forecast to reach an equilibrium level. Post 2011 ore prices are forecast to decline as demand constraints ease.

# **CRU** STRATEGIES

The table below presents CRU's iron ore price series from 2005 until 2009 and includes CRU estimates for 2010 to 2015.

Benchmark iro	on ore prio	ces 200	5 - 2015	5			
(Nominal c/dm	tu)						
Contract year (Apr - Mar)	2005	2006	2007	2008	2009		CAGR 2005- 2009
Hamersley Fines	61.7	73.4	80.4	144.7	97.0		12.0%
Hamersley Lump	78.8	93.7	102.6	201.7	112.0		9.2%
Itabira Fines	62.5	74.4	81.5	134.4	96.5		11.5%
Vale Pellets	115.5	112.0	118.0	220.2	113.8		(0.4%)
	2010	2011	2012	2013	2014	2015	CAGR 2010- 2015
Hamersley Fines	200.9	192.7	187.5	172.7	131.8	129.1	(8.5%)
Hamersley Lump	226.9	217.6	211.7	195.0	158.8	156.2	(7.2%)
Itabira Fines	199.9	191.8	186.5	171.8	131.2	128.6	(8.4%)
Vale Pellets	237.9	230.2	223.9	217.7	177.3	174.9	(6.0%)
Calendar year	2005	2006	2007	2008	2009		CAGR 2005- 2009
Hamersley Fines	55.3	70.5	78.7	128.6	108.9		18.5%
Hamersley Lump	70.6	90.0	100.4	176.9	134.4		17.5%
Itabira Fines	56.0	71.4	79.7	121.2	106.0		17.3%
Vale Pellets	102.1	112.9	116.5	194.6	140.4		8.3%
	2010	2011	2012	2013	2014	2015	CAGR 2010- 2015
Hamersley Fines	174.9	194.7	188.8	176.4	142.0	128.2	(6.0%)
Hamersley Lump	198.2	219.9	213.2	199.2	167.9	152.3	(5.1%)
Itabira Fines	174.1	193.8	187.8	175.5	141.4	127.7	(6.0%)
Vale Pellets	206.9	232.1	225.5	219.3	187.4	174.1	(3.4%)

# **CRU | STRATEGIES**

#### Valuing different iron ores

Iron ore prices are determined to a large extent by the seaborne market. For the purposes of determining what price should be paid for a particular ore, a standard methodology is used by both miners and steel mills. In calculating prices through this method, three main factors should be taken into account:

- Freight costs
- Iron content and mineralogy
- Chemical impurities

The central premise of this methodology is that an ore with the same chemical composition will be worth the same amount, on a delivered basis, to the same location. However, two iron ores will rarely, if ever, have the same chemical composition, or come from the same point of origin.

Therefore, to determine the fair free-on-board (FOB) price of an ore, the difference in freight cost and difference in ore value must be accounted for. When examining this, international conventions of pricing ore in cents per dry metric tonne unit (c/dmtu) are used. The calculation to obtain an FOB price in this instance is given below.

Benchmark Price (Hamersley Fines sales to China/Itabira Fines sales to Europe)

+ Freight cost to deliver ore to the consumer from the benchmark mine or location

+/- Iron content and chemical impurities, known as value in use, as this will affect how much the ore is worth to the customer

- Freight from the delivery location to the seller's shipping point
- = The free-on-board price for the ore.

This methodology can be applied to any ore type from any location. Normally freight is the largest consideration when calculating relative ore prices; since iron ore is a low value high volume bulk product, the cost of shipping the product can often be more than the price of the product itself.

In the case of the Group, it is highly likely that the lower freight cost to the steel mill, in comparison to ore from Hamersley will result in a freight differential/premium being paid by the steel mill to the Group.

#### Value in Use

The algorithm calculates the value in use differences between a specific ore and the benchmark ore. This varies depending on product form and location as follows:

- in the Far East, Hamersley lump and fines, Hebei Concentrates, Vale pellets and MBR pellet feed
- in Europe, Kumba lump, Itabira (SSF) fines and Vale Pellets; and
- in North America, IOC pellets.

The algorithm makes adjustments for productivity, carbon purchases, flux purchases, dephosphorisation costs and, in the case of pellet feed, energy costs.



The productivity adjustment is based on the notion that a blast furnace is volume constrained. Thus we calculate the extent to which the iron content of the burden of specific ore differs from the iron content of the burden of benchmark ore.

There are many different impurities that can affect the value of an iron ore, the most important are given below:

- Silica and Alumina:
  - **Reduced productivity:** Higher impurities result in a lower iron ore grade, in-turn resulting in a lower pig iron output. Therefore this has to be offset with the purchase of more expensive scrap steel.
  - **Increased operating costs:** Leads to; a higher coke rate, higher input of flux materials to bind the charge and higher rates of slag generation. Consequently the higher the silica content the lower the ore value to the furnace.
- Phosphorus
  - Adversely affects pig iron composition: Phosphorus is only present in small quantities and as such has little effect on blast furnace productivity. However the phosphorus content reports to the pig iron and must be tightly controlled in order to reach quality levels, as such productivity can be affected indirectly.
  - **Prevents slag recycling:** leading to a lower iron recovery in a combined BF-BOF process.
- Sulphur
  - Increased de-sulphurisation agent use: the cost of using agents to remove sulphur increases in proportion to the sulphur content of the ore.

The energy adjustment for fines is made by comparing the magnetite content of the ore being valued with the magnetite content of the benchmark ore. The difference is then valued by assuming that an additional 0.61 GJ of thermal energy is required for every tonne of pure haematite as compared with pure magnetite.

The table below shows a comparison of leading seaborne iron ore fines. CRU presumes that the Zanaga iron ore fines products will be of comparable grade to Itabira fines.

#### Ore chemistry and sizing comparison

	Itabira Fines	Hamersley Fines	Indian Spot Material
Iron	65.75%	62.50%	63.50%
Silica	3.80%	7.00%	3.50%
Alumina	0.80%	2.50%	3.00%
Phosphorous	0.04%	0.07%	0.10%
Sulphur	0.03%	0.05%	0.05%

# **CRU** | STRATEGIES

#### Zanaga specific price series calculation

Exact product specifications for the ores that are expected to be produced for Zanaga are not currently available, hence CRU Strategies has presumed that the product will be an equivalent grade to the Itabira fines product produced by Vale of Brazil. It should be noted that two size ranges of ore will be produced at the deposit a sinter fines and a concentrate product. The sizing of the sinter fines product should be suited to all steel mills purchasing from the seaborne market. The sizing of the concentrate product may be too fine for many steel mills in Western Europe to accept without a small discount of around 5% to account for the additional cost of using a finer grained product in the sinter plant. In China this product would be acceptable as sinter fines, possible with a small discount; it should be noted that this is a general statement and would vary between steel mills. The reason this should be acceptable in China is a historical legacy of Soviet technology in much of the steel industry in the country; the ore type in Russia and China produces a sinter fines product with a similar size range to the Zanaga concentrate, therefore steel mills are designed to use this product in their sinter plants.

CRU Strategies has produced a simplified netback calculation for the Zanaga product based on the following assumptions.

- Ore grade and value to a steel mill in both Europe and Asia is the same as the Itabira fines benchmark product
- 155,000 dwt Capesize vessels are used
- Itabira fines are the benchmark for Europe
- Hamersley fines are the benchmark for Asia.
- Shipments to Europe are from Pointe Noire in the Congo to Rotterdam (major raw material port for Europe)
- Shipments to China are from Pointe Noire in the Congo to Qingdao (major raw material port for China)

The results and composition of these calculations for sales to Europe and China are given overleaf:

# **CRU** | STRATEGIES

#### Zanaga specific price series: annual

#### (Nominal c/dmtu)

Sales to Europe	2010	2011	2012	2013	2014	2015
Itabira Fines (fob Vitoria, Brazil)	174.06	193.79	187.85	175.50	141.36	127.70
Freight Brazil to Europe (Rotterdam)	21.81	18.25	18.40	19.12	19.44	18.79
Itabira Fines (cif Rotterdam)	195.87	212.04	206.24	194.62	160.79	146.49
+ / - value in use	-	-	-	-	-	-
Freight Europe to Congo (Pointe Noire)	23.01	19.22	19.31	20.04	20.37	19.67
Zanaga Fines (fob Pointe Noire)	172.87	192.82	186.94	174.58	140.42	126.81
Sales to China	2010	2011	2012	2013	2014	2015
Hamersley fines (fob Port Dampier)	174.92	194.74	188.77	176.36	142.05	128.17
Freight Australia to China (Qingdao)	30.80	27.65	31.32	33.23	36.74	32.42
Hamersley Fines (cif Qingdao)	205.72	222.40	220.09	209.59	178.79	160.59
+ / - value in use	9.52	9.83	10.24	9.53	10.15	11.39
Freight China to Congo (Pointe Noire)	40.99	34.22	34.48	35.86	36.46	35.04
Zanaga Fines (fob Pointe Noire)	164.73	188.17	182.38	168.55	134.56	122.70

Data: CRU Strategies

# **CRU** STRATEGIES

#### Iron ore industry cost structure

CRU Strategies has used the CRU Iron Ore Cost Model 2010 for this analysis. The CRU Iron Ore Cost Model uses an approach to benchmarking mines known as Value Based Costing (VBC). The approach calculates costs, enabling benchmarking of mines, using four broad types of costs a given operation will incur:

- Site Costs: Costs incurred during onsite production, subdivided as raw material costs (royalties and taxes) and conversions costs (in the case of iron ore mining, crushing, beneficiation, taking product to port, etc.). This section also includes sustaining capital costs.
- **Business Costs:** Site Costs plus costs incurred in transportation, sales and marketing, basically the costs associated with delivering the product to the consumer. This is where the value of the ore is adjusted for freight and value in use allowing direct comparisons to be made between mines across the globe.
- **Corporate Costs:** Business Costs plus costs associated with corporate activities and liabilities (for example pensions).
- **Economic Costs:** Corporate Costs plus capital charges reflecting the market value of an asset amortised over its remaining life cycle at a set weighted average cost of capital.
- Delivered Costs: the cost for the mine to deliver the ore to a specific market

In this instance CRU Strategies have presented industry cost curves for iron ore fines, on the basis of site and delivered costs to China and Europe. The site (to point of shipment) and delivered cost curves for 2010 are presented below:







# Iron ore fines delivered China cost curve 2010 (c/dmtu)



Iron ore fines delivered Europe cost curve 2010 (c/dmtu)



**CRU Strategies Ltd** 

17 November 2010
#### PART V

#### THE REPUBLIC OF CONGO, ITS LICENCE REGIME AND THE GROUP'S LICENCES

## SECTION A - THE REPUBLIC OF CONGO

#### 1. INTRODUCTION

The Republic of Congo, commonly referred to as Congo or Congo (Brazzaville) in order to distinguish it from the Democratic Republic of Congo, is a Central African country with a population of approximately 3.7 million and an economy that is dominated by off-shore oil production. Major international firms, including Total and Eni have carried out oil exploration and commercial production in the Republic of Congo for over 30 years. The country is a functioning democracy with rule of law based on the French Civil Code and mining law to World Bank standards.



Figure 7: Location of the Republic of Congo

## 2. GEOGRAPHY AND DEMOGRAPHY

The Republic of Congo has a surface area of 342,000 km<sup>2</sup> (roughly the same size as Germany or Finland), giving a population density of approximately twelve people per km<sup>2</sup>. While the country's official language is French, Lingala and Kikongo are common among the indigenous population. The country's capital, major industrial centre and largest city (population 1.2 million), Brazzaville, is located on the Congo River on the country's south-eastern border. The other major population centre is the main seaport Pointe Noire (population 0.6 million). About 61 per cent. of the population is urbanised.

## 3. GOVERNMENT

The Republic of Congo is a democratic republic with a multi-party system that exists alongside a directly elected executive president and a two chamber parliament comprising a Senate and National Assembly. Following the Republic of Congo's independence from France in 1960, Congolese politics gradually adopted a socialist constitutional ideology, becoming Africa's first "people's republic" in 1969. The country's recent political history has been marked by civil conflicts between 1993 and 1999. A political liberalisation process took place in November and December 1999 and the current constitution was adopted in January 2002, followed by presidential, legislative, local, and senatorial elections. The Republic of Congo is currently rated as having an equivalent security and political risk

to that of Mozambique. The country is governed by a single dominant coalition that supports the president, Denis Sassou-Nguesso, who has presided over the country since October 1997. The country has a seven year presidential term, and the current President was re-elected in July 2009.

#### 4. LEGAL FRAMEWORK

The 2002 constitution established a two chamber parliament consisting of a Senate with 66 seats and a National Assembly comprising 137 seats. Senators are directly elected by popular vote to serve six-year terms and National Assembly members serve five-year terms.

The legal system in the Republic of Congo is based on the French civil law system (the Civil Code of the former French Equatorial Africa). The Republic of Congo is also a member state of OHADA, which has enacted an Act relating to Company Law and Economic Interest Groupings, providing for a standard system for the creation and administration of companies and related entities, and a Uniform Act on Arbitration, allowing recourse to a standard arbitration mechanism for the settlement of contractual disputes arising from civil or commercial contracts concluded in the Republic of Congo as an alternative to Republic of Congo courts for legal proceedings relating to contracts. In commercial law matters, the provisions of the Uniform Act on Commercial Companies and Economic Interest Groups (the "Uniform Act") apply. The Uniform Act outlines the provisions that govern the functioning of commercial companies in the member states of the OHADA including for example the formation of congo will apply to the extent that they are not contradictory to the provisions of the Uniform Act.

The Republic of Congo is also a member of CEMAC. CEMAC governs and regulates the flow of funds between non-CEMAC jurisdictions and legal entities residing or having their registered offices in the territory of a CEMAC member state. The Treaty which instituted CEMAC on 16 March 1994 (in N'Djaména) was ratified by the Republic of Congo in June 1999. There are six member states, including the Republic of Congo. The objectives of the Treaty are the harmonisation of the different political systems of the member states and the creation of a legal and economic framework which is conducive to the encouragement of investment and the realisation of a common market.

## Congolese domestic legislation

To the extent that issues are not dealt with expressly under OHADA law, the principal legislation under Congolese law that is relevant to the Zanaga Project includes the following texts:

- the Congolese Mining Code, enacted by law n° 4-2005 dated 11 April 2005, and its decree of application, Decree n° 2007-274 dated 21 May 2007;
- the General Tax Code, enacted by law n°19-2005 dated 24 November 2005;
- the Environmental Code, enacted by law n° 003/91 dated 23 April 1991 and its Decree of application 86-775 dated 7 June 1986;
- the Labour Code enacted by law n° 47/75 dated 15 March 1965 (as amended) and its texts of application; and
- the Congolese Investment Charter enacted by law n°6-2003 dated 18 January 2003, for which the Group is eligible, at its election, to benefit from a wide range of foreign investment and protection benefits.

#### 5. ECONOMIC OVERVIEW

The economy of the Republic of Congo is heavily dependent on the oil sector, which in 2008 accounted for approximately 60 per cent. of its US\$12.5 billion GDP and more than 91 per cent. of its exports. In 2009, oil output was estimated at 110 million barrels and is expected to grow strongly to 119.3 million barrels in 2010. Production is expected to fall slightly in 2011 to 117.2 million barrels as mature fields start to decline. However, major oil companies such as Total and Eni continue to invest in work programmes and exploration in the area. Other sectors of the Congolese economy, particularly the industrial sector, remain relatively underdeveloped. As a result of this, and uncertainty over future oil revenues, the government has demonstrated a clear desire to diversify its economy and

reduce its reliance on oil revenues by attracting new investment in its mining industry. To achieve this, the government has sought to build an attractive investor climate, exhibited through compliance with worldwide policies of governance, such as the World Bank's EITI, of which the Congo is currently a "candidate country".

The global economic crisis has had a limited impact on the Republic of Congo's economic performance. Real GDP is estimated to have grown 7.6 per cent. in 2009 and it is expected to grow a further 10.5 per cent. in 2010. In 2011, it is expected to fall to 6 per cent. Inflation averaged 5 per cent. in 2009 and is forecast to rise to 5.5 per cent. in 2010 and then fall to 3 per cent. in 2011.

The Republic of Congo is a member of the United Nations, African Union, African Development Bank, World Trade Organisation, CEMAC, Central African Customs and Economic Union, Economic Community of Central African States and INTERPOL. Congo held a seat on the United Nations Security Council during 2006-2007. Relations are also developing with China and the Directors expect Chinese stakes in the Congolese oil, forestry and mining sectors to expand.

#### 6. THE REPUBLIC OF CONGO'S INFRASTRUCTURE

Development of the Congolese economy has been limited in recent years in part by difficulties relating to the country's transport infrastructure. The general climatic conditions in the country can make transportation difficult, especially by road. However, the country does have an international sea port at Pointe Noire and while the rail infrastructure in the Republic of Congo is not extensive, there is a rail line in operation between Point Noire and Brazzaville. It is expected that public investment (by the Republic of Congo and the World Bank) in major transport infrastructure projects, particularly new roads, which are scheduled for completion in 2012, should improve the situation considerably from 2012.

In regard to energy supply, the Republic of Congo is a significant petroleum exporter but suffers from a lack of investment in energy related infrastructure. Energy demand is gradually returning to the levels of two decades ago, and electrification is at approximately 45 per cent. in urban centres. The national power authority in the Republic of Congo, Société National d'Electricité ("SNE"), presides over major construction initiatives in both generation and transmission facilities. SNE is also in charge of concluding supply contracts and setting rates. There are a number of large scale energy projects in progress. Eni has built a 150MW gas fired power station near Point Noire, which it proposes to enlarge to 300MW or 450MW (subject to demand). The country also has significant hydroelectricity generation potential.

#### SECTION B – CONGOLESE MINING LICENCE REGIME

#### 1. INTRODUCTION

In general, there are six categories of mining licences that may be issued in the Republic of Congo under the Mining Code namely: (i) prospecting licences; (ii) exploration licences; (iii) artisanal mining licences; (iv) industrial mining licences; (v) exploitation licences; and (vi) licences for the possession, circulation and conversion of precious mineral substances. Exploration licences and exploitation licences are considered in greater detail below.

#### 2. EXPLORATION LICENCES

Exploration licences are issued by way of decree passed by the *Conseil des Ministres* ("Council of Ministers"). The principle of "first come, first served" is applied to the granting of exploration licences, subject to applicants of equal financial and technical ability. The exploration licence is granted on the basis of a report drawn up by the Minister of Mines.

An exploration licence confers on its titleholder the exclusive right of exploration (to an unlimited depth) for the substances covered by and within the surface area set out in the licence. Depending on the mineral substance concerned, exploration licences have a maximum surface area of either 1,000 km<sup>2</sup> or 2,000 km<sup>2</sup> respectively. In the event that an exploration licence covers a surface area that is either prohibited or already covered by another prior exploration licence relating to the same mineral substances, then the surface area will be reduced to the extent prohibited or so covered by the pre-existing licence.

Exploration licences are transferable subject to the prior authorisation or consent of the Minister of Mines.

Exploration licences are valid for a period of three years from the date of publication of their attribution in the Congolese Government Gazette (*"Journal Officiel"*) and may be renewed twice for periods of two years, upon the application of the titleholder, addressed to the Minister of Mines. The application for the renewal of an exploration licence must be filed three months prior to the expiry of the licence. The validity of the licence will be extended for the period during which, and for so long as, a decision is not taken regarding its renewal.

It is to be noted that such a renewal of the exploration licence is accompanied by a reduction in the surface area covered by the licence which will not exceed one half of the previous surface area. The reduction may therefore be less than 50 per cent. of the previous area. Any reduction in surface area will be specified in the relevant decree, which will be passed in the same manner as the issue of the original exploration licence. Under Article 33 of the Mining Code, the holder of the exploration licence may propose the remaining area which the holder wishes to retain on the renewal of the licence. The holder will therefore be entitled to propose the retention of the most appropriate area. The Mining Code does not, however, state that the Council of Ministers must accept the holder's proposal as regards the area to be retained. The area of land that is no longer included within the exploration licence as a result of any such reduction will fall again into the public domain. The land area may then again be the subject of new exploration licences which third parties are permitted to apply for. The exploration licence may be extended to cover new mineral substances in the same form and subject to the same conditions as the grant of the original licence, i.e. by way of decree passed by the Council of Ministers.

The holder of an exploration licence is obliged to:

- notify the Minister of Mines of any changes to the bye-laws, the legal form or the share capital
  of the operating company in question, as well as any changes in the composition of the board
  of directors of the company;
- transmit, on an annual basis, to the Ministry of Mines, copies of the company's balance sheet, as well as copies of any reports sent to the board of directors;
- involve senior representatives from the Congolese Administration of Mining and Geology during the course of the prospecting works;

- carry out, at the very least, the minimum of prospecting/exploration works and expenditure provided for in the Decree under which it was granted;
- notify and inform the Congolese Administration of Mining and Geology of the types and quantities of exploration samples collected and the location from where such samples were taken;
- deliver to the Congolese Administration of Mining and Geology the results of any sample analysis and duplicate copies of the samples taken (upon request);
- pay the annual surface taxes and royalties;
- render quarterly reports to the Congolese Administration of Mining and Geology summarising, amongst others:
  - the objectives for the quarter;
  - the nature and description of the works effected during the quarter;
  - the equipment and materials used; and
  - the number and categories of management and labourers/employees.

The exploration licence may be suspended, after notification, by the Minister of Mines in the following circumstances:

- the works of exploration are restricted without any justifiable reason and in a manner which is prejudicial to public interest for a period of more than six months;
- where exploration works, in fact, amount to unlawful mining works;
- the holder of the licence does not comply with commitments undertaken and does not comply with obligations as regards the declaration of works or the holder challenges the controls enforced by representatives of the Congolese Administration of Mining and Geology;
- exploration works are undertaken outside of the surface area granted by the exploration licence; or
- where the holder of the licence can no longer comply with the technical and financial undertakings set out in the exploration licence, which are required in order to carry out the exploration work. Checks will be carried out in this respect on the relevant site (or sites) by officials of the Congolese Administration of Mining and Geology (Article 131 of the Mining Code).

In the event that the holder of an exploration licence has not commenced exploration activities (for which the licence was granted) within a period of nine months from the date on which the licence is granted, then the licence may be withdrawn by the Minister of Mines without the holder having any right to compensation for such withdrawal. In addition, in accordance with the Mining Code, an exploration licence may be withdrawn in the following circumstances:

- persistent and continued inactivity;
- activity manifestly immaterial to the financial effort subscribed; and
- inobservance of the undertakings subscribed under the exploration licence and the mining convention.

The cancellation of an exploration licence may only occur in accordance with the following specific procedure. The Minister of Mines must first transmit to the holder of the exploration licence a registered letter requesting that the latter make known, within a period not exceeding three months, the reasons why the works have been suspended or restricted. If such reasons are found to be without any justification, then the Minister of Mines will formally request that the holder recommences the works within a period which will again not exceed three months. If the works are not commenced within six months after the expiry of the deadline imposed by the Minister, then the exploration licence will be declared cancelled by way of Decree passed by the Council of Ministers upon the report of the Minister of Mines.

The mine operator to whom an exploration licence has been granted is required to enter into a mining agreement with the government of the Republic of Congo. The Group is the holder of two exploration

licences, which were renewed for the first time for a period of two years by Decrees n° 2010-338 and 2010-339 dated 14 June 2010, and has entered into the 2007 Mining Convention with the government of the Republic of Congo on 14 May 2007 in respect of the Zanaga Project, which was subsequently amended by the 2010 Addendum on 8 September 2010.

# 3. EXPLOITATION LICENCES

Holders of exploration licences in respect of defined surface areas have priority for the issue of an exploitation licence in the event of "successful" exploration results in such areas. In the event that the holder of an exploration licence discovers a mineral deposit, the application to convert the exploration licence into an exploitation licence must be submitted to the Minister of Mines within three months of the production of a study that confirms the presence of a commercially viable and "exploitable deposit". The applicant must also present to the Minister of Mines a "technico-economic exploitation programme". In addition to these documents, Article 59 of the Mining Code states that the application for an exploitation licence must be accompanied by the documents set out in Article 50 of the Mining Code which includes, amongst others:

- a report on the results of the exploration work programme;
- a feasibility study (not defined);
- a development and exploitation plan; and
- an environmental impact study.

The exploitation licence is formally issued by way of a Council of Minister's decree. The licence is officially granted on the basis of a report and proposal from the Minister of Mines, following a public benefit inquiry of the licence.

Exploitation licences are valid for an initial period not exceeding 25 years and are renewable, upon demand by their titleholder, for separate periods not exceeding 15 years each. The exploitation licence may be assigned, transferred and sublet with the prior consent of the Ministry of Mines. Exploitation licences can be withdrawn, without compensation, upon proposal of the Minister of Mines followed by a decision of the Council of Ministers, if, for example, the holder has not commenced development works in the mining area within 12 months of being awarded the licence.

The mine operator to whom an exploitation licence has been granted is required to enter into a mining agreement with the government of the Republic of Congo. As such, on the grant of an exploitation licence to the Group, it will enter into a mining agreement with the government.

## 4. MINING AGREEMENTS

Article 98 of the Mining Code provides that the operator to whom an exploitation licence or exploration licence has been granted must enter into a mining agreement with the government of the Republic of Congo at the time of issue of the licence. A mining agreement defines the rights and obligations of the parties with regard to the investments and operations of the mine project. Pursuant to Article 99 of the Mining Code, a mining agreement must specifically address, among other things:

- the minimum works programme as well as the timetable for conducting the exploration or exploitation works;
- the minimum expenses for the exploration and exploitation works;
- the conditions of formation of associations, joint ventures or production sharing agreements or any other agreements, to conduct mining activities in common;
- the government of the Republic of Congo's contribution or the contributions of other persons to the capital or to profits of the companies;
- the conditions of realisation and organisation of the exploration or exploitation works;
- the total or partial processing of minerals found or produced during the exploration or exploitation works;
- the definition of the market value of the minerals;

- the technical and financial guarantees;
- the setting-up of bank accounts for the performance of mine site rehabilitation obligations;
- the application of the Congolese fiscal and customs regime as well as the particular tax regime and/or benefits applicable to the mining company;
- the arbitration and dispute resolution provisions for any disputes arising from the interpretation or implementation of the mining agreement in question;
- the coordination of the operations of exploration and exploitation carried on by the operator on neighbouring sites; and
- the tax treatment of the investments' depreciation.

Pursuant to the mining agreement, the operator commits to:

- respect the right and interests of the land owners;
- give priority to the recruitment of nationals, with equal qualification and experience;
- ensure the ongoing training of local personnel;
- give priority to the use of local products and services with equal conditions of delay and quality;
- cooperate with other operators in the mining industry to allow the setting up of Congolese companies for the supply of the abovementioned goods and equipment;
- prepare and submit for approval of the appropriate Congolese authorities an environmental and social impact assessment, an environmental management and rehabilitation plan with the details of measures adopted to reduce or to avoid any nuisances and pollution;
- update the plan for soil management; and
- remit any plans, data or documents allowing the Ministry of Mines and Geology to have a better understanding of the mineral deposits and their exploitation.

#### 5. GOVERNMENT PARTICIPATION

The holder of an exploitation licence is required to incorporate a Congolese company to be the operating entity (being MPD Congo in the case of the Company). Under Article 100 of the Mining Code, the Congolese government is entitled to a free carried interest in projects which are at exploitation phase. This participation cannot be less than 10 per cent. The Directors understand that (i) any government participation in excess of this 10 per cent. threshold and (ii) the form thereof will be subject to further negotiation with the government when a mining agreement is prepared for the exploitation phase of the Zanaga Project.

## 6. LAND USE AND DECLARATION OF PUBLIC UTILITY

Provided that it is in the public interest, upon the request of a holder of an exploitation licence, the government of the Republic of Congo may make a Declaration of Public Utility ("DUP" or Declaration d'Utilité Publique) in the prescribed form, whereby land within and outside the exploitation licence concession area may be expropriated from its existing owners in order to accommodate the needs of the mining project, its works and installations. Under Congolese Law n° 11-2004, any expropriation for DUP purposes includes the following consecutive steps: (i) a preliminary inquiry (*Enquête Préalable*) (ii) the declaration of public utility or DUP; (iii) a detailed inquiry (*Enquête Parcellaire*); (iv) execution of a deed of transfer (*Acte de Cessibilité*); and (v) payment of the requisite compensation to the former owner of the expropriated land area.

An exploration licence holder can also be authorised to occupy land for carrying out exploration works within the perimeter of the licence area, putting in place installations for the storage and disposal of the extracted products and for any installations which are to be used to facilitate exploration activities by an Order of the local "*Préfecture*".

In accordance with the Decree of Application (of the Mining Code's provisions) of 21 May 2007, the holder of an exploitation licence can (in respect of industrial activities relating to mining works), by application for and subsequent to an Order of the Minister of Mines, be authorised to:

- occupy land necessary for its activities and related industries;
- cut the wood necessary for its works, in accordance with the Forestry Code and other legislation applicable to forestry; and
- use water resources which are not yet used or reserved and to erect such water installations as may be required for the works.

The holder of such authorisation is still required to pay any applicable royalties and taxes. The licence holder is also required to repair any damage that its works cause on public land areas.

Pursuant to the Mining Code, and subject to authorisation being granted by way of a DUP or an Order of the *"Préfecture"* and the limitations set out below, an exploration licence confers on its holder the right (inside or outside the perimeter of the exploration licence area) to:

- set up permanently (to a maximum height of 4.75 metres above ground) cables, pipelines or other means of transportation, as well as the necessary masts and towers to carry them;
- bury cables and pipelines to a minimum depth of 0.50 metres and set up installations with less than 4m<sup>2</sup> of surface area as required for the functioning of the cables or pipelines or boundary delimitations; and
- remove, at its own expense, from the surface all trees, bushes and other obstacles.

These rights are subject to the following limitations:

- the encumbrances are limited to a surface area of 5 metres as defined in the relevant authorisation. A larger surface area may be permitted if required to allow access for people and machines to cross the land;
- the payment of compensation to the relevant land owners. The land owners can also require the licence holder to purchase the land or expropriate the land if, as a result of the mining activities, the normal use of the land in question is no longer possible;
- authorisation cannot be given if the areas of land concerned adjoin dwellings or fences surrounding dwellings; and
- authorisation will only be given once the land owners (and, if applicable, the farmers) have been given the opportunity to present their case.

#### 7. OTHER APPLICABLE MINING, SOCIAL AND ENVIRONMENTAL OBLIGATIONS

In addition to the requirements set out above under the different mining licence types, mining companies in the Republic of Congo must also comply with a number of other mining obligations, which include the following (non-exhaustive list of) principal obligations under the applicable Mining and Environmental Codes:

- verification and settlement of any local land rights and access required in accordance with article 113 of the Mining Code. Such verifications is carried out by the company with the Congolese Administration of Mining and Geology before the granting of the mining titles (whether prospecting, exploration or exploitation), thereby enabling an assessment to be made as to whether any compensation is due;
- pursuant to articles 128 and 129 of the Mining Code, the holder of a mining title is obliged to restore the land, at the end of the exploration or mining operations, which has been affected by the exploration or mining works, in accordance with an environmental rehabilitation plan, which must be updated during the course of the works (article 12.2 of the Zanaga Mining Convention);
- co-operation with and allowing for three site inspections per annum by the Congolese Administration of Mining and Geology in accordance with article 131 of the Mining Code; and
- submission of (i) a preliminary environmental impact study (including a preliminary environmental management and rehabilitation plan), together with the application for an exploration licence, and (ii) a final ESIA and EMRP, together with the application for an exploitation licence.

# SECTION C – THE GROUP'S LICENCES

#### 1. ZANAGA EXPLORATION LICENCES

MPD Congo is the registered legal and beneficial titleholder of the Zanaga Exploration Licences, being two exclusive exploration licences for iron ore.

The Zanaga Exploration Licences were published in the *Journal Officiel* on 10 May 2007 and again on 17 June 2010 following their renewal for a further two years on 14 June 2010. The table below gives a summary of the key terms of the Zanaga Exploration Licences held by MPD Congo.

Full Name:	Zanaga-Bambama Exploration Licence	Zanaga-Madzoumou Exploration Licence			
Surface Area:	500 km²	500 km²			
Mineral:	Iron Ore	Iron Ore			
Licence Type:	Exploration	Exploration			
Duration:	Renewed for 2 years as from 8 May 2010 and thereafter renewable for an additional term of 2 years	Renewed for 2 years as from 8 May 2010 and thereafter renewable for an additional term of 2 years			
Date of First Renewal:	8 May 2010	8 May 2010			
Filing Date for Second Renewal:	7 February 2012	7 February 2012			
Transferability:	With Ministerial Consent	With Ministerial Consent			
Exclusivity:	Exclusive	Exclusive			
Expenditure Commitment:	CFA 59,768,556,073 from May 2010 to May 2012				
Possible Extensions:	2 years, subject to compliance with agreed work programme budget and relinquishment of up to 50 per cent. of the licence areas				

## 2. THE ZANAGA MINING CONVENTION

The Group entered into the 2007 Mining Convention with the government of the Republic of Congo on 14 May 2007. This was subsequently amended by the 2010 Addendum on 8 September 2010. The 2007 Mining Convention and 2010 Addendum are jointly referred to below as the Zanaga Mining Convention. The duration of the Zanaga Mining Convention is the same as the duration of the Zanaga Exploration Licences (including their potential renewal periods). Certain of the key provisions of the Zanaga Mining Convention are summarised below.

#### **Object of the Convention**

The Zanaga Mining Convention applies in respect of the exploration works for iron ore deposits and to any other minerals likely to be discovered within the Zanaga Exploration Licences' Areas. The Zanaga Mining Convention sets out the general, economic, legal, financial, tax and employment rights and obligations which apply to the Group when it is (directly or indirectly) conducting business in the Republic of Congo.

The Group may only assign or transfer its rights under the Zanaga Mining Convention with the prior approval of the Congolese Ministry of Mines.

#### Tax Regime

The Zanaga Mining Convention sets out, *inter alia*, the following provisions in respect of the tax regime applicable to the Group:

- During the exploration phase of the Zanaga Project, the Group and any foreign company without a permanent establishment in the Republic of Congo that directly participates in the realisation of the Zanaga Project, is exempted from the following Congolese taxes:
  - Corporate Income Tax;
  - Special Corporate Tax;
  - Standard Income Tax of Congolese employees;
  - Stamp Duties payable on the execution and registration of any deeds;
  - Stamp Duties and Taxes payable on the transfer of shares; and
  - a Zero VAT rate;
- MPD Congo must set submit all requisite tax and labour declarations in accordance with the laws of the Republic of Congo that are applicable to the personnel employed in the Republic of the Congo;
- MPD Congo must follow and adhere to OHADA accounting procedures; and
- MPD Congo is required to put in place an information exchange procedure with the Congolese tax and customs authorities for the duration of the project.

The 2010 Addendum stipulates the following additional provisions in respect of the tax regime applicable to the Group:

- a distinction is drawn between (i) non-resident expatriate employees, who are not liable to pay income taxes in the Republic of Congo; and (ii) resident expatriate employees, who are liable to pay income taxes in the Republic of Congo in accordance with the fixed tax regime applicable to expatriate "rotating" employees in the Congolese oil sector;
- non-resident employees are not liable make contributions to social security or local labour organisations and are not liable to pay any income taxes and charges in the Republic of Congo on their salaries;
- the Group is exempted from withholding tax or other direct taxes in the Republic of Congo on payments made to foreign services providers;
- the Group is exempted from any VAT on the acquisition of goods and services, subject to making a declaration guaranteeing that the goods and services are exclusively for the benefit of the Zanaga Project;
- the Group is not liable to pay any other indirect taxes in the Republic of Congo at the exploration stage of the Zanaga Project; and
- the Group is, however, liable to pay any parafiscal taxes and taxes due for the granting of licences, certificates, authorisations and/or services provided by administration departments in the same manner and under the same terms as any other enterprise that operates in the Republic of Congo.

#### **Customs and Excise**

The Zanaga Mining Convention sets out, *inter alia*, the following provisions in respect of customs and excise:

- the procedure for exemption specified in articles 149 and 150 of the Mining Code applies to any equipment, vehicles, consumer goods and spare parts imported by the Group, its service providers or its subcontractors in relation to the Zanaga Project;
- the temporary admission regime will be applied to equipment, machinery, installations, commercial vehicles for tourism and transport and similar goods imported by the Group, its service providers or its subcontractors and required exclusively for the purposes of the Zanaga Project;

- the Group, its service providers and its subcontractors are exempt from paying customs duties on most other goods (not referred to above) imported for the purposes of the Zanaga Project;
- the Group undertakes to provide, as and when required, a certificate of guarantee that the goods and equipment referred to above are exclusively used and required for the purposes of the Zanaga Project;
- the Group will on an annual basis furnish to the applicable Congolese authorities a provisional estimation of the goods and equipment it intends to import to the Republic of Congo which will be revised on a quarterly basis; and
- the Group and the Congolese government of the Republic of Congo have agreed to negotiate a protocol based on the above principles in order to simplify all the customs procedures applicable to the Group's operations.

#### Land Allocation for Zanaga Project Infrastructure

The Zanaga Mining Convention further outlines in broad terms the proposed procedures envisaged for the allocation of land for the future mining, rail and port infrastructure, the resettlement and compensation measures for local population and communities and the proposed broad principles that will eventually govern the exploitation of the infrastructure relating to the Zanaga Project. For example, the Zanaga Mining Convention provides that:

- in association with the Congolese government, the Group and/or any company authorised by the Group will carry out technical, environmental and socio-economic studies on the preferred transport corridor for the Zanaga Project;
- the land areas for the transport corridor will be reserved and determined by way of a public decision to formally declare the Zanaga Project as a project of "National Interest" (*Projet d'Intérêt National*); and
- the government of the Republic of Congo undertakes to take all steps required under applicable legislation to declare the land areas affected as of "public utility" or DUP which would enable the government to expropriate the land required for the realisation of the Zanaga Project infrastructure (the "Infrastructure").

In order to mitigate against risks resulting from disputes in respect of the allocation of land, its expropriation, compensation payable, and resettlement issues, the government of the Republic of Congo and the Group have further agreed to negotiate protocols in order to set up a specified procedure for preliminary enquiries as to how the land areas required for the Zanaga Project may be expropriated. The parties have agreed to negotiate in good faith and agree a process for expropriation to be completed within three months of the Group's potential decision to invest as a result of completion of the BFS. The process will have to respect Congolese legislation, international best practice and notably procedures concerning relocation of affected inhabitants of the land areas in question. It was agreed under the Zanaga Mining convention that the land areas required by the Zanaga Project would be placed at the Group's (or any company authorised by it) disposal for a minimum period equal to the duration of the exploitation licence granted to the Group in respect of the Zanaga Project. This concession may be subject to compensation.

The Group, its shareholders and any company authorised by it will have the right to finance, realise and operate the Infrastructure by means of concession, farm-in, BOT (build, operate and transfer), or any other means authorised by applicable legislation. The Group will either directly or through an agreed company build the Infrastructure within the time limits set out in investment decision and this will be repeated in the exploitation licence. To this end, the Congolese government will facilitate the conclusion of the expropriation agreements in order that the Group (or any company authorised by it) may build and operate the Infrastructure on the expropriated land, subject to payment of a royalty that shall not exceed the maximum royalty applicable to national land in the area where the Infrastructure will be built.

#### **Environmental and Social**

Under the 2007 Mining Convention the Group is obliged, within 30 days following each four monthly "control mission" by the Administration of Geology & Mines to deposit of 50 per cent. of the then estimated cost of the rehabilitation of any land areas affected by the Group's operations into an escrow account held by an authorised Congolese bank as an environmental rehabilitation fund.

The 2010 Addendum makes provision for more extensive reciprocal undertakings to conduct and complete a Socio-Environmental Impact Assessment Study ("SEIA") in respect of the Zanaga Project in a collaborative manner and in accordance with applicable Congolese laws and international best practices and principles, as provided for by the World Bank. The government of the Republic of Congo undertakes to assist the Group at various stages of the Zanaga Project and the Group is required to pay the government a global fixed royalty equal to FCFA 20 million for its assistance in this context.

The 2010 Addendum furthermore sets out a definitive 28 month timetable for the completion of the SEIA and the granting of an environmental permit in respect of the Zanaga Project. The following consecutive steps are provided for:

- determination, approval and publication of terms of reference for the SEIA (6 months);
- determination and engagement of local and international consultants for the SEIA (3 months);
- realisation of socio-environmental studies (10 months);
- public enquiry (3 months);
- consideration of the SEIA by an Evaluation Technical Committee (6 months);
- agreement between MPD Congo and the Evaluation Technical Committee on the Environmental Management Plan (PGEP) (2 months); and
- issuance of the Environmental Permit by way of Inter-Ministerial Decree (1 month).

The 2010 Addendum further provides that within 2 months of the commencement of the SEIA, an *ad hoc* dispute resolution committee and accompanying procedural framework will be agreed and set up so as to ensure, where appropriate, that the environmental permit will be issued within the prescribed time limit provided that all applicable conditions are fulfilled by all parties concerned.

#### Permitting and Licensing

In order to facilitate and ensure the expeditious and non-discriminatory issue to MPD Congo of all requisite permits, licences, authorisations, administrative approvals and acts ("Approvals") required for the realisation of the Zanaga Project, MPD Congo and the Congolese government undertook under the 2010 Addendum to implement a two step process to (i) jointly identify all the applicable Approvals, and thereafter (ii) to jointly "fine tune", in accordance with best international and local practices, the documents, steps and procedures required for the simple, expeditious and transparent granting of such Approvals and to clarify which competent authorities are responsible for granting of the Approvals. The Congolese government are to furthermore undertake to ensure the issuance to MPD Congo of all Approvals in a prompt and timely manner.

#### **Other Obligations**

Pursuant to the Zanaga Mining Convention, the government of the Republic of Congo gave, amongst others, the following specific undertakings:

- not to take any measures to limit any of the advantages provided for under the Zanaga Mining Convention;
- not to take any measures to limit the Group's freedom to employ or dismiss employees, in accordance with the Congolese Labour Code. However, the Group is required to give priority to a Congolese candidates where they have equal experience and qualifications to a non-Congolese applicant for the same position; and

• to facilitate, by any appropriate means, performance of the exploration and prospection works, any studies to be carried out, and creation of the Infrastructure in connection with the Zanaga Project.

Further, the Group is subject, *inter alia*, to the following obligations under the terms of the Zanaga Mining Convention:

- to give regular guarantees to the government of the Republic of Congo that it has sufficient financial resources to carry out the Zanaga Project; and
- to provide information to the government of the Republic of Congo in relation to its exploration works under the Zanaga Exploration Licences.

The activities carried out by the Group in respect of the Zanaga Project are subject to technical verification by the Administration of Geology and Mines.

#### **Dispute Resolution**

The Zanaga Mining Convention provides that any disputes arising out of such convention that cannot be resolved in an amicable manner must be finally determined by way of ICSID arbitration (International Centre for Settlement of Investment Disputes) under the provisions of the Washington Convention. To this end the Congolese government has expressly waived any sovereign immunity for the execution of any such ICSID arbitral award.

#### **Exploitation phase**

Pursuant to the Zanaga Mining Convention, if iron ore deposits or any other mineral substance are discovered at the site covered by the Zanaga Exploration Licences in quantities that are commercially exploitable, the government of the Republic of Congo and the Group are required to conclude an agreement for their exploitation which will set out the respective roles of each party. As provided for under Article 98 of the Mining Code, any costs incurred by the parties in respect of the exploration phase of the Zanaga Project (which have been approved and certified by the Congolese Mining Administration) will be taken into account when negotiating the parties' financial obligations for the exploitation phase of the Zanaga Project.

#### PART VI

#### **RISK FACTORS**

In addition to the other relevant information set out in this document, the following specific factors should be considered carefully in evaluating whether to make an investment in the Company. If you are in any doubt about the contents of this document or the action you should take, you are strongly recommended to consult a professional adviser authorised under FSMA who specialises in advising on the acquisition of shares and other securities.

The Directors believe the following risks to be the most significant for potential investors. The risks listed, however, do not necessarily comprise all those associated with an investment in the Company and are not presented in any order of priority. In particular, the Company's performance may be affected by changes in legal, regulatory and tax requirements in the UK, Mauritius, Guernsey, BVI and the Republic of Congo as well as overall global financial conditions.

Investors should also consider the risks identified by SRK in the CPR in Part VII of this document.

This is a high risk investment and investors may lose a substantial portion or even all of the money they invest in the Company. An investment in the Company is, therefore, suitable only for financially sophisticated investors who are capable of evaluating the risks and merits of such investment and who have sufficient resources to bear any loss that might result from such investment.

Investors should also take their own tax advice as to the consequences of owning shares in the Company as well as receiving returns from it. No representation or warranty, express or implied, is given to investors as to the tax consequences of their acquiring, owning or disposing of any shares in the Company and neither the Company, the Directors nor Liberum will be responsible for any tax consequences for any such investors.

# 1. SPECIAL RISK FACTORS – RISKS RELATING TO THE GROUP'S OPERATIONS AND INDUSTRY

#### Early stage of operations

The Group's operations are at an early stage of development and success will depend on the Directors' ability to manage the current project and to take advantage of further opportunities which may arise. There can be no guarantee that the Group can or will be able to, or that it will be commercially advantageous for it, to develop all or any of the licences. Further, the Group currently has no assets producing positive cash flow and its ultimate success will depend on its ability to generate cash flow from active mining operations in the future and its ability to access equity markets for its development requirements.

An investment in the Company is speculative and involves a high degree of risk. Future results, including resource recoveries and work programme plans and schedules, will be affected by changes in market conditions, commodity price levels, political or regulatory developments, timely completion of exploration programme commitments or projects, the outcome of commercial negotiations and technical or operating factors.

#### Mineral reserve and resource estimates are uncertain and subject to change

The estimation of mineral reserves and mineral resources is a subjective process and the accuracy of reserve and resource estimates is a function of the quantity and quality of available data and the assumptions used and judgements made in interpreting engineering and geological information. There is significant uncertainty in any reserve or resource estimate and the actual deposits encountered and the economic viability of mining a deposit may differ materially from the Group's estimates. The exploration of mineral rights is speculative in nature and is frequently unsuccessful. The Group may therefore be unable to successfully discover and/or exploit reserves.

Estimated mineral reserves or mineral resources may also have to be recalculated based on changes in iron ore or other commodity prices, further exploration or development activity and/or actual production experience. As further information becomes available through additional fieldwork and analysis the estimates may change, which could result in: (i) alterations to development and mining plans which may, in turn, adversely affect the Group's operations; and (ii) a material adverse effect on estimates of the volume or grade of mineralisation, estimated recovery rates or other important factors that influence reserve or resource estimates.

Any significant difference between the Group's actual reserves and resources and its current estimates, could have a material adverse effect on the Group's business, results of operations, financial condition and/or growth prospects, particularly given the high capital expenditure required to develop the infrastructure relating to the Zanaga Project.

#### Exploration and mining risks

Whilst the Directors will endeavour to apply what they consider from time to time to be the latest technology to assess potential projects, the business of exploration for and identification of iron ore deposits is speculative and involves a high degree of risk. The iron ore deposits of any project owned or acquired by the Group may not contain volumes of iron ore of sufficient quality or quantity to be economically viable. Even if there are economically recoverable deposits, delays in the construction and commissioning of mining projects or other technical difficulties, including relating to infrastructure, may make the deposits difficult to exploit.

The exploration and development of any project may be disrupted, damaged or delayed by a variety of risks and hazards which are beyond the control of the Group. These include (without limitation) geological, geotechnical and seismic factors, environmental hazards, technical failures, adverse weather conditions, acts of God and government regulations or delays.

Exploration is also subject to general industrial operating risks, such as environmental hazards, explosions, fires, equipment failure and industrial accidents, which may result in potential delays or liabilities, loss of life, injury, environmental damage, damage to or destruction of property and regulatory investigations.

#### Exploitation risks

There can be no assurance that any resources recovered can be brought into profitable production. Market price fluctuations, increased production costs or reduced recovery rates, or other factors, including those relating to the cost of delivering the required infrastructure, may render the present estimated or inferred resources of the Group uneconomical or unprofitable to develop at a particular site or sites.

Further, the Group may not be able to exploit commercially viable discoveries which it owns or in which it acquires an interest. Exploitation will require the Group to apply for an exploitation licence and negotiate a new convention with the Congolese government and may require other external approvals or consents from relevant authorities and the granting of these approvals and consents is beyond the Group's control. For instance, power purchase agreements or standard offer contracts in certain jurisdictions are subject to approval by local, state, provincial or national utilities commissions or other regulatory authorities. The granting of such approvals and consents may be withheld for lengthy periods, not given at all, or granted subject to the satisfaction of certain conditions which the Group may not be able to meet. As a result of such delays, the Group may incur additional costs, losses or lose revenue or some or all of its licences. If at any stage the Group is precluded from pursuing its exploration programme or the exploration programme is not continued, the Group's business, result of operations, financial condition and/or growth prospects may be materially adversely affected. Additionally, should the regulatory regime in an applicable jurisdiction be modified in a manner which adversely affects natural resources facilities or projects, including taxes and permit fees, the returns to the Group may be adversely affected.

#### Drilling, developing and operating risks

Drilling, developing and operating projects involve a number of risks, many of which are beyond the control of the Group, which may delay or adversely impact the Group's activities. These delays and

adverse impacts could result in the Group's activities being abandoned and/or substantial losses being incurred.

Drilling may not result in the discovery of economically viable resources due to insufficient resources being discovered, the resources not being of sufficient quality to be developed economically or the costs of any development being in excess of that required for an economic project.

If economically recoverable iron ore deposits are found, it may take a number of years from the initial phases of exploration until production is possible, during which time the economic feasibility of production may change. Substantial expenditure is required to establish reserves and, in the cases of new properties, to construct mining and processing facilities. As a result of these uncertainties, no assurance can be given that the exploration programmes will result in any new commercial mining operations being brought into operation.

The scale of production from the development of a iron ore deposit will be dependent upon factors over which the Group has no control such as market conditions at that time, access to, and the operation of, transportation and processing infrastructure, the available capacity levels and tariffs payable by the Group for such infrastructure and the granting of any licences or quotas the Group may require from the relevant regulatory authority. In addition the Zanaga Exploration Licences are in remote areas which may have an adverse effect on the Group's ability to transport its product and impact negatively upon the Group's ability to maintain its plant and machinery and access any other plant and machinery necessary to develop the Zanaga Project. All of these factors may result in delays in production, additional costs to those projected or a reduction in expected revenues for the Group. Therefore, there is a risk that the Group may not make a commercial return on its investment.

#### Operational targets and delays and business plan

The Group's operational targets will be subject to the completion of planned operational goals on time and according to budget, and are dependent on the effective support of the Group's personnel, systems, procedures and controls. Any failure of these may result in delays in the achievement of operational targets with a consequent material adverse impact on the business, operations and financial performance of the Group. The Group will not generate any material income until mining has successfully commenced and the infrastructure has been developed to transport the product. In the meantime the Group will continue to expend its cash reserves.

Similarly, the successful implementation of the Group's business plan is uncertain and the business plan may change from time to time, depending on whether the Call Option is exercised by Xstrata.

#### Current and future financing

The Directors anticipate that the Company will need to make substantial capital investment in order to develop the Zanaga Project and the related infrastructure and such capital investment may be higher than currently planned. The Group may also have further capital requirements to the extent it decides to expand its exploration activities, develop future mining operations, or take advantage of opportunities for acquisitions, joint ventures or other business opportunities that may be presented to it of which it may become aware of. Such investments will require the Group to raise capital, which capital raising is likely to be in the form of debt and/or equity finance.

As set out in more detail in Part II above, Xstrata may decide not to exercise its Call Option and to fund the BFS. In the event that Xstrata does not fund the BFS, the Group will need to finance the costs associated with the BFS and any ongoing costs of the Zanaga Project. It is expected that this would be financed through one or a combination of the following: an equity or debt capital raising, the introduction of a new strategic partner for the Company and/or an offtake agreement in respect of the Zanaga Project.

The success or otherwise and the pricing of any such capital raising will depend upon a wide range of factors including, but not limited to, the prevailing market conditions at that time (including the general availability of credit and the outlook for iron ore prices), the compliance with national and international best practice (such as the World Bank's Equator Principles) for environmental and social aspects of the Zanaga Project, the prevailing fiscal and legal framework and the outcome of relevant

feasibility studies. The Group may be unable to obtain debt and/or equity financing in the amounts required, in a timely manner, on favourable terms or at all and should this occur, it is highly likely to pose challenges to the Group's proposed development and proposed timeline for development.

Moreover, the global credit environment may pose additional challenges to the Group's ability to secure loans or to secure loans on acceptable terms, including as to rates of interest. To the extent the Group does take out loans, the Group may be subject to material interest and amortisation expenses, covenants requiring that the Group maintain prescribed financial ratios and covenants restricting certain aspects of its business, including, for example, restrictions on additional future borrowings and indebtedness levels and permitted future acquisition activity, and may also be collateralised by security interests placed over certain of the Group's assets.

If the Group raises additional funds through further issuances of securities (including equity securities), the holders of Ordinary Shares could suffer significant dilution, and any new securities that the Company issues could have rights, preferences and privileges superior to those of the holders of the Ordinary Shares.

If the Group fails to generate or obtain sufficient capital resources to establish, develop and operate its business, this could materially and adversely affect the Group's business, results of operations, financial condition and prospects.

#### Licensing and other legal and regulatory requirements

The Group's current and future operations are subject to exploration, development, exploitation and mining licences, leases, licences including, without limitation, the Zanaga Exploration Licences, concessions and regulatory consents and approvals (collectively, the "Authorisations") from the government and regulatory authorities.

Whilst the Directors believe that the Group has obtained all Authorisations that are material in the context of the Group's business as it is now conducted, there can be no assurance that it has every necessary or desirable Authorisation, that the Authorisations required to carry on the Group's operations will not change or that the Group will be able to successfully enforce its current Authorisations, or that it will obtain any additional Authorisations that may be required in the future. Certain Authorisations may, or may in the future, contain onerous conditions with which the Group may not be able to comply or on terms which include Congolese government participation, which may impact on the results, operations or financial conditions or prospects of the Group. A failure to comply with an obligation in an Authorisation may result in adverse consequences for the Group, including the termination of that Authorisation.

There can also be no assurance that any existing or future Authorisations will be renewed following their expiry or that the terms of any such renewed Authorisations will be renewed following their expiry or that the terms of any such renewed Authorisations will be commercially acceptable. Obtaining new permits and rights or renewals of existing permits and rights can be a complex and time-consuming process and the Group cannot guarantee whether any necessary permits or rights will be obtained on acceptable terms, in a timely manner, or at all. The costs and delays associated with obtaining necessary permits or rights (or renewals thereof) could stop, delay or restrict the Group's operations and any planned development. Conditions may be imposed on such Authorisations that may affect the viability of the Zanaga Project, including payment and any other obligations.

Failure to obtain, renew, enforce or comply with one or more Authorisations could have a material adverse effect on the Group's prospects, business, results of operations and prospects.

#### Renewal of the Zanaga Exploration Licences

The initial three year term of the Zanaga Exploration Licences expired on 8 May 2010 and the Zanaga Exploration Licences were renewed on 14 June 2010 for a further period of two years from 8 May 2010. The Zanaga Exploration Licences are thereafter renewable for a subsequent term of two years. Whilst the Directors expect the Zanaga Exploration Licences to be renewed, this is outside of its control and there can be no guarantee that this will happen.

Each renewal of the Zanaga Exploration Licences will be accompanied by a reduction of the surface area covered by the Zanaga Exploration Licences of up to 50 per cent. of the current surface area covered by the Zanaga Exploration Licences. Congolese law permits the Company's Congolese subsidiary, as holder of the Exploration Licences, to propose the area which should be abandoned. There can be no guarantee that the Congolese government will accept the Group's proposal. Should this occur, this could have a material adverse effect on the Group's business, prospects, financial condition and results of operations.

#### Title

The acquisition and retention of title to mineral rights is a detailed and time-consuming process. Whilst the Company has investigated the Group's title to, rights over and interests in, the Zanaga Exploration Licences and other assets, and has taken reasonable measures to ensure title to its projects, this should not be construed as a guarantee of the Group's title to such assets. The Group's rights under the Zanaga Exploration Licences and other assets may be subject to prior unregistered agreements or transfers that have not been recorded or detected through title research and title may be affected by such undetected defects. They may also be affected by other risks identified in this Admission Document, including the risks identified above. There can be no assurance that the Group's title to the Zanaga Exploration Licences or other assets will not be challenged, impaired or impugned. Any such challenge could have a material adverse effect on the Group's business, prospects, financial condition and results of operations.

#### Risks Associated with Native Land Claims

Pursuant to the laws of the Republic of Congo, mineral deposits are the property of the federal government with the ability to purchase surface rights. Generally speaking, the Republic of Congo has not had a history of native land claims being made against the state's title to land. There is no guarantee, however, that they will not, in the future have a deleterious effect on the progress of development and future production.

The Zanaga Mining Convention envisages that the Zanaga Project will be declared a project of national benefit and the government of the Republic of Congo has undertaken, amongst other things, to take all steps required in order to declare the land areas within the transport corridor to be of public benefit. Such a declaration would enable the government to carry out a process to expropriate the land required by the Zanaga Project and place such land at the disposal of the Group in order to build the infrastructure, including the railway line, required for the realisation of the Zanaga Project. This means that the Group's rights to the relevant land will be subject to negotiation between the Congolese government and the Group. Alternatively, if the land is not declared DUP then the Group will have to reach agreement with the local land owners which may be a more time consuming and costly process.

#### Legal, administrative or judicial proceedings

Legal, administrative and regulatory proceedings may arise from time to time in the course of the Group's business or as a result of the Congolese government's compulsory participation process. Any judgment or decision against the Group in any current or future legal, administrative or judicial proceedings could have a material adverse effect on the Group's business, results of operations, financial condition and prospects.

#### **Projections and estimates**

This Admission Document sets forth projections and estimates relating to the Group's future production levels, capital expenditure requirements, cash requirements and production costs. These projections and estimates are based on a number of assumptions relating to the Group's business activities, future iron ore prices, the Group's potential mineral deposits and rates of production and demand levels for the Group's products, cost of constructing infrastructure among others, and are likely to be lower or higher, potentially materially, than actual results. The projected capital expenditures are also based upon assumptions relating to levels of taxation, equipment, labour, processing and other production costs, and currency exchange rates. Although the Directors believe

that the assumptions and estimates made are reasonable and the reasonableness of these assumptions and estimations has been independently reviewed, they may differ materially from the Group's actual results or requirements in connection with the projected information. The assumptions and estimates are inherently highly uncertain, based on events that have not yet taken place and are subject to unforeseen circumstances and significant economic, competitive and other contingencies beyond the Group's control. The Company may choose not to pursue its business plan in its current form or on the projected timelines and there can be no assurance that the projected results and events will, in fact, occur. Under no circumstances should the projections set forth in this Admission Document be regarded as a representation, warranty or prediction that the Group will achieve, or will likely be able to achieve, any particular future result. There can be no assurance that the Group's future results will not vary materially from those included in this Admission Document. Accordingly, investors may lose some or all of their investments to the extent that the projections or conclusions included in this Admission Document are not ultimately realised.

#### Undefined market and product

Professional consultants, acting on behalf of the Group, have undertaken some preliminary metallurgical analysis of representative samples of the mineralised lithologies from the Zanaga Licence Area. The results of these analyses have indicated at least two target product options that could be produced from the samples from the Zanaga Licence Area. There is no assurance that the results of this metallurgical work are applicable to the entire mineralised deposit at the Zanaga Licence Area nor that the product alternatives suggested will attract interest from global consumers of iron ore. The Group has not yet undertaken a detailed market study to identify the potential demand for its products and there are no assurances that the demand for the Group's product will be sufficient in quantity or in price to ensure the economic viability of the Zanaga Project.

#### Limited operating history

The Company is currently in an early stage of development, during which it is investing in the development of the Zanaga Project. Neither the Company nor the Group, to date, has generated income. The Directors expect that the Company and the Group will incur significant increased costs, therefore substantial operating losses, associated with resource delineation and development of the Zanaga Project and related transportation infrastructure in the future. There can be no assurance that the Group will be profitable or cash flow positive.

#### Location

The successful development of the Zanaga Project depends on adequate infrastructure. The region in which the Zanaga Project is located is sparsely populated and difficult to access. Reliable roads, bridges, power sources and water supplies are important determinants which affect capital and operating costs and the Group's ability to maintain expected levels of progress with its exploration activities. Unusual weather or other natural phenomena, sabotage or government or other interference in the maintenance or provision of such infrastructure could impact on the development of the Zanaga Project, increase exploration costs or delay the transportation of supplies, equipment or machinery to the Zanaga Project. Any such issues in respect of the infrastructure supporting or at the Zanaga Project could materially and adversely affect the Group's business, results of operations, financial condition and prospects.

#### Transportation infrastructure

Central to the Group's ability to become a commercial mining operation is access to a transportation system through which it can transport future iron ore product to a port for onward export by sea. According to the Company's business plan, in order to achieve this, the Group proposes to build a port facility at Pointe Noire and build a rail network.

In relation to the proposed port and rail network, the Group has not yet obtained necessary permits, authorisations or land access rights. In relation to the proposed port facility, the permitting and authorisation process is at a very early stage.

No construction activity has commenced on either the port or the rail and neither piece of infrastructure will be completed for a number of years.

The Zanaga Mining Convention envisages that the Zanaga Project will be declared a project of national benefit and the government of the Republic of Congo has undertaken, amongst other things, to take all steps required in order to declare the land areas within the transport corridor to be of public benefit. Such a declaration would enable the government to carry out a process to expropriate the land required by the Zanaga Project and place such land at the disposal of the Group in order to build the infrastructure, including the railway line, required for the realisation of the Zanaga Project. This means that the Group's rights to the relevant land will be subject to negotiation between the Group's rights of use of such infrastructure as they would be then considered as part of the public domain. If the land is not declared DUP then the Group will have to reach agreement with the local land owners. There is, however, no guarantee that the Group will be successful in doing so.

Any delays in (i) the declaration of the DUP and finalising purchase of the land sites and obtaining land rights, (ii) obtaining the necessary permits and authorisations (iii) the construction or commissioning of the port or the railway, or (iv) raising finance to fund the infrastructure development, could prevent altogether or impede the Group's ability to export its future iron ore products on the anticipated timelines or at projected volumes and costs. Such delays or a failure to complete the proposed rail network or to establish the port or to do either in an economically viable manner, could have a material adverse effect on the Group's business, results of operations, financial condition and prospects.

#### **Reliance on third party operators**

The Group will depend heavily on third-party contractors and consultants for the provision of certain services and equipment in order to develop the Zanaga Project and conduct its operations.

Certain of the services are, or may in the future, only be available on commercially reasonable terms from a limited number of providers. There can be no assurance that the Group will be able to secure or secure in a timely manner or on commercially acceptable terms the provision of all the services which it will need or that the arrangements it does enter into will be sufficient for the Group's future needs or will not be interrupted or cease altogether.

If the Group is forced to change a provider of such services, it may experience additional costs, interruptions to operations or other adverse effects on its business. There also can be no assurance that the Group would be able to find adequate replacement services on a timely basis or at all. Should the Group be unable to acquire or retain providers of key services on commercially acceptable terms, or should there be interruptions to, delay in securing, or inadequacies with, any services provided, it could have a material adverse effect on the Group's business, results of operations, financial condition and prospects.

#### Dependence on small number of key personnel

The Group's ability to implement its business strategy and develop its competitive position is dependent, to a large degree, on the services of highly-skilled employees and consultants with technical mining, processing and infrastructure expertise including geological, hydrological, metallurgical and engineering experts, certain of which are in short supply. It is possible that the Group may experience difficulty attracting and retaining sufficient numbers of skilled employees.

The success of the operations and activities of the Group is also dependent to a significant extent on the judgement and abilities of its senior management. In the event that any member of senior management leaves the Group, the Group may seek to appoint a successor, however the Group cannot guarantee that any such successor will have the same level of expertise, competence or ability as existing management.

The Group's inability to recruit sufficient qualified employees, the loss or diminution in the services of members of the senior management team or an inability to attract and retain additional or replacement senior management could have a material adverse effect on the Group's business, financial condition, results of operations or prospects.

#### Labour risks

In addition to the key personnel described above, the Group is also dependent upon local employees and contractors in order to develop the Zanaga Project and conduct its operations. If the Group is unable to recruit the required personnel with the required skills, this could adversely affect the Group's operations. Significant increases in labour costs could also adversely affect the Group.

HIV/AIDS, malaria and other contagious diseases are prevalent in the Republic of Congo and, accordingly, the Group's workforce will be exposed to the health risks associated with the country. The Group's results may be materially adversely affected by the loss of productivity and increased costs arising from any effect of HIV/AIDS, malaria and other contagious diseases on the Group's workforce.

#### **Environmental risks**

The Group's operations are subject to potential risks and liabilities associated with the pollution of the environment and the disposal of waste products that may occur as a result of its mineral exploration, development and production, including damage to preservation areas, over-exploitation and accidental spills and leakages. Such potential liabilities include not only the obligation to remediate environmental damage and indemnify affected third parties, but also the imposition of court judgments, administrative penalties and criminal sanctions against the Group and its employees and executive officers. Environmental laws and regulations, involving the protection and remediation of the environment and governmental policies for the implementation of such laws and regulations are constantly changing and are generally increasing in scope and becoming more restrictive. The Group cannot give any assurance that, notwithstanding its precautions, breaches of these environmental laws and regulations (whether inadvertent or not) or environmental pollution will not materially and adversely affect its financial condition, business, prospects and results of operations.

#### Health and safety

The Group is required to comply with a range of health and safety laws and regulations in connection with its business activities and will be required to comply with further laws and regulations if and when production commences. A violation of health and safety laws relating to its operations, or a failure to comply with the instructions of the relevant health and safety authorities, could lead to, amongst other things, a temporary shutdown of all or a portion of the Group's operations or the imposition of costly compliance measures. If health and safety authorities require the Group to shut down all or a portion of its operations or to implement costly compliance measures, whether pursuant to existing or new health and safety laws and regulations, or the more stringent enforcement of existing laws and regulations, such measures could have a material adverse effect on the Group's business, reputation, results of operations, financial condition and prospects.

Due to the nature of the Group's operations, there is a risk that substantial damage to property or injury to persons may be sustained during the Group's exploration activities. Any such damage or injury could have a material adverse effect on the Group's business, reputation results of operations, financial condition and prospects.

#### Changes to, and interpretation of, laws or regulations

The mineral exploration industry is highly regulated. The implementation of new laws or regulations, any changes to existing laws or regulations or an adverse interpretation of, or difficulty in obtaining effective legal redress in relation to, existing laws and regulations relating to exploration, development, mining or mineral processing activities could have an adverse impact on the Group's costs, flexibility, business plan and results of operations or otherwise affect the economic viability of the Group's business. Any changes or new laws and regulations could additionally require the Group to modify its exploration programmes, development plans, its operations or the technologies it uses to conduct those operations. The Group is unable to predict the effect of additional laws and regulations (including environmental laws and regulations) which may be adopted in the future or how existing laws and regulations may be interpreted, including whether any such laws or regulations would materially increase the Group's cost of doing business or affect its operations. Changes in applicable laws and regulation of new laws and regulations could result in the Group

experiencing operational delays or require the Group to make unbudgeted capital expenditures. All the above factors could have a material adverse effect on the Group's results of operations, prospects, business and financial condition.

#### Adverse publicity from consumer and environmental groups

There is an increasing level of consumer awareness relating to the effect of mining exploration and production on its surroundings, communities and the environment. Consumer and environmental groups therefore exist to encourage participants in the mining industry to employ practices which minimise any adverse impact that mining may have on communities, workers and the environment and also to lobby governments for the introduction of additional environmental and social policies, regulation and legislation. Whilst the Group seeks to operate in a socially responsible manner, changes to governmental policy and adverse publicity generated by such consumer groups which either relates to the iron ore industry as a whole or to the Group in particular, could have an adverse effect on the reputation and financial position of the Group.

#### Iron ore prices

The Group's principal business is the exploration for iron ore. The Group's ability to raise finance, the terms on which that finance is raised and its future financial performance is largely dependent on movements in the price of iron ore. Iron ore prices have historically been volatile and are primarily affected by the demand for and price of steel. Given the historical volatility of iron ore prices, there are no assurances that the iron ore price will remain at levels that make the Group's project economically viable. An increase in iron ore supply without a corresponding increase in iron ore demand would be expected to result in a decrease in the price of iron ore. A decline in iron ore prices would adversely impact the business of the Group.

Iron ore prices are also affected by numerous other factors beyond the Group's control, including the relative exchange rate of the U.S. dollar with other major currencies, global and regional demand, political and economic conditions, production levels and costs and transportation costs in major iron ore producing regions. If, as a result of a decline in iron ore prices, revenues from iron ore sales were to fall below cash operating costs, the feasibility of continuing development and operations would be evaluated and if warranted, could be discontinued.

#### Insurance

The Group, as a participant in exploration and mining programmes, may become subject to liability for hazards for which it cannot be insured, which could exceed policy limits or against which it may elect not to be insured. These risks include but are not limited to periodic interruptions due to industrial and railway accidents, labour claims, encountering unusual or unexpected geological formations, environmental damage, power outages, equipment failures and severe weather conditions or other acts of God. These events may damage or destroy mineral properties, future production facilities, transport facilities and equipment, as well as lead to personal injury or death, environmental damage, future waste from intermediary products or resources and mining, production or transportation delays, monetary losses or legal liability. There is no assurance that the Group will be able to rebuild damaged property in a timely manner or at all.

The Group does not currently have nor may it have in the future insurance coverage for its plant or any of its facilities, for business interruption, for third-party liability in respect of property, and for environmental damage arising from accidents on the Zanaga Licence Area or relating to its operations. The Group intends to obtain insurance coverage in the future to the extent the Directors believe necessary if and when it enters the development and construction phases and becomes operational. However, there is no guarantee that the Group will be able to secure adequate levels of insurance coverage on economically viable terms or at all. Moreover, there is no assurance that the Group will be able to maintain existing levels of insurance in the future at rates it considers to be reasonable. Until the Group is able, or elects, to obtain full insurance coverage, there is a risk that losses and liabilities arising could significantly increase its costs and have a material adverse effect on its business, results of operations, financial condition and prospects.

#### Taxation

It is possible that in the future, whether as a result of a change of applicable law or the practice or ruling of any relevant tax authority or the renegotiation or amendment of any applicable taxation convention or treaty, or as a result of any change in the management or the conduct of the affairs or the operations or structure of the Company or its subsidiaries, the Company and/or its subsidiaries could become, or be regarded as being, resident in a jurisdiction in which they do not intend to be resident therefore becoming subject to the tax regime of that jurisdiction. If this were to occur, this could have a material adverse effect on the Group's business, results of operations and financial condition.

#### Free carried interest

The holder of an exploitation licence is required to incorporate a Congolese company to be the operating entity (being MPD Congo in the case of the Group). Under Article 100 of the Mining Code, the Congolese government is entitled to a free carried interest in projects which are at the production phase. This participation cannot be less than ten per cent. There is, therefore, a risk that the government will seek to obtain a higher participation in the Zanaga Project. If this were to occur, this could have a material adverse effect on the Group's business, results of operations, financial condition and prospects. However, the Directors understand that (i) any government participation in excess of the minimum ten per cent. threshold and (ii) the form of such participation will be subject to further negotiation with the Congolese government when a mining agreement is prepared for the production phase of the Zanaga Project.

#### 2. RISKS RELATING TO THE REPUBLIC OF CONGO

#### Political, regulatory and economic changes

The Group's operations are located entirely in the Republic of Congo. The operations of the Group will be exposed to various levels of political, regulatory, economic and other risks and uncertainties.

As in many other countries, these risks and uncertainties include, but are not limited to: political, military or civil unrest; fluctuations in global economic and market conditions impacting on the Congolese economy; terrorism; hostage taking; extreme fluctuations in currency exchange rates; high rates of inflation; labour unrest; nationalisation; illegal mining; restrictions on foreign exchange and repatriation. In addition, the Republic of Congo is an emerging market and, as a result, is generally subject to greater risks than in the case of more developed markets.

Operations may be affected in varying degrees by government regulations with respect to, but not limited to, restrictions on production, price controls, export controls, labour laws (including requirements to award contracts to local contractors or to employ citizens of, or purchase supplies from, the Republic of Congo), expropriation of property, foreign investment, maintenance of claims, environmental legislation, land use, land claims of local people, water use and mine safety. Failure to comply strictly with applicable laws, regulations and local practices relating to mineral rights applications and tenure, could result in loss, reduction or expropriation of entitlements, or the imposition of additional local or foreign parties as joint venture partners with carried or other interests.

Should any of the above risks materialise, this could have a material adverse effect on the Group's business, prospects, financial condition and results of operations.

#### Fluctuation in inflation and exchange rates

The Group's reporting currency is the U.S. dollar. When in production, the Directors expect that most of the Group's revenues will be denominated in U.S. dollars, while most of its in country costs will be denominated in CFA francs and Euros. The Directors also expect the Group to hold assets and incur liabilities in other foreign currencies, including the pound sterling. Consequently, increases in the value of the Euro (and consequently the CFA franc) relative to the U.S. dollar and other foreign currencies may result in a reduction in the Group's reported profits. In addition, because the Group's functional currency is the U.S. dollar, both at a consolidated and operating company level, the Group must translate the CFA franc denominated assets and liabilities into U.S. dollars. To do so, non-U.S. dollar

denominated monetary assets and liabilities are translated into U.S. dollars using the closing exchange rate at the date of the balance sheets. Consequently, increases or decreases in the value of the U.S. dollar versus the Euro (and consequently the CFA franc) and other foreign currencies may affect the Group's assets and liabilities in the Group's balance sheets. Appreciation of the Euro (and consequently the CFA franc) against the U.S. dollar would cause the Group's projected capital and operating costs (as expressed in U.S. dollars) to increase. Any of the foregoing could adversely affect the Group's business, financial condition and results of operations as well as the market price of its Ordinary Shares.

#### **CEMAC** regulations

The Republic of Congo is a member of CEMAC. CEMAC governs and regulates the flow of funds between non-CEMAC jurisdictions and legal entities residing or having their registered offices in the territory of a CEMAC member state. The Group is required to obtain governmental consent before bringing funds into the Republic of Congo. Any failure to declare such funds could result the Group being subject to penalties and/or sanctions. This could have a material adverse effect on the Group's business, operating results and financial position.

#### **Enforcement of contractual rights**

The legal system in the Republic of Congo is based on the French civil law system (the Civil Code of the former French Equatorial Africa). The Republic of Congo is also a member state of the Organization for the Harmonization of Business Law in Africa, which has enacted an Act relating to Company Law and Economic Interest Groupings, providing for a standard system for the creation and administration of companies and related entities, and a Uniform Act on Arbitration, allowing recourse to a standard arbitration mechanism for the settlement of contractual disputes arising from civil or commercial contracts concluded in the Republic of Congo as an alternative to recourse to the Republic of Congo courts for legal proceedings relating to contracts. Under Republic of Congo contract law, parties may enter into private contracts in the language of their choice, however enforcement of certain contracts (such as commercial leases and asset purchase agreements) before the Republic of Congo courts requires notarisation and translation into French. Contracts relating to administrative matters, between public entities or between a public entity and a private entity (such as, for example, leasing of areas belonging to a public entity to a private company), must be entered into in French, but need not be notarised before being enforced in a Republic of Congo court. All contracts require registration with the Republic of Congo stamp duties and registration fees office and payment of the applicable stamp duties as a condition of enforceability. If any of these processes are not strictly followed, the courts may determine that a contract entered into is not enforceable. If any of the Group's contracts are deemed unenforceable, this could have a material adverse effect on the Group's business, operating results and financial position.

#### Republic of Congo tax laws

The Company's Congolese subsidiary, MPD Congo, will be subject to tax in the Republic of Congo. Misinterpretations of Congolese tax regulations could lead to financial penalties in the future Congolese tax laws and related regulations are complex and interpretation and application are subject to the opinions of the local tax inspectorate. Non-compliance with tax laws and regulations can lead to the imposition of punitive damages in the form of penalties and interest. Future tax investigations or inquiries may raise issues or assessments to which the Company's Congolese subsidiary believes it is not subject, or has complied with, and which therefore have not been accounted for in the Company's consolidated financial statements. Reviews and assessments of the Company's Congolese subsidiary's current or historic tax filings could result in additional taxes, penalties and interest, and such amounts could be material.

Any adverse change in tax laws and/or statutory royalties could result in increases in the Group's overall tax burden, which could negatively affect the Group's overall financial performance.

#### Local climatic conditions

Weather conditions in the Republic of Congo can fluctuate severely. Rain storms, flooding and other adverse weather conditions are common and can severely disrupt transport in the region where the Group operates and other logistics on which the Group is dependent. There can be no guarantee that unfavourable weather conditions will not occur and the occurrence of such events may have a material adverse affect on the Group's business, results of operations, financial condition and prospects

#### 3. RISKS RELATING TO THE XSTRATA TRANSACTION

Part II "Xstrata Transaction" of this document sets out a summary of the Xstrata Transaction and the two principal transaction documents relating to the Xstrata Transaction, namely the Call Option Deed and the JVA. These documents contain a number of provisions which may have a material impact on the ownership structure, management, funding and future direction of Jumelles BVI and the Group. As a result, the Xstrata Transaction and the provisions of the Call Option Deed and the JVA could have a material adverse effect on the value of a potential investor's holding of Ordinary Shares, the Group's business, results of operations, financial condition and prospects.

Potential investors should carefully read Part II "Xstrata Transaction" of this document and ensure that they understand the ways in which the Xstrata Transaction and the Call Option Deed and the JVA might affect the value of their holdings of Ordinary Shares and the potential risks associated with the Xstrata Transaction.

The Xstrata Transaction might have a material impact on the value of a potential investor's holding of Ordinary Shares in a number of different circumstances. By way of illustration, these provisions include (without limitation) the following:

Under the Call Option Deed, Xstrata was only obliged to fund the first US\$50 million of the PFS. Xstrata may determine in its sole discretion not to exercise the Call Option. In the event that Xstrata decides not to exercise the Call Option, it shall be under no further obligation to fund Jumelles BVI or the Jumelles BVI group. Consequently, Xstrata's funding of the completion of the PFS and the BFS is not guaranteed under the Call Option Deed or the JVA. It is noted, however that Xstrata has committed to contribute, by way of additional Call Option premium, up to US\$56.49 million of further funding for phase II of the PFS pursuant to the Further Funding Letter. In the event that Xstrata does not fund the completion of the PFS or the BFS, the Group will need to finance the costs associated with the PFS, the BFS and any ongoing costs of the Zanaga Project. The need to finance such costs could have timetable implications on the completion of the PFS and BFS or impact upon the Group's ability to convert the Zanaga Exploration Licences to exploitation licences and, if minimum expenditure conditions are not met before March 2012, the Group may be unable to renew the Zanaga Exploration Licences, which expire in May 2012.

In the event that Xstrata exercises the Call Option and the BFS is completed, Xstrata may exercise its right to make an offer to the Company for all of the ordinary shares the Company holds in Jumelles BVI. The exercise of this right is not subject to Shareholder approval. If Xstrata exercises this right under the JVA, the Company will no longer hold any ordinary shares in Jumelles BVI and will receive the consideration proceeds from Xstrata for the ordinary shares in Jumelles BVI. There is no guarantee that the consideration paid by Xstrata will be in excess of the underlying value of the Company's Ordinary Shares.

In the event that there is a material adverse change, Xstrata's funding obligations under the Call Option Deed and the JVA will be suspended until the material adverse change has ceased. Xstrata's funding obligations will also be suspended in the event that there is a material breach by Garbet, Guava or the Company of the tax covenant, which relates to existing employee incentive plans and certain warranties.

Under the Call Option, where an interest of greater than 50 per cent. in Garbet, Guava or any holding company of Garbet or Guava is acquired by a third party, Xstrata has the right to acquire all of the interests in the Zanaga Project held by Garbet or Guava as the case may be. The price payable by Xstrata in such circumstances is (i) the amount which the third party has agreed to pay for the shares

or (ii) where the assets or interests are not related to the Zanaga Exploration Licences, Jumelles BVI or its subsidiaries, the amount which the third party has agreed to pay for the shares. Further details of the change of control provision under the Call Option are set out in Part II of this document.

Whilst, under the terms of the Relationship Agreement which is summarised in paragraph 13.18 of Part X of this document, Garbet and Guava have undertaken not to take any action and to procure that none of their respective holding companies take any action which would trigger these change of control provisions applicable to it without the prior written consent of the other parties to the Relationship Agreement, the acquisition of control of Garbet, Guava or any of their respective holding companies in the Zanaga Project at a price which is less than the fair market value or that they would otherwise have to pay.

The change of control provisions contained in the JVA could act as an impediment to a takeover of the Company as in such circumstances Xstrata would have the right to acquire all of the shares which it does not hold in Jumelles BVI. Similarly, all of the rights attaching to the preferred right contained in the JVA shall lapse if there is a change of control in respect of the Company and this could also act as an impediment to a takeover.

Investors should therefore refer in more detail to Part II "Xstrata Transaction" of this document before making any investment decision.

#### 4. RISKS RELATING TO THE ORDINARY SHARES

#### Absence of prior public trading

Prior to Admission, there has been no public market for the Ordinary Shares. The Placing Price has been agreed between Liberum and the Company and may not be indicative of the market price for the Ordinary Shares following Admission. Although the Company has applied to the London Stock Exchange for admission of the Ordinary Shares to trading on AIM, the Company can give no assurance that an active trading market for the Ordinary Shares will develop or, if developed, that it will be maintained following Admission. If an active trading market is not developed or maintained, the liquidity and market price of the Ordinary Shares could be adversely affected.

# Shareholders of a BVI incorporated company do not have the same protections afforded to shareholders of a company incorporated in England and Wales

As the Company is incorporated in the BVI it is subject to the laws of that jurisdiction. The UK Act does not apply to the Company and BVI law does not provide identical shareholder protections to those contained in the UK Act. Set out below is a description of certain differences between companies incorporated in England and the BVI:

- **Pre-emption rights.** Statutory pre-emption rights under the BVI Act over further issues of shares in the Company have been disapplied. The Articles have, however, been amended to include pre-emption rights equivalent to rights offered to shareholders of companies incorporated in the UK.
- **Takeovers.** The City Code will not apply to the Company. The Company's Articles of Association, however, incorporate provisions similar to those contained in Rule 9 of the City Code. For further information please see paragraph 6.19 of Part X of this document.

#### Substantial Shareholders will be able to exert significant influence over the Company

Garbet and Guava are substantial shareholders of the Company. As a result of their substantial shareholding, Garbet and Guava, subject to the Company's Articles and applicable laws and regulations, will be able to exercise significant influence over all matters requiring Shareholders' approval, including the composition of the Board, the timing and amount of dividend payments and the approval of general corporate transactions.

Garbet and Guava have entered into a Relationship Agreement with the Company which regulates the relationship between them and the Company. The terms of the Relationship Agreement are summarised in paragraph 13.18 of Part X of this document.

#### Future sales of Ordinary Shares in the open market could cause the share price to fall

The Company is unable to predict whether substantial amounts of Ordinary Shares will be sold in the open market following termination of the lock-in arrangements described in paragraph 11 of Part X of this document. Any sales of substantial amounts of Ordinary Shares in the open market, or the perception that such sales might occur, could materially and adversely affect the market price of the Ordinary Shares.

#### Investment in AIM securities

Investment in shares traded on AIM is perceived to involve a higher degree of risk and be less liquid than investment in companies whose shares are listed on the Official List and traded on the London Stock Exchange's Main Market for listed securities. An investment in Ordinary Shares may be difficult to realise. Prospective investors should be aware that the value of Ordinary Shares may go down as well as up and that the market price of the Ordinary Shares may not reflect the underlying value of the Company. Investors may therefore realise less than, or lose all of, their investment.

#### Potentially volatile share price and liquidity

The share price of quoted emerging companies can be highly volatile and shareholdings illiquid. The price at which the Ordinary Shares are quoted and the price at which investors may realise for their Ordinary Shares may be influenced by a significant number of factors, some specific to the Company, the Group and their operations and some which affect quoted companies generally. These factors could include the performance of the Group, large purchases or sales of Ordinary Shares, legislative changes and general, economic, political or regulatory conditions.

# There is a significant likelihood that the Company will be treated as a passive foreign investment company

Although the Company has not made a determination as to whether it is a PFIC for U.S. federal income tax purposes, there is a significant likelihood that the Company will be classified as a PFIC for U.S. federal income tax purposes. PFIC status is fundamentally factual in nature, generally cannot be determined until the close of the taxable year in question and is determined annually. An investment in a PFIC may have materially adverse U.S. federal income tax consequences to a U.S. Holder, including subjecting the U.S. Holder to a greater tax liability than may otherwise apply and subjecting U.S. Holders to tax on amounts in advance of when tax would otherwise be imposed. If a U.S. Holder holding Ordinary Shares is treated as owning stock of a PFIC, any gain recognised by such person upon a sale or other disposal of Ordinary Shares generally will be treated as ordinary income (rather than capital gain), and any resulting U.S. federal income tax may be increased by an interest charge on taxes that are considered deferred. Rules similar to those applicable to disposals generally will apply to certain excess distributions in respect of an Ordinary Share. A U.S. Holder generally may avoid some of these unfavourable U.S. federal income tax consequences by making a QEF election, or alternatively, making a mark-to-market election, with respect to an investment in certain PFICs. The Company intends to make a determination of whether it is a PFIC after the close of each taxable year. If the Company determines that it is a PFIC for any taxable year, it will provide, upon written request from any U.S. Holder, a "PFIC Annual Information Statement" (as described in United States Treasury Regulation Section 1.1295-1(g)(1)) that is required for a U.S. Holder to make a QEF election with respect to the Company.

In addition, if the Company is a PFIC and, at any time, has a non-U.S. subsidiary that is classified as a PFIC, U.S. Holders of Ordinary Shares generally would be deemed to own, and also would be subject to the PFIC rules with respect to, their indirect ownership interests in that lower-tier PFIC. If the Company is a PFIC and a U.S. Holder of Ordinary Shares does not make a QEF election in respect of a lower-tier PFIC, the U.S. Holder could incur liability for the deferred tax and interest charge described above if either (1) the Company receives a distribution from, or disposes of all or part of its

interest in, the lower-tier PFIC or (2) the U.S. Holder disposes of all or part of its Ordinary Shares. The Company intends to use its best efforts to cause any lower-tier PFIC to provide to a U.S. Holder the information that may be required to make a QEF election with respect to the lower-tier PFIC. A mark-to-market election under the PFIC rules with respect to Ordinary Shares would not apply to a lower-tier PFIC, and a U.S. Holder would not be able to make such a mark-to-market election in respect of its indirect ownership interest in that lower-tier PFIC. Consequently, U.S. Holders of Ordinary Shares could be subject to the PFIC rules with respect to income of the lower-tier PFIC the value of which already had been taken into account indirectly via mark-to-market adjustments. Prospective investors should refer to "Certain U.S. Federal Income Tax Considerations" in paragraph 20.8 of Part X of this document and should consult with their legal advisers regarding the PFIC issues before investing in the Ordinary Shares.

# The Company has not and will not register as an investment company under the Investment Company Act

The Company will seek to qualify for an exception to the definition of "investment company" under the Investment Company Act and will not register as an investment company in the United States under the Investment Company Act. The Investment Company Act provides certain protections to investors and imposes certain restrictions on registered investment companies, none of which will be applicable to the Company or investors in the Company.

#### The Ordinary Shares are subject to restrictions on transfers

The Ordinary Shares have not been registered in the United States under the Securities Act or under any other applicable securities laws and are subject to restrictions on transfer. They may not be resold in the United States, except pursuant to registration or an exemption from the registration requirements of the Securities Act and any applicable state securities laws and subject to the limitations set out in paragraph 20 of Part X of this document to which prospective investors should refer.

#### PART VII

**COMPETENT PERSON'S REPORT** 

# A INDEPENDENT COMPETENT PERSONS' REPORT ON THE MINERAL ASSETS OF ZANAGA IRON ORE COMPANY LIMITED

**Prepared for** 

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Zanaga Iron Ore Project CPR.docx

17 November, 2010



#### EXECUTIVE SUMMARY

SRK Consulting has been commissioned by the board of directors of Zanaga Iron Ore Company Limited to prepare an independent Competent Persons' Report ("CPR") on Zanaga Iron Ore Project ("ZIOP") located in the Republic of Congo ("Congo Brazzaville").

The Mineral Assets comprise two iron ore Exploration Licences ("ELs") that together have a total surface area of 1,000km<sup>2</sup>. As at 30 September 2010, the Company has total Mineral Resources of 3.34Bnt grading 32.75%Fe<sub>T</sub> of which 0.60Bnt grading 39.31%Fe<sub>T</sub> is classified as Indicated Mineral Resources and 2.74Bnt grading 31.31%Fe<sub>T</sub> is classified as Inferred Mineral Resources.

Classification	Tonnage	Qualities					
	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
Total Indicated Resources	602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Total Inferred Resources	2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
Total Mineral Resources	3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%

The registered legal and beneficial titleholder of the ELs is Mining Project Development Congo SAU ("MPD"), a private company incorporated in Congo Brazzaville which is a wholly owned subsidiary of Zanaga Iron Ore Company Limited. In addition to the ELs, MPD and the government of Congo Brazzaville ("GoCB") have (14 May 2007) entered into a mining convention which regulates the parties' respective rights and obligations during the exploration phase (as opposed to the exploitation phase) of the ZIOP (the "2007 Mining Convention").

The ZIOP, if executed, will be a long-term mining and infrastructure project subject to high capital expenditure and long lead times to establish construction completion and production capacity. Accordingly, MPD and the GoCB have established a negotiating team in order to revise the legal and fiscal framework and related procedures to appropriately develop the ZIOP. In July 2009 an addendum to the 2007 Mining Convention was proposed and on 8 September 2010 this was duly incorporated as an Addendum No.1 to the 2007 Mining Convention

MPD also manages the ZIOP which is currently the subject of an ongoing exploration programme, Environmental and Social Impact Assessment ("Zanaga ESIA") and a Pre-Feasibility Study ("Zanaga PFS"). The Zanaga PFS is scheduled for completion during Q1 2011 and follows on from a scoping study completed by SRK in 2009. The Zanaga PFS is managed by SRK, who is directly responsible for authoring certain but not all technical disciplines of the Zanaga PFS.

In September 2009, following completion of the 2009 Scoping Study, the then shareholders of the Company and Jumelles Limited ("Jumelles", a wholly owned subsidiary of the Company) entered into a transaction with a Xstrata (Schweiz) AG ("Xstrata (Schweiz)" to fund a minimum of US\$50m towards the Zanaga Phase 1 PFS (September 2009 to June 2010) in return for an option to acquire a 50% plus one share interest in Jumelles for financing the BFS. In September 2010 Xstrata formerly agreed to fund Phase 2 of the Zanaga Phase 2 (July 2010 to Q1 2011).

The strategic objective of the Zanaga PFS is to assess the technical feasibility and economic viability of developing an integrated mine-rail-port operation processing some 130Mtpa to 140Mtpa of Run-of-Mine ("RoM") ore to produce 45Mtpa of concentrate. The Zanaga PFS assumes the development of an open-pit mining operation with a nearby concentrator producing concentrates which will be transported via a 350km rail link to a port facility located 9km north of Pointe-Noire situated on the Atlantic Ocean. Mining operations assume initial production from the higher grade (>40%Fe<sub>T</sub>) haematitic ore thereafter replaced by the lower grade (>30%Fe<sub>T</sub>) banded ironstone formation ("BIF") ore. Concentrate production includes two types of concentrates: a coarser concentrate suitable for sintering; and a finer concentrate as blended feed for sintering or pellet feed.

The development of the ZIOP assumes initial capital expenditure of approximately US\$7.5bn over a three year construction period with the nameplate capacity of 45Mt concentrate achieved over a

further two years. Preliminary indications of unit cash costs indicate a life-of-mine ("LoM") weighted average of US $28/t_{conc}$ .

Should Xstrata not exercise the call option, the Company will require access to additional funds for completion of the next developmental milestone, specifically the Zanaga FS which inter alia shall also include ongoing exploration, completion of the Zanaga ESIA and other ongoing commitments relating to the 2010 Addendum: hereinafter referred to as the Feasibility Study Work Programme (the "FS Work Programme"). The FS Work Programme comprises detailed schedules of activities scheduled for completion in Q4 2012 and associated expenditures amounting to some US\$255.3m.

To facilitate access to part of this additional funding the Company has stated its intention for the issued and to be issued ordinary share capital of the Company to be admitted (the "Admission") to the Alternative Investment Market ("AIM") of the London Stock Exchange plc (the "LSE"). In the event that the Admission only secures part of the funding requirement for the FS Work Programme, SRK has been informed that the Company intends to secure the balance from other sources which inter alia may include additional capital raising from the AIM Market. This CPR will be included in an admission document (the "Admission Document") which will be published in connection with the Admission in accordance with the AIM Rules (defined below).

Accordingly the focus of this CPR is to provide a technical opinion in respect of the FS Work Programme, specifically that:

- the character: the Mineral Resources delineated and the results of the technical studies of the Mineral Assets is of sufficient merit to justify the FS Work Programme; and
- the Work Programmes are appropriately defined with respect to scope, schedule of activities and expenditures.

SRK has conducted a comprehensive review and assessment of all material issues likely to influence the technical studies underway (the Zanaga PFS) and the proposed Zanaga FS, specifically those issues which may influence the technical feasibility and economic viability of the ZIOP. The base data upon which the 2010 Statements and the Work Programmes as stated herein, have been provided to and taken in good faith by SRK has unless where explicitly authored by SRK as part of the Zanaga PFS, not been independently verified by it by means of re-calculation. SRK has, however, conducted a review and assessment of all material technical issues likely to influence the future performance of the Mineral Assets, which included the following:

- Inspection visits to the Mineral Assets, transport corridor and port facility site during 2009 and 2010 inclusive;
- Enquiry of key project and head office personnel during Q3 2010 in respect of the FS Work Programme and other related matters;
- An examination and review of technical studies completed in respect of the Mineral Assets and all conclusions and recommendations drawn there from, specifically in respect of technical disciplines for which SRK are not directly responsible for authoring; and
- An assessment of the Work Programmes as proposed by the Company in the event that Xstrata
  does not execute any of its options as described herein.

In respect of the Zanaga PFS, SRK is directly responsible for the authoring of the following technical disciplines for on-mine areas: geology and Mineral Resources; mining engineering; geotechnical engineering; hydrology and hydrogeology; tailings storage facility; soil and noise aspects of the ESIA; and mineral economics

#### Mineral Resources

As at 30 September 2010 the total Mineral Resources reported in accordance with the terms and definitions of the JORC Code amount to 3.34Bnt grading 32.75%Fe<sub>T</sub>, 43.43%SiO<sub>2</sub>, 0.046%P, 3.33%Al<sub>2</sub>O<sub>3</sub>, 0.14%MnO and 1.22%LOI. These include material classified as Indicated and Inferred Mineral Resources where the former comprises 0.60Bnt grading 39.31%Fe<sub>T</sub>, 36.05%SiO<sub>2</sub>, 0.0446%P, 3.35%Al<sub>2</sub>O<sub>3</sub>, 0.11%MnO and 2.19%LOI.

In considering the 2010 Statements as reported below, SRK notes the following:

- All references to Mineral Resources are stated in accordance with the JORC Code;
- No Ore Reserves have been declared for the Mineral Assets due to the lack of multi-disciplinary studies in which all aspects have been completed to a minimum of PFS level to adequately demonstrate the technical feasibility and economic viability of the Mineral Assets. Furthermore the technical studies in progress for the Mineral Assets are reliant upon significant portions of Inferred Mineral Resources without which a positive return on the initial capital outlay for development of the ZIOP cannot yet be demonstrated. The Company in conjunctions with its consultants is currently advancing the various technical studies to PFS level. Assuming successful outcome of the Zanaga PFS and subsequent FS Work Programme and Zanaga FS and that all technical aspects have been adequately addressed, it is reasonable to assume that Ore Reserves will be declared as part of the then completed Feasibility Study; and
- All Mineral Resources are derived by application of a 0%FeT COG to all classified material falling within a optimised shell based on a LTP assumption of USc115/dmtu.

Table 1.1ES presents the Indicated and Inferred Mineral Resources subdivided by lithologies for each process route. Table 1.2ES presents the total Mineral Resource LTP sensitivity for each process route.

Classification	Lithologies	Tonnage			Qualitie	s		
	J	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
Indicated Mineral Resources	S							
Haematite Concentrator		333	43.52%	29.19%	0.046%	3.63%	0.10%	2.77%
-	COL	59	48.97%	15.11%	0.050%	7.23%	0.10%	5.29%
	ITG	58	47.80%	21.67%	0.048%	4.29%	0.13%	3.16%
	ITF	215	40.87%	35.08%	0.045%	2.47%	0.10%	1.98%
Itabirite Concentrator		269	34.10%	44.53%	0.039%	3.01%	0.11%	1.48%
	ITC	207	34.39%	44.13%	0.038%	3.03%	0.11%	1.66%
	ITT	62	33.12%	45.87%	0.044%	2.96%	0.11%	0.88%
Total Indicated		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Inferred								
Haematite Concentrator		156	38.50%	32.17%	0.042%	7.06%	0.10%	4.15%
	COL	32	40.43%	21.89%	0.044%	10.75%	0.08%	6.89%
	ITG	30	41.52%	26.69%	0.041%	7.66%	0.09%	4.49%
	ITF	94	36.89%	37.43%	0.041%	5.61%	0.12%	3.11%
Itabirite Concentrator		2,580	30.87%	45.83%	0.047%	3.09%	0.15%	0.82%
	ITC	147	32.64%	45.62%	0.034%	3.95%	0.11%	2.23%
	ITT	43	30.26%	47.22%	0.038%	4.27%	0.11%	1.67%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Inferred		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
Mineral Resources								
Haematite Concentrator		488	41.92%	30.14%	0.045%	4.73%	0.10%	3.21%
	COL	91	45.96%	17.51%	0.048%	8.47%	0.09%	5.86%
	ITG	88	45.69%	23.36%	0.045%	5.42%	0.11%	3.61%
	ITF	309	39.66%	35.79%	0.044%	3.42%	0.10%	2.32%
Itabirite Concentrator		2,849	31.18%	45.71%	0.046%	3.09%	0.14%	0.88%
	ITC	355	33.66%	44.75%	0.036%	3.41%	0.11%	1.90%
	ITT	105	31.94%	46.42%	0.041%	3.50%	0.11%	1.21%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Mineral Resources		3 337	32 75%	43 43%	0.046%	3 33%	0.14%	1.22%

 Table
 1.1ES
 Mineral Resources (Summary by lithology) 30 September 2010

Ore Lithologies	Units	Commodity Price (USc/dmtu)								
	_	50	75	85	100	115	125	150	175	200
Tonnage	(Mt)	2,115	3,042	3,152	3,270	3,337	3,355	3,381	3,396	3,405
- Haematite Conc.	(Mt)	471	488	488	488	488	488	488	488	488
- Itabirite Conc.	(Mt)	1,644	2,554	2,664	2,782	2,849	2,866	2,893	2,908	2,917
Grade	(% Fe <sub>т</sub> )	35.22%	33.38%	33.17%	32.92%	32.75%	32.74%	32.70%	32.67%	32.66%
- Haematite Conc.	(%Fe <sub>⊺</sub> )	42.25%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%
<ul> <li>Itabirite Conc.</li> </ul>	(%Fe⊤)	33.21%	31.75%	31.57%	31.34%	31.18%	31.18%	31.14%	31.12%	31.11%
Grade	(% P)	0.048%	0.048%	0.048%	0.049%	0.046%	0.049%	0.049%	0.049%	0.049%
- Haematite Conc.	(%P)	0.040%	0.040%	0.040%	0.040%	0.045%	0.040%	0.040%	0.040%	0.040%
<ul> <li>Itabirite Conc.</li> </ul>	(%P)	0.050%	0.050%	0.050%	0.050%	0.046%	0.050%	0.050%	0.050%	0.050%
Grade	(% AL <sub>2</sub> O <sub>3</sub> )	3.03%	3.21%	3.23%	3.29%	3.33%	3.33%	3.34%	3.34%	3.35%
- Haematite Conc.	(%AL <sub>2</sub> O <sub>3</sub> )	4.60%	4.72%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%
<ul> <li>Itabirite Conc.</li> </ul>	(%AL <sub>2</sub> O <sub>3</sub> )	2.58%	2.92%	2.96%	3.04%	3.09%	3.09%	3.11%	3.11%	3.12%
Waste	(Mt)	798	2,554	2,994	3,571	3,962	4,148	4,432	4,628	4,760
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.4	0.8	0.9	1.1	1.2	1.2	1.3	1.4	1.4

# Table 1.2ES Total Mineral Resources Sensitivity (Summary by process route) 30 September 2010 September 2010

#### Technical Studies: Zanaga PFS and Zanaga ESIA

The technical studies completed to date in respect of the ZIOP comprise the 2009 Conceptual Study and the 2009 Scoping Study (Order of Magnitude Study). The Zanaga PFS is currently underway and scheduled for completion during Q1 2011 and the total expenditures to 30 September 2010 amount to US\$64.37m of which 59% (US\$38.17m) comprised expenditures for exploration, salaries and consultants. Funding for the Zanaga PFS amounts to some US\$106m sourced from two separate tranches comprising US\$50m and US\$56m for Zanaga PFS Phase I completed in June 2010 and Zanaga PFS Phase II to complete in Q1 2011 respectively.

SRK has the responsibility for compilation of the Zanaga PFS and in addition has authoring roles for the following: geology; mineral resources; mine site geotechnical engineering and hydrogeology; tailings storage facilities; waste rock dumps; and financial modelling. The remaining technical disciplines are managed by either the Company directly or other engineering/consultancy companies mandated by the Company: mine site infrastructure (WSP); metallurgical processing (ProMet); rail transport corridor and port infrastructure (Egis); and environmental and social aspects (the Company; Hydrobiology; Synergy; Kew Gardens; and an Independent Expert).

The strategic objective of the Zanaga PFS is to assess the technical feasibility and economic viability of developing an integrated mine-rail-port operation to produce a total of 45Mtpa of marketable iron ore concentrates: a coarser concentrate suitable for sintering (15Mtpa); and a finer concentrate for pellet feed or as blended feed for sintering (30Mtpa; expanding to 45Mtpa). Preliminary results of the Zanaga PFS indicate:

- Mining operations relying on conventional open-pit mining methods with combined production from both higher grade (>40%Fe<sub>T</sub>) haematitic ore thereafter replaced by the lower grade (>30%Fe<sub>T</sub>) BIF ore with the build up to full production largely comprising processing of haematite ores. Thereafter production will most likely continue in proportion to the individual concentrator capacity with a 15Mtpa:30Mtpa split. Following depletion of haematite ores, concentrate production will be entirely sourced from the Itabirite Plant. The latest mining optimisation analysis indicates total RoM of 3.23Bnt grading 31.59%Fe<sub>T</sub> with an accompanying stripping ratio of 0.90<sub>twaste:tore</sub>.
- Metallurgical processing through two separate concentrators:
  - Haematite Concentrator: 15Mtpa of concentrate production which at currently assumed yields
     43% indicate a required RoM feed capacity of 35Mtpa to process COL/ITG/ITF,
  - Itabirite Concentrator: 30Mtpa of concentrate production which at currently assumed yields 33% indicate a required RoM feed capacity of 92Mtpa to process ITC/ITT/BIF. Further expansion to 45Mtpa of concentrate production is planned which results increased RoM feed capacity of 138Mtpa, assuming similar weighted average yields.

Metallurgical performance parameters resulting from the recently completed mining optimisation study which indicates total production from COL/ITG/ITF and ITC. It is however important to note that the recent Fe grade of the ITF concentrate is substantially reduced from the preliminary results and in order to achieve a minimum sinter produce Fe grade of 64.82%, concentrates from the COL/ITG/ITF/ITC would need to be blended with ITT/BIF material to address the current shortfall (±1%Fe). SRK notes that significant further testwork is planned to optimise the production of both sinter feed concentrate and concentrate fines for blending to produce sinter feed and/or pellet feed.

Lithology	Optir	uisation RoM Metallurgical Performance Optimisation Conce			Metallurgical Performance				
	Tonnage	Grade	Content	Yield	Concentrate	Recovery	Tonnage	Grade	Content
	(Mt)	(% Fe <sub>T</sub> )	(MtFe)	(%)	(%Fe)	(%)	(Mt)	(%Fe <sub>T</sub> )	(MtFe)
COL	93	43.77%	41	41.08%	63.11%	59.24%	38	63.11%	24
ITG	90	43.51%	39	49.71%	63.39%	72.42%	45	63.39%	28
ITF	316	37.77%	120	41.48%	63.60%	69.85%	131	63.60%	84
ITC	360	32.20%	116	26.38%	65.00%	53.26%	95	65.00%	62
ITT	107	30.48%	33	29.99%	66.19%	65.12%	32	66.19%	21
BIF	2,260	29.71%	671	33.64%	66.10%	74.84%	760	66.10%	502
Total	3,227	31.59%	1,019	34.14%	65.50%	70.77%	1,102	65.50%	722

Table 1.3ES Metallurdical performance by lithology (30 September)	Table	1.3ES	ble 1.3ES Metallurgical performance by lithology (30 Septembe	r 2010
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The initial flowsheet configuration included: comminution circuits comprising two stage mineral sizers for haematite ore and single staged crushers for Itabirite ores and AG/pebble mills; coarse gravity (jigs) and fine gravity separation (spirals) and magnetic separation;

- Mine site infrastructure including: materials handling, waste rock dump; water management facilities; tailings storage facilities; rail and road access; accommodation; workshops; airstrips; ore stockpiles; and product stockpiles are required;
- Power generation/supply, transmission and distribution options for the mine site comprise either: power generation by HFO or diesel oil; or electric grid power supply through purchase. For the deep water port facility the preferred option is grid supply via the national (SNE) network to a dedicated substation at the port site. The current installed power requirement the mine site is estimated at approximately 300MW comprising: On this basis annual energy usage is assumed at some 2.4TWhrs and initial indications for power purchase from CEC via 220kV lines is some USc8/kWhr with a lower limit of USc6/kWhr also under consideration. Installed power assumed for the port is 20MW with an annual energy usage of 93GWhr;
- Rail transportation via a 350km rail link to a port facility located 9km North of Pointe-Noire situated on the Atlantic Ocean. The current alignment traverses various terrain from Pointe Noire to the mine site and nominally delineated as follows: Pointe-Noire Coastal basin; Mayombé Mountains; Plateau of Great Niari Depression; Great Niari Depression; ascent of Chaillu Mountains; Chaillu Mountains and the mine site;

Preliminary estimates for construction quantities comprise: earthworks totalling 88Mm<sup>3</sup>; bridge structures comprising bridges for crossing identified rivers and to replace fills of more than 35m high (49 bridges in total are required for a total length of 7,900m); track foundation layers and pavement structures (1.9Mm<sup>3</sup>) drainage and hydraulic structures numbering 1,050; and railway track comprises a total of 385km of rail with sleeper spacing at 1,800/km to cater for the high 40t axle load.

The principal operating specifications assumed for the Zanaga PFS are: transportation of 51Mt wet (45Mt dry at 13% moisture); fuel 150,000t; containers at 10,000 twenty foot equivalent units ("TEU"); and maximum gradients of 1.0% and 1.5% from Zanaga to Pointe Noire and Pointe Noire to Zanaga respectively.

• **Port facilities** and associated rail head site is to be located 9km north of Pointe Noire adjacent to the Atlantic Ocean and extending over some 2km2. This comprises a piled access trestle

extending approximately 2.0km from the beachfront into the sea with a loading platform at the seaward end of the access trestle capable of berthing cape size vessels (170,000DWT to 230,000DWT). The current configuration comprising both on shore and off shore elements includes consideration for: loading platform and its trestle; shore protection; service labour; yard preliminary structures and associated maintenance port facilities. Key associated equipment include: support vessels; ship-loaders and conveyors; and other yard equipments;

Environmental studies targeting completion of the ESIA process for environmental authorisation during Q4 2012. Key environmental issues identified to date include a number of both social and bio-physical considerations. The principal social issue highlighted is directly related to the requirement for a significant relocation programme in the immediate vicinity of the mine site. The principal bio-physical issues relate to: the presence of forest areas around the mine site which are of high biodiversity value for both plants and animals and in addition the presence of critically endangered, endangered and other species; the identification of the port site as a location which is important for nesting by Endangered turtles (Olive Ridley Turtles); and the location of the mine site on the watershed between the basins of the Ogooué and Niari rivers indicating potential for inter alia trans-boundary impacts (as the Ogooué River flows into Gabon).

Initial closure cost estimates are limited to the mine site only on the assumption that any infrastructural aspects of the transport corridor and the PNP will continue to provide post closure benefits. Accordingly the current estimate for the mine-site provides for some US\$230m which includes approximately US\$6m of TBL and is considered overall to project an estimation accuracy of  $\pm 40\%$ ;

- Marketing strategy assuming production of concentrate products which are either marketable as sinter feed and/or concentrate fines. Accordingly concentrate production includes two types of concentrates: a coarser concentrate suitable for sintering; concentrate fines for pellet feed or in part blended feed for sintering. Preliminary metallurgical testwork indicates that concentrates sourced from the COL/ITG/ITF and ITC material can be blended to produce concentrate which is marketable as a sinter product: by weight of concentrates sourced from COL (25%), ITG (30%), ITF (25%) and ITC (20%). To date however there has been no sintering tests undertaken for any of the concentrates produced from the various composite samples tested. Accordingly it is not possible at this stage to confirm whether a substantive portion of the concentrates sourced from the ZIOP is marketable as a sinter feed concentrate;
- Capital expenditure totalling US\$7.45Bn comprising: base costs of US\$5.83bn; contingencies of US\$0.99bn (17% of base costs); and engineering procurement and EPCM of US\$0.63bn. This total is subdivided into the following reporting areas: mine site at US\$3.46bn (46%); transport corridor (33%); PNP (17%); and power (4%).

Capital Expenditure Item	Base	Conting	jency	EPCM	Total
	(US\$m)	(%)	(US\$m)	(US\$m)	(US\$m)
Mine Site	2,644	19%	514	306	3,463
Transport Corridor	2,074	14%	289	104	2,467
Pointe Noire Port	896	17%	152	203	1,250
Power	214	15%	32	21	268
Total	5,828	17%	986	634	7,448

#### Table1.4ESCapital expenditure

Prior to finalisation of the Zanaga PFS the current capital estimates reflect similar levels of accuracy as included in the 2009 Scoping Study which was noted at  $\pm 40\%$ . It is however expected that on completion of the Zanaga PFS the capital expenditure estimates will be further refined to  $\pm 25\%$ . These estimates for the Zanaga PFS are currently of a preliminary nature and accordingly are subject to change. Furthermore it should be noted that the uncertainties associated with substantive infrastructure related projects for which both topographic relief and

site specific geotechnical considerations are remain the subject of further work, are inevitably significant. Accordingly it is likely that only on completion of the Zanaga FS where due consideration for such investigations are complete will the resulting capital expenditure estimates attain the level of accuracy's approaching  $\pm 10$  to  $\pm 15\%$ .

Additional capital expenditures are required for the expansion of the Itabirite Concentrator to facilitate production of concentrate from the initial 30Mtpa to 45Mtpa. The total capital expenditure required for this expansion is estimated at US\$236m. Preliminary estimates of sustaining capital expenditure largely reflect replacement costs for the mobile mining equipment fleet, certain fixed plant and conveyors which over the current assumed LoM production totals US\$3.36bn. These expenditures are assumed to commence in the 5<sup>th</sup> year following the first year of production through to depletion of the assumed tonnages included in the optimised shell corresponding to the LTP of USc85/dmtu.

The scheduling of capital expenditures for construction assumes a total period of some 3 years to 3.5 years with some 40% of annual production capacity achieved during the first year of processing operations. Within this period some US\$1.0bn is expended in year 1 with US\$2.1bn expended in each of the following three calendar periods and the balance thereafter for a maximum of a further two calendar periods;

Cash costs excluding 3% royalty ranging from a weighted average low of US\$25.98/t<sub>Conc</sub> to US\$28.34/t<sub>Conc</sub> for total concentrate production with Scenario 2 indicating unit costs of US\$21.88/t<sub>Conc</sub> and US\$28.31/t<sub>Conc</sub> for production from the Haematite Concentrator and the Itabirite Concentrator respectively.

	lable	1.5ES	Operating cash costs excluding royalty	
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Units	Haematite	Itabirite	Total
(US\$/t <sub>Conc</sub> )	22.92	29.65	28.34
(US\$/t <sub>Conc</sub> )	21.88	28.31	27.06
(US\$/t <sub>Conc</sub> )	21.05	27.17	25.98
	Units (US\$/t <sub>Conc</sub> ) (US\$/t <sub>Conc</sub> ) (US\$/t <sub>Conc</sub> )	Units         Haematite           (U\$\$t <sub>com</sub> )         22.92           (U\$\$t <sub>com</sub> )         21.88           (U\$\$t <sub>com</sub> )         21.82           (U\$\$t <sub>com</sub> )         21.05	Units         Haematite         Itabirite           (U\$\$t <sub>conc</sub> )         22.92         29.65           (U\$\$t <sub>conc</sub> )         21.88         28.31           (U\$\$t <sub>conc</sub> )         21.05         27.17

. ..

Table 1.6ES presents a summary of the key performance statistics for the ZIOP based on the preliminary results of Phase I of the Zanaga PFS.
Inputs	Units	Total	Haematite	Itabirite
Production	-	-	-	
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.90	0.90	0.90
Ore Processed	(Mt)	3,227	500	2,727
	(%Fe <sub>⊤</sub> )	31.59%	39.92%	30.07%
	(MtFe⊤)	1,019	200	820
Yield	(%)	34.14%	42.89%	32.54%
Recovery	(%)	70.77%	68.19%	71.40%
Concentrate	(Mt)	1,102	214	887
	(%Fe)	65.50%	63.47%	65.99%
	(MtFe⊤)	722	136	585
Sales Revenue				
Commodity Price	(USc/dmtu)	85	85	85
	(US\$m)	61,330	11,567	49,763
Operating Expenditure (Units)				
Mining	(US\$/t <sub>Mined</sub> )	1.71	1.71	1.71
Processing	(US\$/t <sub>RoM</sub> )	3.61	3.22	3.68
Overheads	(US\$/t <sub>RoM</sub> )	0.69	0.69	0.69
Rail	(US\$/t <sub>Conc</sub> )	4.91	4.91	4.91
Port	(US\$/t <sub>Conc</sub> )	1.31	1.31	1.31
Closure	(US\$/t <sub>Conc</sub> )	0.24	0.24	0.24
Royalty	(%)	3%	3%	3%
Operating Expenditure (Total)	(1)00	10.500	1 007	0.070
Mining	(US\$m)	10,500	1,627	8,8/3
Processing	(US\$m)	11,045	1,010	10,033
Pail	(US\$m)	5 407	1 052	1,000
Port	(US\$m)	1 440	280	1 160
Povalty	(US\$m)	1,440	347	1 /03
Closure	(US\$m)	260	51	209
Total	(US\$m)	33 325	5 312	28 012
Canital Expenditure	(0000)		0,012	20,012
Project <sup>(1)</sup>	(US\$m)	7 704	1 499	6 205
Sustaining <sup>(2)</sup>	(US\$m)	3.364	655	2,709
Total	(US\$m)	11 068	2 154	8 914
Expenditures	(0000)		2,101	0,011
Cash Costs	(US\$m)	33.065	5 262	27.803
Cash Costs (ex. rovalty)	(US\$m)	31 225	4 915	26,310
Total Cash Costs	(US\$m)	33,325	5.312	28,012
Total Working Costs	(US\$m)	33.325	5.312	28.012
Unit Costs		· · · ·		· · ·
Cash Costs	(US\$/tcom)	30.01	24.54	31.34
Cash Costs (ex. rovalty)	(US\$/t <sub>Conc</sub> )	28.34	22.92	29.65
Total Cash Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	31.57
Total Working Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	31.57

#### Table 1.6ES ZIOP key performance statistics

Project capital expenditure comprising initial capital expenditure (US\$7,448) and Itabirite Concentrator expansion costs (US\$236m).

Sustaining capital expenditure comprising replacement capital expenditure for the mobile mining equipment and conveyors based on the assumed operating period indicated by the current optimisation analysis assuming a LTP of USc85/dmtu.

#### Work Programmes

(1)

(2)

Should Xstrata not exercise its option, the Company will require access to additional funds (see the FS Work Programme and/or the Early Work Programme) for completion of the next developmental milestone, specifically the Zanaga FS which inter alia includes ongoing exploration, completion of the Zanaga ESIA and other ongoing commitments relating to the 2010 Addendum.

Accordingly and in the event where immediate funding is required following a decision by Xstrata not to exercise its option, the Company has developed an alternative scenario as defined by the proposed continuation expenditure. The "Continuation Work Programme" applies, as reported in Section 8.4 of this CPR. This in essence reflects the minimum expenditures required in ensure compliance with its commitments in respect of the Zanaga ELs. The Company would then expect to raise further funding, following completion of a positive outcome of the Zanaga PFS, to fund the FS Work Programme and/or the Early Works Programme defined herein.

The basis of the FS Work Programme (and the Early Works Programme) and any associated supporting technical information has been provided by the Company solely and explicitly does not purport to reflect the current or future views and/or commitments of Xstrata. Accordingly should Xstrata execute its option, details relating to the FS Work Programme (and the Early Works Programme), both with respect to activity and expenditure schedules may be fundamentally different to that presented herein.

Furthermore the current scope of the Zanaga PFS includes the preparation of a detailed work programme for completion of the Zanaga FS. As the FS Work Programme detailed herein predates

the completion of the Zanaga PFS, SRK notes that the FS Work Programme is preliminary in nature and subject to change. Specifically the expenditure component relating to the exploration drill programme is not supported by a designed exploration programme which includes layouts of drill fences and holes.

Accordingly the reader is cautioned that completion of the Zanaga PFS and/or a decision by Xstrata to execute or not execute its option may well result in fundamental changes to the FS Work Programme as presented herein.

#### FS Work Programme and Early Works Programme

The FS Work Programme is largely focused on the completion of the Zanaga FS with activities and associated expenditures scheduled over a 24 month period. The development milestone achieved at this stage is a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable. Furthermore this will also be supported by the Zanaga ESIA study which is to be prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the International Council of Mining and Metals ("ICMM") sustainable development framework.

The forecasted expenditures totals US\$255.3m of which US\$226.6m is classified as operating expenditures and US\$28.7m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$167.5m and US\$87.8m respectively and include contingencies of US\$32.5m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

In addition to the FS Work Programme and, in order to fast-track certain aspects of the infrastructure components the Company has identified an "Early Works Programme". The associated expenditures is however a sub-set of the capital expenditure currently associated with the construction and commissioning of the ZIOP and ranges between US\$70m and US\$90m. Details relating to the Early Works Programme are included in Section 8.3 of this CPR.

#### **Continuation Work Programme**

The Continuation Work Programme is focused on ensuring the minimum required to comply with the current terms of the Decrees, the 2007 Mining Convention and the 2010 Addendum and includes associated expenditures scheduled over an 18 month period. Accordingly the development milestone achieved at this stage is substantially limited compared to that included in the FS Work Programme and will not result in: a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable; or an ESIA study prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the ICMM Sustainable Development Framework.

The forecasted expenditures for the Continuation Work Programme totals US\$57.3m of which US\$50.2m is classified as operating expenditures and US\$7.0m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$45.7m and US\$11.6m respectively and include contingencies of US\$6.6m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

#### Conclusions

Based on a review of all technical information completed to date as part of the Zanaga PFS and in addition the Work Programmes as developed by the Company, SRK concludes that:

- the character: the Mineral Resources delineated and the results of the technical studies: of the Mineral Assets is of sufficient merit to justify the Work Programmes; and
- the Work Programmes are appropriately defined with respect to scope, schedule of activities and expenditures.

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# A INDEPENDENT COMPETENT PERSONS' REPORT ON THE MINERAL ASSETS OF ZANAGA IRON ORE COMPANY LIMITED

# 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 directors of Zanaga Iron Ore Company Limited ("Zanaga" also referred to herein as the "Company") to prepare an independent Competent Persons' Report ("CPR") in accordance with the Guidance Note (as defined in section 1.2.3 below) on the iron ore mineral assets (the "Mineral Assets") of the Company comprising the Zanaga Iron Ore Project ("ZIOP") located in the Republic of Congo ("Congo Brazzaville").

The Mineral Assets comprise two iron ore Exploration Licences ("ELs"): the Zanaga-Mandzoumou Exploration Licence (the "Zanaga-Mandzoumou EL"); and the Zanaga-Bambama Exploration Licence (the "Zanaga-Bambama EL"). These are located in the Lékoumou Department of Congo Brazzaville and collectively have a total surface area of 1,000km<sup>2</sup>. The key terms of the ELs (Table 4.3) are incorporated in two separate decrees (jointly the "Decrees") dated 14 June 2010 which were published in the *Journal Officiel* of 17 June 2010.

The registered legal and beneficial titleholder of the ELs is Mining Project Development Congo SAU ("MPD"), a private company incorporated in Congo Brazzaville which is a wholly owned subsidiary of the Company. In addition to the ELs, MPD and the government of Congo Brazzaville ("GoCB") have (14 May 2007) entered into a mining convention which regulates the parties' respective rights and obligations during the exploration phase (as opposed to the exploitation phase) of the ZIOP (the "2007 Mining Convention"). The ZIOP, if executed, will be a long-term mining and infrastructure project subject to high capital expenditure and long lead times to establish construction completion and production capacity. Accordingly, MPD and the GoCB have established a negotiating team in order to revise the legal and fiscal framework and related procedures to appropriately develop the ZIOP. In July 2009 an addendum to the 2007 Mining Convention was proposed and on 8 September 2010 this was duly incorporated as a Addendum No.1 to the 2007 Mining Convention (the "2010 Addendum" – See section 4.3.2 for further details).

MPD also manages the ZIOP which is currently the subject of an ongoing exploration programme, Environmental and Social Impact Assessment ("Zanaga ESIA") and a Pre-Feasibility Study ("Zanaga PFS"). The Zanaga PFS is scheduled for completion during Q1 2011 and follows on from a scoping study completed by SRK in 2009 (the "2009 Scoping Study"). The Zanaga PFS is managed by SRK, who is directly responsible for authoring



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Offices in

certain but not all technical disciplines of the Zanaga PFS (see further detail in Section 7).

Following completion of the 2009 Scoping Study, the then shareholders of the Company and Jumelles Limited ("Jumelles", a wholly owned subsidiary of the Company) entered into a transaction (the "Xstrata Transaction") with a Xstrata (Schweiz) AG ("Xstrata (Schweiz)" - a wholly owned subsidiary of Xstrata PIc) to fund a minimum of US\$50m towards ongoing exploration of the Mineral Assets and the Zanaga Phase 1 PFS (September 2009 to June 2010) in return for an option to acquire a 50% plus one share interest in Jumelles (the "Call Option"). If Xstrata (Schweiz) elects to exercise the Call Option, it will fund the subsequent feasibility study for the ZIOP (the "Zanaga FS") and associated costs. The Xstrata Transaction comprises two principal transaction documents namely (i) a Call Option Deed (the "Call Option Deed") and (ii) a Joint Venture Agreement (the "JVA"). These two documents, collectively the "Xstrata Agreement", set out certain rights and obligations of the various parties and in addition also include a pathway for Xstrata (Schweiz) to acquire 100% of Jumelles post completion of the Zanaga FS. The Xstrata Transaction has subsequently been notated such that Xstrata (Schweiz) has been substituted by Xstrata Pty Limited ("Xstrata") a wholly owned company of Xstrata Plc. References to "Xstrata" hereinafter in this CPR are either to Xstrata (Schweiz), Xstrata or Xstrata Plc as appropriate.

Should Xstrata not exercise the call option, the Company will require access to additional funds for completion of the next developmental milestone, specifically the Zanaga FS which inter alia shall also include ongoing exploration, completion of the Zanaga ESIA and other ongoing commitments relating to the 2010 Addendum: hereinafter referred to as the Feasibility Study Work Programme (the "FS Work Programme"). The FS Work Programme comprises detailed schedules of activities scheduled for completion in Q4 2012 and associated expenditures amounting to some US\$255.3m.

To facilitate access to part of this additional funding the Company has stated its intention for the issued and to be issued ordinary share capital of the Company to be admitted (the "Admission") to the Alternative Investment Market ("AIM") of the London Stock Exchange plc (the "LSE"). In the event that the Admission only secures part of the funding requirement for the FS Work Programme, SRK has been informed that the Company intends to secure the balance from other sources which inter alia may include additional capital raising from the AIM Market. This CPR will be included in an admission document (the "Admission Document") which will be published in connection with the Admission in accordance with the AIM Rules (defined below).

Accordingly the focus of this CPR is to provide a technical opinion in respect of the FS Work Programme, specifically that:

- the character: the Mineral Resources delineated and the results of the technical studies of the Mineral Assets is of sufficient merit to justify the FS Work Programme; and
- the Work Programmes are appropriately defined with respect to scope, schedule of activities and expenditures.

The strategic objective of the Zanaga PFS is to assess the technical feasibility and economic viability of developing an integrated mine-rail-port operation processing some 130Mtpa to 140Mtpa of Run-of-Mine ("RoM") ore to produce 45Mtpa of concentrate. The Zanaga PFS assumes the development of an open-pit mining operation with a nearby concentrator producing concentrates which will be transported via a 350km rail link to a port facility located 9km north of Pointe-Noire situated on the Atlantic Ocean. Mining operations assume initial production from the higher grade (>40%Fe<sub>T</sub>) haematitic ore thereafter replaced by the lower

grade (>30%Fe<sub>T</sub>) banded ironstone formation ("BIF") ore. Concentrate production includes two types of concentrates: a coarser concentrate suitable for sintering; and a finer concentrate for pellet feed or as blended feed for sintering.

The development of the ZIOP assumes initial capital expenditure of approximately US\$7.5bn over a three year construction period with the nameplate capacity of 45Mt concentrate achieved over a further two years. Preliminary indications of unit cash costs indicate a life-of-mine ("LoM") weighted average of US\$28/t<sub>conc</sub>.

As at 30 September 2010, the Company has total Mineral Resources of 3.34Bnt grading 32.75%Fe<sub>T</sub> of which 0.60Bnt grading 39.31%Fe<sub>T</sub> is classified as Indicated Mineral Resources and 2.74Bnt grading 31.31%Fe<sub>T</sub> is classified as Inferred Mineral Resources (Table 4.4).

As at 30 September 2010, the net book value of the Plant, Property and Equipment ("PP&E") was valued at US\$10.44m. Total exploration expenditures excluding the cost of acquisition and capital purchases to 30 September 2010 is reported at US\$86.68m of which US\$51.21m was attributable to direct exploration activities and technical studies. Total Employees Costed ("TEC") at September 2010 was US\$5.79m..

For the financial period ending 30 September 2010 the Company expended a total of US\$64.37m of which US\$38.17m was attributable to direct exploration activities and technical studies. Additional capital expenditures amounted to US\$11.00m.

The technical information as presented herein is provided solely in support of the Admission and the associated capital raising required to part fund the US\$50m Continuation Work Programme in the event that Xstrata does not execute its option. The basis of the FS Work Programme and any associated supporting technical information has been provided by the Company solely and explicitly does not purport to reflect the current or future views and/or commitments of Xstrata. Accordingly should Xstrata execute any or all of its options the details relating to the FS Work Programme, both with respect to activity and expenditure schedules may be fundamentally different to that presented herein. The technical information provided in this CPR is both historical in nature and pre-dates the completion of the ongoing Zanaga PFS which completion is anticipated in Q1 2011. Accordingly the reader is cautioned that completion of the Zanaga PFS may result in technical information which differs from that reported herein.

This CPR assumes that the corporate structure as well as the equity participation reflected in Figure 1.1 is effective as at 1 October 2010. Save for the Mineral Assets as presented in this CPR, SRK has been informed by the Company that it has no other material mineral assets held through holdings in direct subsidiaries, joint ventures and associate companies.



Figure1.1Zanaga Iron Ore Company current structure

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

This CPR presents the following key technical information as at 30 September 2010:

- The latest Mineral Resource statements reported in accordance with the terms and definitions of the JORC Code (defined later); and
- The FS Work Programme comprising the ongoing exploration programme, the ESIA, the Zanaga FS and all other ongoing commitments relating to the 2010 Addendum; and
- The Continuation Work Programme required in the event that Xstrata does not exercise its option.

#### 1.2 Requirement, Structure and Compliance

### 1.2.1 Requirement

This CPR has been prepared by SRK and will be included in the Admission Document to be published by the Company in connection with its proposed Admission to AIM. SRK has been informed by the Company that the principal purpose of the offering is to raise part funding for the FS Work Programme required for completing the next developmental stage of the Mineral Assets, specifically the Zanaga FS.

This CPR will be addressed to the Company, and the Nominated Adviser Liberum Capital Limited ("Liberum", hereinafter referred to as the "Nomad") and various other advisers to the Company appointed in support of the Admission and will be reproduced in the main body of the Admission Document.

#### 1.2.2 Structure

The Mineral Assets comprise iron ore properties which are integral to the development of the ZIOP which is currently the subject of the Zanaga PFS. The current technical studies have not yet demonstrated the technical feasibility and economic viability of the ZIOP on a multidisciplinary basis to a comprehensive PFS or Feasibility Study level. Accordingly no Ore Reserves have been delineated and only Mineral Resources have been declared to date. As the primary focus of this CPR is the assessment of the FS Work Programme for a single project, this CPR has been broadly structured on a discipline basis where technical sections comprise: Geology; Mineral Resources; Technical Work Completed to Date; Work Programmes; Risks and Opportunities; and Conclusions and Recommendations.

#### 1.2.3 Compliance and Reporting Standard

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

- The "Note for Mining and Oil & Gas Companies, June 2009" issued by the LSE (the "Guidance Note"): specifically and without limitation the CPR will comply with the content requirements of Appendix 2 of the Guidance Note and include the relevant summaries set out in Appendices 1 and 3 of the Guidance Note, and SRK accepts responsibility for the CPR in accordance with Schedule 2(a) of the AIM Rules (defined below) and paragraphs 1.1 and 1.2 of Annex 1 and paragraphs 1.1 and 1.2 of Annex 3 of the Prospectus Rules (defined below) and consents to its inclusion in the Admission Document;
- The AIM Rules for Companies, February 2010 (the "AIM Rules"): including but not limited to Rule 3 relating to Admission Documents;
- The rules for trading AIM securities as set out in the "Rules of the London Stock Exchange"; and
- Annexures I-III of the "Prospectus Rules" published by the Financial Services Authority from time to time and governed by the United Kingdom Listing Authority as applied by the AIM Rules.

For the avoidance of doubt, and given the current development status of the ZIOP the CPR does not include a valuation of the Mineral Assets of the Company.

In accordance with the Rules the reporting standard adopted for the reporting of the Mineral Resource and Ore Reserve statements for the Mineral Assets to be included in the CPR 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 JORC Code is a reporting code which has been aligned with the Committee for Mineral Reserves International Reporting Standards ("CRIRSCO") reporting template. Accordingly SRK considers the JORC Code to be an internationally recognised reporting standard which is recognised and adopted world-wide for market-related reporting and financial investment

This CPR has been prepared under the direction of the SRK Competent Persons' (the "CPs", see Section 1.6) as defined by the JORC Code who assume overall professional responsibility for the CPR). The CPR however is published by SRK, the commissioned entity, and accordingly SRK assumes responsibility for the views expressed herein. Consequently where relevant all references to SRK shall include the CPs and vice versa.

Furthermore SRK understands that this CPR has not undergone regulatory review and that

the Company's advisors have completed an internal review of the CPR.

#### 1.2.4 Reliance on SRK

This CPR is addressed to and stated as being capable of being relied upon by the Directors of the Company, the Nomad and other advisers in support of the Admission, specifically in respect of compliance with the Rules. Accordingly SRK agrees that the CPR may be made available to and may be relied upon by the members of any equity syndicate (other than the Nomad) constituted in connection with the Admission and by the Company's and the Nomad's respective legal advisers.

In being responsible for the CPR, SRK declares that it has taken all reasonable care to ensure that the information contained in the CPR is, to the best of its knowledge and belief, in accordance with the facts and contains no omission likely to affect the import of such information. This declaration has been included in the Admission Document and SRK has provided signed consent letters in conjunction with publication of the Admission Document.

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

The effective date (the "Effective Date") of this CPR is deemed to be 17 November 2010 which is later than the Base Information Date ("BID") noted as 30 September 2010. To the knowledge of SRK, and as informed by the Company, there has been no material change in respect of the Mineral Assets since 30 September 2010. The Mineral Resources are presented as at 30 September 2010 and this CPR includes any additional technical information available to this date in respect of the Zanaga PFS which is scheduled for completion during Q1 2011. SRK however notes that as the Zanaga PFS is ongoing, the cut-off date for exploration information which informs the Mineral Resource statement as reported herein is 30 June 2010 and accordingly the inclusion of additional exploration information obtained subsequent to this date may result in a revised Mineral Resource statement which differs from that reported herein.

The FS Work Programme assumes activities and expenditures necessary to complete the detailed scope as reported in this CPR in the event whereby Xstrata choose not to exercise its option to acquire 50% plus 1 share in return for financing the BFS. Furthermore this CPR assumes that all necessary funding in order to complete the Zanaga PFS is in place. Accordingly detailed information in respect of scheduled activities and associated expenditures necessary for completion of the Zanaga PFS is not included in this CPR.

# 1.4 Verification, Validation and Reliance

This CPR is dependent upon technical, financial and legal input. The technical information as provided to and taken in good faith by SRK has unless where explicitly authored by SRK as part of the PFS, not been independently verified by it by means of re-calculation. SRK has, however, conducted a review and assessment of all material technical issues likely to influence the future performance of the Mineral Assets, which included the following:

- Inspection visits to the Mineral Assets, transport corridor and port facility site during 2009 and 2010 inclusive;
- Enquiry of key project and head office personnel during Q3 2010 in respect of the FS Work Programme and other related matters;
- An examination and review of technical studies completed in respect of the Mineral Assets and all conclusions and recommendations drawn there from, specifically in respect of technical disciplines for which SRK are not directly responsible for authoring; and

• An assessment of the FS Work Programme as proposed by the Company in the event that Xstrata does not execute any of its options as described herein.

SRK has also assessed the reasonableness of the macro-economic parameters and commodity price assumptions as currently assumed in the generation of certain technical-economic projections for inclusion in the Zanaga PFS.

In respect of the Zanaga PFS, SRK is directly responsible for the authoring of the following technical disciplines for on-mine areas: geology and Mineral Resources; mining engineering; geotechnical engineering; hydrology and hydrogeology; tailings storage facility; soil and noise aspects of the ESIA; and mineral economics. The responsibility for other on-mine and off-mine infrastructure is as follows:

- Other on-mine infrastructure: WSP Group Plc ("WSP");
- Metallurgical Processing: ProMet Engineers Pty Ltd ("ProMet");
- Rail transport corridor and Port infrastructure: Egis Engineering ("Egis"); and
- ESIA: all aspects excepting those noted earlier are managed directly by the Company with input from a number of independent consultants, including:
  - Freshwater and marine: Hydrobiology Pty Limited ("Hydrobiology"),
  - Social: Synergy Global Consulting Limited ("Synergy"),
  - Flora: Royal Botanical Gardens, Kew Gardens ("Kew Gardens"),
  - Fauna: Independent Expert.

Accordingly the Company has provided fundamental base technical data to SRK for the purpose of this review and inclusion in the CPR. In such instances where SRK has not been directly responsible for the authoring of such data, SRK has performed all necessary validation and verification procedures deemed necessary and/or appropriate by SRK in order to place an appropriate level of reliance on such information.

#### 1.4.1 Technical Reliance

SRK places reliance on the Company and its technical representative Mr Colin Harris that all technical information provided to SRK as at 30 September, is accurate. Mr Colin Harris, as the Project Director of the Company, has overall responsibility for the multi-disciplinary studies completed under the direction of the Company. Mr Colin Harris has over 40 years experience in the management of the exploration and evaluation of precious and bulk commodity projects in the mining and metals sector. More recently, he has been directly involved in project evaluation in francophone Africa and has also managed the evaluation of Rio Tinto Plc's Simandou Iron Ore Project in the Republic of Guinea ("Guinea").

## 1.4.2 Financial Reliance

In consideration of all financial aspects relating to the Mineral Assets, SRK has placed reliance on the Company that the following information as they may relate to the Mineral Assets and the Company, specifically the FS Work Programme is appropriate as at 30 September 2010:

- Taxation aspects for all local and federal taxes including: opening balances; determination
  of tax-deductible items (depreciation); and summary of applicable taxes;
- Opening balances for debtors, creditors and stores and any associated working capital calculations; and
- Balance sheet items including all relevant aspects which would be required by the reader

in order to determine where appropriate a technical valuation of the Mineral Asserts and an equity value for the Company.

The financial information referred to above has been prepared under the direction of Mr Gary Vallerius who is a full time employee of the Company in the capacity of Chief Financial Officer of the Company. Mr Gary Vallerius has over 20 years financial management experience in the mining and metal sector. More recently he managed the financial aspects of all of Rio Tinto Plc's African and European exploration projects including the Simandou Iron Ore Project in Guinea.

#### 1.4.3 Legal Reliance

In consideration of all legal aspects relating to the Mineral Assets, SRK has placed reliance on the representations by the Company that the following are correct as at 30 September 2010 and remain correct until the date of the Admission Document:

- That save as disclosed in the Admission Document, the Directors of the Company are not aware of any legal proceedings that may have an influence on the rights to explore for minerals;
- That save as disclosed in the Admission Document, the Company is the legal owner of all mineral and surface rights as reported in the Admission Document; and
- That save as expressly mention in the Risk Factors or Additional Information section of the main body of the Admission Document, no significant legal issue exists which would affect the likely viability of the Mineral Assets and/or the estimation and classification of the Mineral Resources as reported herein.

The legal information referred to above has been prepared under the direction of the Directors of the Company.

# 1.5 Limitations, Reliance on Information, Declaration, Consent, Copyright and Cautionary Statements

#### 1.5.1 Limitations

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 other than the addressees for any loss suffered by any such other person as a result of, arising out of, or in connection with the CPR or statements contained therein, required by and given solely for the purpose of complying with the Rules and consenting to inclusion of the CPR in the Admission Document.

The Company has confirmed in writing to SRK that, to its knowledge, the information provided by it (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 has confirmed in writing to SRK that it believes it has provided all material information.

The Company has confirmed in writing to SRK that, to the extent permitted by law, the Company indemnifies SRK and its employees and officers in respect of any liability suffered or incurred as a result of or in connection with the preparation of this CPR. This indemnity does not apply in respect of any gross negligence, wilful misconduct or breach of law or if SRK is in breach of its terms of engagement or where SRK is found to be liable as a person responsible for the Admission Document.

#### 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 analyses together, could create a misleading view of the process underlying the opinions presented in this CPR. The preparation of a CPR is a complex process and does not lend itself to partial analysis or summary.

The Mineral Resources, FS Work Programme and the presentation of preliminary results of technical-economic parameters ("TEPs"), inter alia operating and capital expenditures, is based on information provided by the Company and in certain instances information authored by SRK as part of the ongoing Zanaga PFS. The Mineral Resources and the TEPs are based on assumptions regarding commodity prices and exchange rates prevailing at the date of this report. These assumptions can change significantly over relatively short periods of time and should these change materially the Mineral Resources and the TEPs could be materially different in these changed circumstances. 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 and the projections and assumptions included in the various technical studies completed by the Company, opined upon by SRK and reported herein.

Neither SRK, the SRK Competent Persons who are responsible for authoring this CPR, nor any Directors of SRK have at the date of this report, nor have had within the previous two years, any shareholding in the Company, the Mineral Assets or advisors of the Company. Consequently, SRK, the SRK Competent Persons and the Directors of SRK consider themselves to be independent of the Company.

In this CPR, SRK provides assurances to the Board of Directors of the Company that the Mineral Resources, the FS Work Programme and any associated technical information where provided by third parties including the Company has been 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

In accordance with the Schedule Two of the AIM Rules and paragraph 23.1 of the Annex 1 of the Prospectus Rules, SRK has given and has not withdrawn its written consent to the inclusion of the CPR, and to the inclusion of any extracts from the CPR, in the Admission Document and/or any pathfinder proof of the Admission Document and has reviewed all information contained in the Admission Document and the pathfinder proof of the Admission Document (as the case may be) which is extracted from the CPR or based upon information contained in the CPR and has confirmed in writing that the information presented is accurate,

balanced, 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.

#### 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 "Mineral Resources", that the SEC guidelines strictly prohibit companies from including in filings.

The Mineral Resource estimates, the FS Work Programme and preliminary results from the Zanaga PFS are based on many factors, including, in this case, data with respect to drilling and sampling, estimates of future technical factors, operating and capital expenditures, product prices and the exchange rate between the various currencies and the US\$. Accordingly should these factors change the Mineral Resource estimates, the FS Work Programme and the preliminary results from the Zanaga PFS may need to be revised and may result in lower estimates of Mineral Resources.

The FS Work Programme and the preliminary results of the PFS include a number of forward looking statements. These forward looking statements are necessary 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 975 staff, offering expertise in a wide range of resource engineering disciplines with 38 offices located on six continents. 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 judgement issues. The SRK Group has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, Mineral Experts' Reports, Competent Persons' Reports, Mineral Resource and Ore Reserve Compliance Audits, Independent Valuation 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 13 consultants sourced from the SRK Group's offices in the United Kingdom over a two-month period. These consultants are specialists in the fields of geology, resource and reserve estimation and classification, open-pit mining, geotechnical engineering, mineral processing, hydrogeology and hydrology, tailings management, infrastructure, environmental

management and mineral economics.

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

- Richard Nicholls, MAusIMM, BSc geology and mineral resources;
- Lucy Roberts, MAusIMM, PhD geology and mineral resources;
- John Arthur, CEng, FGS, MIMMM, PhD geology and mineral resources;
- Chris Reardon, MAusIMM, MISEE, BSc mining engineering;
- Allan McCracken CEng, MICE, MIMMM, BSc geotechnical engineering;
- Anthony Rex, CGeol, FGS, PhD hydrogeology and hydrology;
- John Willis, MAusIMM, MAIME, PhD mineral processing;
- Kris Czajewski, PEng, APEG, APEGGA tailings storage facility;
- Simon Young, B.Eng infrastructure and capital expenditure;
- Craig Watt, MIMWA, BSc, PhD environmental;
- Jane Joughin, PrSci(Nat), MSc environmental;
- Tim McGurk, CEng, MIMMM, BEng Zanaga PFS; and
- lestyn Humphreys, FIMMM, AIME, PhD mineral economics.

The Competent Person who has reviewed the Mineral Resources as reported by the Company is Dr John Arthur, CEng, FGS, MIMMM, PhD, who is an employee of SRK. He is a Member of the Institute of Materials, Metals and Mining ("IMMM") which is a 'Recognised Overseas Professional Organisation' ("ROPO") included in a list promulgated by the Australian Stock Exchange from time to time. Dr John Arthur is a mining geologist with 21 years experience in the mining industry and has been involved in the reporting of Mineral Resources on various properties internationally during the past five years.

The Competent Person who has overall responsibility for the Zanaga PFS is Mr Tim McGurk, CEng, MIMMM, BEng, who is a principal consultant with SRK. He is a Member of the IMMM which is a ROPO included in a list promulgated by the ASX from time to time. Mr Tim McGurk is a corporate consultant with 20 years experience in the mining and metals industry.

The Competent Person who has overall responsibility for the CPR is Dr lestyn Humphreys, FIMMM, PhD, who is a corporate consultant with SRK and managing director of SRK Consulting (UK) Ltd. He is a Fellow of the IMMM which is a ROPO included in a list promulgated by the ASX from time to time. Dr lestyn Humphreys is a corporate consultant with 20 years experience in the mining and metals industry and has been involved in the preparation of Competent Persons' Report on various properties internationally during the past five years.

#### 2 COMMODITY PRICES

#### 2.1 Introduction

The following section includes a summary of certain historical and forecast commodity price and macro-economic statistics for input into the declaration of Mineral Resources, the FS Work Programme and certain assumptions in respect of the ongoing Zanaga PFS. The source of the information as reported herein is largely based on information sourced from the Company and the public domain. The following section is presented solely for information and should not be considered a substitute for a detailed historical and forecast demand-supply-price analysis in respect of commodity prices and economic analysis in respect of assumptions in respect of exchange rates and consumer price inflation ("CPI").

# 2.2 Commodity Prices

Commodity prices are influenced, inter alia, by commodity demand-supply balances for iron ore and steel production and the cost of transportation all of which are influenced by global economic growth and industrial production. In the three-year period from 1 October 2007 through to 30 September 2010 the following apply:

 Concentrate fines prices ranging between USc79/dmtu and USc200/dmtu with a resulting three-year average of USc127/dmtu which can be compared with the LTP assumed for the current optimisation analysis of USc85/dmtu and spot prices of USc200/dmtu on 30 September 2010;

The above commodity prices for iron ore are quoted as FoB Brazil and FoB Australia and accordingly do not include any assessment of additional freight costs for transportation to Europe or Asia (China, Japan);

The forecast commodity prices as presented in this CPR are derived from the median of consensus market forecasts ("CMF") dated 30 September 2010. Recent analyses indicate a long term price ("LTP") of USc85/dmtu which is deemed appropriate for input to the current optimisation process. The current optimised shell within which the current Mineral Resource declarations are constrained is based on an assumed price of USc115/dmtu which indicates a 35% premium to the assumed LTP of USc85/dmtu.

#### 2.3 Macro-Economics

In the three year period to 30 September 2010, the daily exchange rate between the US\$ and the Franc de la Communauté Financière Africaine (the "Congo Brazzaville Franc", hereinafter referred to as the "XAF") has ranged between 415 and 535 with a resulting average of 469 XAF to one United States Dollar (US\$). The rate on 30 September 2010 was 481 XAF to one US\$.

In the three year period to 30 September 2010, the 12-month United States of America ("US") CPI has ranged between 5.60% and -2.53% with a resulting average of 1.79%. The closing 12-month US CPI as at 30 September 2010 was 1.22%.

In the three year period to 30 September 2010, the 12-month Congo Brazzaville CPI has ranged between 16.94% and -3.93% with a resulting average of 5.62%. The closing 12-month Congo Brazzaville CPI as at 30 September 2010 was 7.83%.

### 3 COUNTRY PROFILE

#### 3.1 Introduction

Congo Brazzaville is a Central African country with a population of approximately 3.7 million and an economy that is dominated by offshore oil production. Major international firms, including Total, Eni and Chevron have carried out oil exploration and commercial production in the Republic of Congo for over 30 years. The country is a functioning democracy with rule of law based on the French Civil Code and mining law to World Bank standards.

#### 3.2 Country Description

#### 3.2.1 Geography and natural resources

Congo Brazzaville has a surface area of 342,000km<sup>2</sup> (roughly the same size as Germany or Finland). While the country's official language is French, Lingala and Kikongo are common among the indigenous population. The country's capital, major industrial centre and largest city (population 1.2m), Brazzaville, is located on the Congo River on the country's south-eastern border. The other major population centre is the main seaport Pointe Noire (population 0.6m). About 61% of the population is urbanised.

#### 3.2.2 Government

Congo Brazzaville is a democratic republic with a multi-party system that exists alongside a directly elected executive president and a two chamber parliament comprising a Senate and National Assembly. Following Congo Brazzaville's independence from France in 1960, Congolese politics gradually adopted a socialist constitutional ideology, becoming Africa's first "people's republic in 1969. The country's recent political history has been marked by civil conflicts between 1993 and 1999. A political liberalisation process took place in November / December 1999 and the current constitution was adopted in January 2002, which was followed by presidential, legislative, local, and senatorial elections. The country is governed by a single dominant coalition that supports the president, Denis Sassou-Nguesso, who has presided over the country since October 1997. The country has a seven year Presidential term, and the current President was re-elected in July 2009.

#### 3.2.3 Economy

The economy of Congo Brazzaville is heavily dependent on the oil sector, which in 2008 accounted for approximately 60% of its US\$12.5bn GDP and more than 91% of its exports. In 2009, oil output was estimated at 110 million barrels and is expected to grow strongly to 119.3 million barrels in 2010. Production is expected to fall slightly in 2011 to 117.2 million barrels as mature fields start to decline. However, major oil companies such as Total and Eni continue to invest in work programmes and exploration in the area. Other sectors of the Congolese economy, and in particular, the industrial sector, remain relatively underdeveloped. As a result of this, and uncertainty over future oil revenues, the government of Congo has demonstrated a clear desire to diversify its economy and reduce its reliance on oil revenues by attracting new investment in its mining industry. To achieve this, the government has sought to build an attractive investor climate, exhibited through compliance with worldwide policies of governance, such as the World Bank's Extractive Industries Transparency Initiative ("EITI), of which the Congo is currently a "candidate country".

The global economic crisis has had a limited impact on the Congo Brazzaville's economic performance. Real GDP is estimated to have grown 7.6% in 2009 and it is expected to grow a further 10.5% in 2010. In 2011, it is expected to fall to 6%. Inflation averaged 5% in 2009 and is forecast to rise to 5.5% in 2010 and then fall to 3% in 2011.

Congo Brazzaville is a member of the United Nations, African Union, African Development Bank, World Trade Organisation, CEMAC, Central African Customs and Economic Union, Economic Community of Central African States and INTERPOL. Congo held a seat on the United Nations Security Council during 2006-2007.

### 3.2.4 Infrastructure

Development of the Congolese economy has in recent years been limited in part by difficulties

relating to the country's transport infrastructure. The general climatic conditions in the country can make transportation difficult, especially by road. However, the country does have an international sea port at Pointe Noire and while the rail infrastructure in the Republic of Congo is not extensive, there is a line in operation between Point Noire and Brazzaville. It is expected that public investment (by the Republic of Congo and the World Bank) in major transport infrastructure projects, in particular new roads, which is scheduled for completion in 2012, should improve the situation.

In regard to energy supply, Congo Brazzaville is a significant petroleum exporter but suffers from a lack of investment in energy related infrastructure. Energy demand is gradually returning to the levels of two decades ago, and electrification is at approximately 45% in urban centres. The national power authority Congo Brazzaville, Société National d'Electricité ("SNE"), presides over major construction initiatives in both generation and transmission facilities. SNE is also in charge of concluding supply contracts and setting rates. There are a number of large scale energy projects in progress. Eni has constructed and commissioned the first 150MW phase of a gas fired power station at Djeno, near Pointe Noire. Plans are in place to expand capacity to 300MW, and 450MW subject to demand. The country also has significant hydroelectricity generation potential.

#### 3.2.5 Legal Framework

The 2002 constitution established a two chamber parliament consisting of a Senate with 66 seats and a National Assembly comprising 137 seats. Senators are directly elected by popular vote to serve six-year terms and National Assembly members serve five-year terms.

The legal system in Congo Brazzaville is based on the French civil law system (the Civil Code of the former French Equatorial Africa). Congo Brazzaville is also a member state of the OHADA, which has enacted an Act relating to Company Law and Economic Interest Groupings, providing for a standard system for the creation and administration of companies and related entities, and a Uniform Act on Arbitration, allowing recourse to a standard arbitration mechanism for the settlement of contractual disputes arising from civil or commercial contracts concluded in Congo Brazzaville as an alternative to Congo Brazzaville courts for legal proceedings relating to contracts. In commercial law matters, the provisions of the Uniform Act on Commercial Companies and Economic Interest Groups (the "Uniform Act") apply. The Uniform Act outlines the provisions that govern the functioning of commercial companies in the member states of the OHADA including for example the formation of companies, the liability of directors and mergers and liquidation. The national laws of Congo Brazzaville will apply to the extent that they are not contradictory to the provisions of the Uniform Act.

Congo Brazzaville is also a member of the Central African Monetary and Economic Community ("CEMAC"). CEMAC governs the flow of funds between non-CEMAC jurisdictions and legal entities residing or having their registered offices in the territory of a CEMAC member state. The Treaty which instituted CEMAC on 16 March 1994 (in N'Djaména) was ratified by the Republic of Congo in June 1999. There are six member states, including the Republic of Congo. The objectives of the Treaty are the harmonisation of the different political systems of the member states and the creation of a legal and economic framework which is conducive to the encouragement of investment and the realisation of a common market.

#### 3.3 Regulatory Environment

To the extent that issues are not dealt with expressly under OHADA law, the principal

legislation under Congolese law that is relevant to the Zanaga Project includes the following texts:

- The Congolese Mining Code, enacted by law n° 4-2005 dated 11 April 2005, and its decree of application, Decree n° 2007-274 dated 21 May 2007;
- The General Tax Code, enacted by law n° 19-2005 dated 24 November 2005;
- The Environmental Code, enacted by law n° 003/91 dated 23 April 1991 and its Decree of application 86-775 dated 7 June 1986;
- The Labour Code enacted by law n° 47/75 dated 15 March 1965 (as amended) and its texts of application; and
- The Congolese Investment Charter enacted by law n°6-2003 dated 18 January 2003 (the "Charter"), for which the Group is eligible, at its election, to benefit from a wide range of foreign investment and protection benefits.

Specific details in respect of the each of the various regulatory codes in effect in Congo Brazzaville are included in Section B, Part V of the Admission Document and accordingly are not repeated herein.

#### 4 THE MINERAL ASSETS

#### 4.1 Introduction

This section provides an overview of the Company including historical development and associated reporting statistics for the periods ending 31 December 2006 through to and of inclusive 30 September 2010. For the ZIOP additional information in respect of the following is also provided: historical development; location; terrain; climate; title and rights; geology; Mineral Resources; technical work completed to date; and the various work programmes.

Certain historical expenditure statistics as reported in this section have been derived from management accounts and in certain instances do not necessarily correspond to the audited financial reporting as reported in the body of the Admission Document. Projections of future expenditures are limited to those associated with the various Work Programmes and reflect various funding requirements in the event that Xstrata exercises or does not exercises its option.

#### 4.2 Corporate Overview

The Company is a holding company which currently owns (subject to the Xstrata Transaction), through its various subsidiaries, 100% of the ZIOP located in Congo Brazzaville. On 19 November 2009 the Company was incorporated by Garbet Limited ("Garbet") and Guava Minerals Limited ("Guava") in the British Virgin Islands ("BVI") under the name of Jumelles Holdings Limited to act as the holding company of their respective interests in Jumelles Limited ("Jumelles").

In 2007, Jumelles became the holding company for the interests of its then ultimate 50/50 shareholders, Garbet and Guava, in MPD, which currently owns and operates 100% of the ZIOP (subject to a minimum of 10% free carried interest in MPD in favour of the GoCB).

Between November 2008 and January 2009 a new management team led by Colin Harris was appointed to oversee the ZIOP which completed the 2009 Conceptual Study (February 2009) and commenced work in relation to the 2009 Scoping Study. These technical studies sought to assist the Company in making an informed decision on which options to assess in preparation for the commissioning of the Zanaga PFS. Further objectives included: identification of Mineral Resources reportable in accordance with the terms and definitions of

the JORC Code; and identification of other issues related to: infrastructure; process options; target markets for products; commercial, legal, environmental and or social issues which would likely delay or impact the development of the ZIOP.

Based on the results of the Scoping Study, Xstrata and Jumelles negotiated an Option Agreement whereby Xstrata agreed to fund Phase 1 of the PFS to a value of US\$50m. The Option Agreement, signed in October 2009, is described in 4.2.1 below.

In December 2009, Garbet and Guava contributed their then respective 50/50 joint shareholding in Jumelles to the Company which currently owns 100% of the share capital of Jumelles subject to the Call Option.

On 1 October 2010 the Company changed its name to Zanaga Iron Ore Company Limited. The Company is legally domiciled in the BVI and the address of its registered office, is situated at Coastal Building, 2<sup>nd</sup> Floor, Wickham's Cay II, Road Town Tortola, BVI. The Company's principal place of business is situated in the Bailiwick of Guernsey ("Guernsey").

Garbet is majority owned by Strata Limited ("Strata"), a private investment company based in Guernsey, which specialises in the investment and development of early stage natural resource projects in emerging markets, predominantly on the African continent. Garbet owns approximately 49% of the share capital of the Company. Guava is majority owned by African Resource Holdings Limited ("ARJ"), a BVI company that also specialises in the investment and development of early stage natural resource projects in emerging markets. Guava owns approximately 38% of the share capital of the Company. The balance of the shareholding in the Company is jointly held by a number of institutional investors in the mining and metals sector.

In addition to Jumelles and Jumelles M Limited, a company incorporated in the Republic of Mauritius ("Mauritius"), both of which are intermediate holding companies, the Company has established an additional subsidiary, Jumelles Technical Services (UK) Limited ("Jumelles TS"), for the provision of technical and relates services to the Company and its subsidiaries, hereinafter referred to as the Group. Figure 1.1 presents the current operating structure for the Group, together with details of the relevant countries of incorporation and the percentage of voting rights or securities beneficially owned or over which control or discretion is exercised, subject to the Xstrata Transaction.

Table 4.1 presents the salient historical financial statistics for: the 6 month period ending 31 December 2006; the 12 month periods ending 31 December for calendar 2007 through 2009; the six month period ending 30 June 2010; and the nine month period ending 30 September 2010. As at 30 September 2010 the Company had: US\$10.4m of PP&E; US\$61.5m of capitalised development costs; US\$14.2m of current assets, US\$10.0m of which comprise cash and cash equivalents; and US\$34.1m of current liabilities of which US\$21.0m comprise loans and borrowings form Garbet and Guava. For the financial period ending 31 December 2009, Jumelles expensed US\$23.4m of which US\$14.7m was capitalised and PP&E was US\$5.8m.

Statistics	Units	2006(1)	2007	2008	2009	H1 2010	YTDQ3 2010
Income Statement Statistics							
Employment	(US\$k)	6	500	1,109	5,187	2,938	4,988
Directors fees	(US\$k)	0	7	26	65	0	0
Mining Consultants, Drilling, Camp, P Noire, Transportation	(US\$k)	0	1,142	5,111	10,234	18,092	30,229
Depreciation and amortisation	(US\$k)	0	95	239	478	388	404
Admin, Legal, Travel, Other expenses	(US\$k)	100	2,266	1,713	6,784	8,,877	6,243
MPD transfer to Capitalised Development Expenditure	(US\$k)	-106	(2,502)	(6,277)	(13,990)	(23348)	(38,034)
Total Expenses	(US\$k)	0	1,508	1,921	8,758	6,947	3,830
Operating Profit/(Loss)	(US\$k)	0	(1,508)	(1,921)	(8,758)	(6,947)	(3,830)
Balance Sheet Statistics							
PP&E	(US\$k)	16	510	1,363	6,654	8,766	10,437
Capitalised Development Costs	(US\$k)	103	2,603	8,801	22,904	40,608	61,523
Current Assets	(US\$k)	25	136	137	32,864	12,436	14,178
Cash and Cash Equivalents	(US\$k)	4	120	104	3,838	8,393	10,018
Current Liabilities	(US\$k)	125	4,238	13,164	24,763	30,496	34,060
Loans and borrowings from Garbet and Guava	(US\$k)	118	3,971	12,009	21,027	21,021	21,027

Table 4.1 Jumelles historical financial statistics

<sup>1)</sup> 6 month period to 31 December 2006.

As at 30 September 2010, the Group had total employees costed inclusive of contractors ("TEC") of 653.

#### 4.2.1 The Xstrata Transaction

In October 2009, Garbet and Guava (Jumelles' major shareholders at the time) and Jumelles (the Company's wholly owned subsidiary) entered into a transaction with Xstrata comprising of two principal transaction documents:

- the Call Option Deed which gives Xstrata an option to subscribe for 50% plus one share of the fully diluted and outstanding shares of Jumelles in return for funding the Zanaga FS with a minimum expenditure of US\$100 million; and
- the JVA which governs the operation, conduct and development of Jumelles and the relationship between the Company and Xstrata, gives Xstrata the right to purchase the Company's interest in Jumelles following completion of the Zanaga FS, on an agreed valuation basis and sets out the terms on which Jumelles will be funded following completion of the Zanaga FS.

Following the transfer by Garbet and Guava of their interests in Jumelles to the Company, the Company executed Deeds of Adherence to the Xstrata Transaction agreements. The following represents only a brief outline of the Xstrata Transaction. Part II of the Admission Document contains a detailed summary of the Xstrata Transaction and Section 3 of Part VI of the Admission Documents sets out the risk factors associated with the Xstrata Transaction.

**Call Option Deed:** Pursuant to the Call Option Deed, Xstrata acquired an option to subscribe for 50% plus one share of the fully diluted and outstanding shares of Jumelles in consideration for investing the Call Option Premium, being an aggregate sum of US\$50 million to be utilised by the Company to finance Phase I of the agreed work program for the Zanaga PFS of the ZIOP.

In general terms, Phase I of the Zanaga PFS covered the period up to the date the Call Option Premium was spent (that is, from September 2009 to June 2009). Phase II covers the period from the end of Phase I to the completion of the Zanaga PFS. Phase II of the Zanaga PFS is expected to last from July 2010 to Q1 2011.

After Phase I, Xstrata could either (i) exercise the Call Option at any time from 16 October 2009 until 45 business days following completion of the Zanaga PFS by paying the Call Option Price (defined below); (ii) confirm to Jumelles that it is willing to contribute any additional amount required to complete Phase II of the Zanaga PFS; or (iii) notify Jumelles that it is not willing to contribute the additional amount required to complete the Zanaga PFS; in which case the Call Option Deed shall terminate with immediate effect.

Pursuant to the Further Funding Letter, and following completion of phase 1 of the PFS, Xstrata has confirmed its decision to fund Phase II of the Zanaga PFS up to an agreed amount of US\$56.49 million. Xstrata will fund the costs of completing Phase II of Zanaga PFS, although it may subsequently decide that it does not wish to exercise the Call Option and, in such circumstances, it would not be required to fund the full US\$56.49m.

If the Call Option is exercised, the amount payable upon the exercise of the Call Option by Xstrata (the "Call Option Price") will be:

- the aggregate costs of completing the Zanaga FS, in accordance with international best practice and Xstrata's internal guidelines, provided that such amount shall be greater than US\$100m (excluding the Call Option Premium); plus
- sums to repay all outstanding shareholder loans, up to US\$25m. Sums paid by Xstrata in this respect must be used to repay outstanding shareholder loans. Further details of the shareholder loans are set out in Paragraph 13.14 of Part IX of the Admission Document.

The Call Option Price must not exceed an amount that would result in it being a Class 2 Transaction for Xstrata plc for the purposes of the Listing Rules of the Financial Services Authority at the time of the exercise of the Call Option.

**JVA:** If Xstrata exercises the Call Option, the JVA will become fully effective and Xstrata will be required to fund the costs associated with completing the Zanaga FS in accordance with international best practice and Xstrata's internal guidelines. Under the JVA, Xstrata has the right to buy all of the Company's shareholding in Jumelles following completion of the Zanaga FS.

Pursuant to the JVA, Xstrata has undertaken to use its reasonable endeavours to complete the Zanaga FS at least three months prior to the expiry of the Zanaga Exploration Licences following a further extension to 8 May 2012, subject to there not being a material adverse change.

Within 90 days of completion of the Zanaga FS (the "Xstrata Offer Period"), Xstrata may require the Company to sell all of its ordinary shares in Jumelles in accordance with the provisions of the JVA (an "Xstrata Offer"). The offer notice must specify a cash price and the Company may elect to accept or reject the price stated in the offer notice. In the event that the price is rejected, the Company and Xstrata shall have 15 business days in which to agree on a price. If the parties are unable to reach agreement, they may refer the matter to an independent valuer who will determine a price based on the net present value of the Zanaga Project in accordance with the valuation terms of reference set out in the JVA and summarised in Part II of the Admission Document and the Company will be obliged to sell its shares in Jumelles at this price.

After completion of the Zanaga FS and until the earliest of: (i) the completion of an Xstrata Offer; (ii) the expiry of the Xstrata Offer Period; or (iii) confirmation from Xstrata that it will not make an Xstrata Offer, Xstrata will (for so long as a material adverse change has not occurred and is not continuing at that time) provide all funding required by Jumelles.

Following this date, funding required by Jumelles will, so far as possible, be provided out of: (i) Jumelles' available cash resources and project cash flows; (ii) external debt finance; or (iii) additional finance from the shareholders on arms' length commercial terms.

If the Board of Jumelles determines that shareholder finance is required, it may request such finance from the shareholders. If a shareholder fails to contribute the pro rata amount it is requested to contribute by Jumelles, the other shareholders are entitled to meet any such shortfall and the shareholder who fails to contribute their pro rata amount will be diluted at

Project NPV (as summarised in paragraph 3 of Part II of the Admission Document).

In the event of dilution, the Company will receive a preferred right, as summarised in Part II of the Admission Document, in the form of a note instrument, which ensures that the Company is not economically disadvantaged by granting the Company the right to receive dividends which equal, pro-rata to its holding of ordinary shares from time to time, the interest payable on or the repayment of principal amount of debt issued to the Xstrata entity.

If no Xstrata Offer has been made within the prescribed time limits, the marketing arrangements set out in the JVA (and described further in paragraph 3 of Part II of the Admission Document) will become effective once the ZIOP has reached the production phase. In such event the Company has the right to take or assign its equity share of production through a market priced off-take agreement.

#### 4.3 The Zanaga Iron Ore Project

The Zanaga PFS assumes the development of an open-pit mining operation with a nearby concentrator producing concentrates which will be transported via an estimated 350km rail link to a port facility located 10km North of Pointe-Noire situated on the Atlantic Ocean. The development of the ZIOP assumes initial capital expenditure of approximately US\$7.5bn over a three year construction period with the nameplate capacity of 45Mt concentrate achieved over a further two years.

#### 4.3.1 History

Iron occurrences were believed to have first been discovered at the Zanaga Project in 1939 and were officially reported by the French Geological Survey in 1954. During the 1950s and 1960s, a number of exploration programmes were undertaken within the current Zanaga Licence Area. These were conducted by the Bureau Minier de la France d'Outre Mer in 1955, Erzkontur Ruhr between 1962 and 1964, the Bureau Minier Congolais in 1965, International Planning und Consulting G.m.b.H between 1966 and 1967 and the United Nations Development Agency ("UNDP") between 1967 and 1969. In 1983, Le Bureau de Recherches Géologiques et Minières reviewed all the previous work completed, but primarily focused on the UNDP programme. The historical work completed indicated the potential of the Zanaga Project from both a target exploration and metallurgical processing perspective, and is what drew the Group to the project in 2006.

In May 2007, following the Groups acquisition of MPD, the holder of the Mineral Assets, the Company initiated an exploration programme aimed at confirming the historical work and assessing the mineral potential of the Mineral Assets. Work undertaken between May 2007 and December 2008 included evaluation of Landsat Enhanced Thematic Mapper Satellite ("Landsat ETM") and SRTM Elevation data of the entire Mineral Assets, select pitting and trenching, detailed ground mapping, diamond drilling totalling 4,758m and an airborne magnetic survey and interpretation. Results indicated the presence of a 47km long, strong magnetic anomaly interpreted to have a source in the magnetic itabirite/BIF protore

In September 2007, a trial pitting campaign was begun across the 47km strike of the magnetic anomaly with a north / south line spacing of approximately 1,600m. The results of the pitting, prospecting, mapping, assimilation of the archive data and importantly the airborne magnetic data drill targets were established to test anomalies for the presence of iron mineralisation as well as establishing a lithological section through the mineralised sequence.

Drilling commenced in April 2008, with a total of 18 diamond holes completed, with a total drilled metres of 4,690m. In 2009, a total of 35 diamond holes were completed with total

drilled metres of 2,408.1m and an additional 94 RC holes were completed, with total drilled metres of 5,771m.

The results of this drilling provided the basis to engage a team of geoscientists with specialist iron ore experience in Francophone Africa to further evaluate the deposit.

The initial drill programme noted above, demonstrated the difficulties to accurately target the mineralised zones for drill testing due to lack of outcrop, dense vegetation cover and the difficulties in the detailed interpretation of magnetic data in equatorial regions.

Ground resistivity measurements has been shown as an accurate, cost effective technique that helps define the boundaries of the mineralised zones (to depths of around 100m) and which has been used in conjunction with the other geodata noted above to plan the evaluation drilling programme.

A new drilling contractor experienced in the drilling of friable iron ores was engaged and after mobilisation delays commenced the PFS Phase 1 drilling programme in early 2010.

During July 2010 the drill data comprising 31,481m in 388 Reverse Circulation ("RC") boreholes and 11,224m in 80 diamond Drill ("DD") boreholes was applied for geological modelling (Model 7) that forms the basis of the PFS Study. This drilling was targeted on a central 25km section of the identified 47km long magnetic anomaly in the Zanaga ELs.

 Table
 4.2
 Summary of recent historical drilling (used in geological Model 7).

Year	Diam	ond Drill-holes	;	Reverse	Circulation Dri	ll-holes	Т	otal Drill-holes	;
	(No)	(m/hole)	(m)	(No)	(m/hole)	(m)	(No)	(m/hole)	(m)
2008	18	261	4,690	0	0	0	18	261	4,690
2009	35	69	2,408	94	61	5,771	129	63	8,179
2010	27	153	4,126	294	87	25,711	321	93	29,837
Total	80	140	11,224	388	81	31,482	468	91	42,706

#### 4.3.2 Title and Rights

MPD is the registered legal and beneficial titleholder of two iron ore ELs: the Zanaga-Mandzoumou EL; and the Zanaga-Bambama EL (hereinafter the Zanaga ELs). These are located in the Lékoumou Department of Congo Brazzaville and collectively have a total surface area of 1,000km<sup>2</sup>. Initially granted on 8 May 2007, and following a recent renewal, the key terms of the ELs (Table 4.3) are incorporated in two separate Decrees dated 14 June 2010 which were published in the *Journal Officiel* on 10 May 2007 and again on 17 June 2010 following their renewal.

#### Table 4.3 ZIOP: exploration licence details

Full Name	Zanaga-Bambama EL	Zanaga-Madzoumou EL
Surface Area (km <sup>2</sup> )	500	500
Mineral	Iron Ore	Iron Ore
Licence Type	Exploration Licence	Exploration Licence
Decrees	No. 2010-338	No. 2010-339
Date of first renewal	08 May 2010	08 May 2010
Filing date for second renewal	07 Feb 2012	07 Feb 2012
Transferability	with ministerial consent	with ministerial consent
Duration	Renewed for 2 years as from 8 May	2010 (thereafter renewable for an additional term of 2 years)
Expenditure Commitment		Total of US\$127m
Possible Extensions	2 years subject to compliance with agreed work programme	budget and relinguishment of up to 50% of the licence areas

(Note: the two 500km<sup>2</sup> licence areas noted above are the areas after the obligatory 50% size reduction on first renewal as required under the terms and condition of the Mining Code)

In addition to the ELs, MPD and the GoCB have (14 May 2007) entered into a Mining Convention, the 2007 Mining Convention, which regulates the parties' respective rights and obligations during the exploration phase (as opposed to the exploitation phase) of the ZIOP. The ZIOP, if executed, will be a long term mining and infrastructure project subject to high capital expenditure and long lead times to establish construction, completion and production capacity. Accordingly, MPD and the GoCB have established a negotiating team in order to revise the legal and fiscal framework and related procedures to appropriately develop the

ZIOP. In July 2009 an addendum to the 2007 Mining Convention was proposed and on 8 September 2010 this was duly incorporated as Addendum No.1 to the 2007 Mining Convention, hereinafter referred to as the 2010 Addendum (the "2010 Avenant").

The 2007 Mining Convention applies in respect of the exploration works for iron deposits and to any other minerals likely to be discovered within the perimeter of the Zanaga ELs. The 2007 Mining Convention sets out the general, economic, legal, financial, tax and social rights and obligations which apply to the Group when it is (directly or indirectly) conducting business in Congo Brazzaville. Furthermore the Group may only assign the 2007 Mining Convention with the prior approval of the GoCB.

- **Tax regime:** The 2007 Mining Convention sets out, inter alia, the following provisions in respect of the tax regime applicable to the Group:
  - During the exploration stage of the ZIOP, the Group and any foreign company without a permanent establishment in Congo Brazzaville that directly participates in the realisation of the ZIOP, is exempted from the following taxes applicable in Congo Brazzaville: corporate income tax; special corporate tax; ; standard income tax of Congolese employees; stamp duties payable on the execution and registration of any deeds; stamp duties and taxes payable on the transfer of shares; and a zero VAT tax rate,
  - MPD must set up and submit tax and labour declarations in accordance with the laws of Congo Brazzaville that are applicable to the personnel employed in Congo Brazzaville,
  - MPD must follow and adhere to OHADA accounting procedures, and
  - MPD is required to put in place an information exchange procedure with the Congolese tax and custom administrations for the duration of the project.

The 2010 Addendum stipulates the following additional provisions in respect of the tax regime applicable to the Group:

- a distinction is drawn between: (i) non-resident expatriate employees, who are not liable to pay income taxes in Congo Brazzaville; and (ii) resident expatriate employees, who are liable to pay income taxes in Congo Brazzaville in accordance with the fixed tax regime applicable to expatriate "rotating" employees in the Congolese oil sector,
- non-resident employees are not liable make contributions to social security or local labour organisations and are not liable to pay any income taxes and charges in Congo Brazzaville on their salaries;
- the Group is not required to pay withholding tax or other direct taxes in the Congo Brazzaville on payments made to foreign services providers;
- the Group is not required to pay any VAT on the acquisition of goods and services, subject to making a declaration guaranteeing that the goods and services are exclusively for the benefit of the Zanaga Project;
- the Group is not liable to pay any other indirect taxes in the Congo Brazzaville at the exploration stage of the Zanaga Project; and
- the Group is, however, liable to pay any parafiscal taxes and taxes due for the granting of licences, certificates, authorisations and/or services provided by administration departments in the same manner and under the same terms as any other enterprise that operates in the Congo Brazzaville.
- Customs provisions: The 2007 Mining Convention (as amended by the 2010

Addendum) sets out, inter alia, the following provisions in respect of customs:

- the procedure for exemption specified in articles 149 and 150 of the Mining Code applies to any equipment, vehicles, consumer goods and spare parts imported by the Group, its service providers or its subcontractors in relation to the Zanaga Project;
- the temporary admission regime will be applied to equipment, machinery, installations, commercial vehicles for tourism and transport and similar goods imported by the Group, its service providers or its subcontractors and required exclusively for the purposes of the Zanaga Project;
- the Group, its service providers and its subcontractors are exempt from paying customs duties on most other goods (not referred to above) imported for the purposes of the Zanaga Project;
- the Group undertakes to provide, as and when required, a certificate of guarantee that the goods and equipment referred to above are exclusively used and required for the purposes of the Zanaga Project;
- the Group will on an annual basis furnish to the applicable Congolese authorities a provisional estimation of the goods and equipment it intends to import to Congo Brazzaville which will be revised on a quarterly basis; and
- the Group and the government of Congo Brazzaville have agreed to negotiate a protocol based on the above principles in order to simplify all the customs procedures applicable to the Group's operations.
- Land Occupation provisions: The 2007 Mining Convention (as amended by the 2010 Addendum) further outlines in broad terms the proposed procedures envisaged for the allocation of land for the future mining, rail and port infrastructure, the resettlement and compensation measures for local population and communities and the proposed broad principles that will eventually govern the exploitation of the infrastructure relating to the Zanaga Project. For example, the 2007 Mining Convention (as amended by the 2010 Addendum) provides that:
  - in association with the government of Congo Brazzaville, the Group and/or any company authorised by the Group will carry out technical, environmental and socioeconomic studies on the preferred transport corridor for the Zanaga Project.
  - the land areas for the transport corridor will be reserved and determined by way of a public decision to formally declare the Zanaga Project as a project of "National Interest" (*Projet d'Intérêt National*).
  - the government of Congo Brazzaville undertakes to take all steps required under applicable legislation to declare the land areas affected as of "public utility" or DUP which would enable the government to expropriate the land required for the realisation of the Zanaga Project infrastructure (the "Infrastructure").

In order to mitigate against risks resulting from disputes in respect of the allocation of land, its expropriation, compensation payable, and resettlement issues, the government of Congo Brazzaville and the Group have further agreed to negotiate protocols in order to set up a specified procedure for preliminary enquiries as to how the land areas required for the Zanaga Project may be expropriated. The parties have agreed to negotiate in good faith and agree a process for expropriation to be completed within three months of the Group's potential decision to invest as a result of completion of the Zanaga FS. The process will have to respect Congolese legislation, international best practice and notably procedures concerning relocation of affected inhabitants of the land areas in question. It was agreed under the 2007 Mining convention (as amended by the 2010 Addendum) that

the land areas required by the Zanaga Project would be placed at the Group's (or any company authorised by it) disposal for a minimum period equal to the duration of the exploitation licence granted to the Group in respect of the Zanaga Project. This concession may be subject to compensation.

Environmental provisions: The Group, its shareholders and any company authorised by it will have the right to finance, realise and operate the Infrastructure by means of concession, farm-in, BOT (build, operate and transfer), or any other means authorised by applicable legislation. The Group will either directly or through an agreed company build the Infrastructure within the time delays set out in investment decision and this will be repeated in the exploitation licence. To this end, the government of Congo Brazzaville will facilitate the conclusion of the expropriation agreements in order that the Group (or any company authorised by it) may build and operate the Infrastructure on the expropriated land, subject to payment of a royalty that shall not exceed the maximum royalty applicable to national land in the area where the Infrastructure will be built.

Under the 2007 Mining Convention the Group is obliged, within 30 days following each four monthly "control mission" by the Administration of Geology & Mines to deposit of 50 per cent. of the then estimated cost of the rehabilitation of any land areas affected by the Group's operations into an escrow account held by an authorised Congolese bank as an environmental rehabilitation fund.

The 2010 Addendum makes provision for more extensive reciprocal undertakings to conduct and complete a Socio-Environmental Impact Assessment Study ("SEIA") in respect of the Zanaga Project in a collaborative manner and in accordance with applicable Congolese laws and international best practices and principles, as provided for by the World Bank. The government of the Congo Brazzaville undertakes to assist the Group at various stages of the Zanaga Project and the Group is required to pay the government a global fixed royalty equal to FCFA 20 million for its assistance in this context.

The 2010 Addendum furthermore sets out a definitive 28 month timetable for the completion of the SEIA and the granting of an environmental permit in respect of the Zanaga Project. The following consecutive steps are provided for:

- determination, approval and publication of terms of reference for the SEIA (6 months);
- determination and engagement of local and international consultants for the SEIA (3 months);
- realisation of socio-environmental studies (10 months);
- public enquiry (3 months);
- consideration of the SEIA by an Evaluation Technical Committee (6 months);
- agreement between MPD Congo and the Evaluation Technical Committee on the Environmental Management Plan (PGEP) (2 months); and
- issuance of the Environmental Permit by way of Inter-Ministerial Decree (1 month).

The 2010 Addendum further provides that within 2 months of the commencement of the SEIA, an ad hoc dispute resolution committee and accompanying procedural framework will be agreed and set up so as to ensure, where appropriate, that the environmental permit will be issued within the prescribed time limit provided that all applicable conditions are fulfilled by all parties concerned.

 Permitting and Licensing: In order to facilitate and ensure the expeditious and nondiscriminatory issue to MPD of all requisite permits, licences, authorisations, administrative approvals and acts ("Approvals") required for the realisation of the Zanaga Project, MPD and the Congolese State undertook under the 2010 Addendum to implement a two step process to (i) jointly identify all the applicable Approvals, and thereafter (ii) to jointly "fine tune", in accordance with best international and local practices, the documents, steps and procedures required for the simple, expeditious and transparent granting of such Approvals and to clarify which competent authorities are responsible for granting of the Approvals. The Congolese state are to furthermore undertake to ensure the issuance to MPD of all Approvals in a prompt and timely manner.

- Other Obligations: Pursuant to the 2007 Mining Convention (as amended by the 2010 Addendum), the government of Congo Brazzaville gave the following undertakings:
  - not to take any measures to limit any of the advantages provided for under the Zanaga Mining Convention;
  - not to take any measures to limit the Group's freedom to employ or dismiss employees, in accordance with the Congolese Labour Code. However, the Group is required to give priority to a Congolese candidates where they have equal experience and qualifications to a non-Congolese applicant for the same position; and
  - to facilitate, by any appropriate means, performance of the exploration and prospection works, any studies to be carried out, and creation of the Infrastructure in connection with the Zanaga Project.

Further, the Group is subject, inter alia, to the following obligations under the terms of the 2007 Mining Convention (as amended by the 2010 Addendum):

- to give regular guarantees to the government of the Republic of Congo guaranteeing that is has sufficient financial resources to carry out the Zanaga Project; and
- to provide information to the government of the Republic of Congo in relation to its exploration works under the Zanaga Exploration Licences.

The activities carried out by the Group in respect of the Zanaga Project are subject to technical verification by the Administration of Mines.

- Dispute Resolution: The 2007 Mining Convention (as amended by the 2010 Addendum) provides that any disputes arising out of such convention that cannot be resolved in an amicable manner must be finally determined by way of ICSID arbitration (International Centre for Settlement of Investment Disputes) under the provisions of the Washington Convention. To this end the Congolese State has expressly waived any sovereign immunity for the execution of any such ICSID arbitral award.
- Exploitation: Pursuant to the 2007 Mining Convention (as amended by the 2010 Addendum), if iron deposits or any other mineral substance are discovered at the site covered by the Zanaga Exploration Licences in quantities that are commercially exploitable, the government of Congo Brazzaville and the Group are required to conclude an agreement for their exploitation which will set out the respective roles of each party. As provided for under Article 98 of the Mining Code, any costs incurred by the parties in respect of the exploration phase of the Zanaga Project (which have been approved and certified by the Congolese Mining Administration) will be taken into account when negotiating the parties' financial obligations for the exploitation phase of the Zanaga Project.

#### 4.3.3 Geology

The iron ore deposits are located within a north-south oriented Precambrian greenstone belt

in the eastern part of the "Chaillu Massif" in South Western Congo which over the Zanaga ELs extends for over 47km in length, and is typically 0.5 to 3km in width.

The iron ore deposits consist of north-south trending, easterly dipping banded iron-formations ("BIF"), amphibolite-bearing quartzites, amphibolites with residual pyroxenites and a small mass of intrusive dunite. Structurally, the iron ore deposits are defined by two to three parallel north-south striking, magnetically responsive limbs, which are interpreted as an anticlinal fold structure, and which is sheared with an apparent sinistral sense of movement. The mineralised unit also exhibits intense micro-folding within the itabirite and the mineralised package is also cut by a number of east-west striking lineaments, which are thought to be fault related.

Overall the iron-rich units exhibit variable surface expression widths of between 20m to a maximum of 420m at section 9704100 mN with a maximum combined width of 600m (Lebayi area) The main limb widths in the northern zone, which hosts over 60% of the current Resource are generally around 320m. The strike length of the identified Resources extend approximately 25km from north to south (including truncations), and have a moderate dip towards the east. The deposit is currently open at depth, and has been modelled to the 400mRL in all areas and 200mRL in the Lebayi area. The magnetic anomaly identified which hosts the iron rich units, extends both north and south of the Resource area over a total strike length of 47km.

The Zanaga Iron Ore deposits are cross-cut by network of late transverse faults with an eastnortheast to west-southwest orientation which have moderate associated movements of subkilometre scale. Other transverse faults, of northwest-southeast direction, are less frequent, and have a similar scale of movement.

The geometry of the mineralisation is typically interbedded limbs of amphibolites and itabirites. The lithologies of the deposit comprise a weathering sequence, namely soil ("SOL") and canga ("CAN"), colluviums ("COL"), the weathered itabirite units: goethitic itabirite ("ITG"); friable itabirite ("ITF"); compact itabirite ("ITC") and transitional itabirite ("ITT").

The weathered itabirite units overlay un-weathered ore ("proto ore") comprising itabirite/banded iron formation BIF. The weathered sequence observed at Zanaga Iron Ore deposits is typical of iron ore deposits, where the surficial material demonstrates enrichment in iron above the proto ore due to a mass reduction and associated leaching of the silicate layers and the oxidation of the protore magnetite (Fe  $_{3}O_{4}$ )to haematite (Fe $_{2}O_{3}$ ).

The itabirites have been subjected to intensive tropical weathering, and so has typical supergene enrichment. The main mineralised units in the deposit directly related to the underlying itabirite are ITG, ITF, ITC, ITT and BIF. The COL unit at the top of the sequence is an irregular horizon which is typically less than 7m thick comprising angular to sub-rounded clasts of haematite (>60%Fe<sub>T</sub>) loosely cemented by a clayey goethitic matrix. It has a high total iron ore ("Fe<sub>T</sub>") grade that averages 46% Fe<sub>T</sub> and upto 62% Fe<sub>T</sub>. Overall the weathering profile, COL, ITG, ITF, ITC and ITT typically penetrates 60m to 70m below surface.

#### 4.3.4 Mineral Resources

As at 30 September 2010 the total Mineral Resources reported in accordance with the terms and definitions of the JORC Code amount to 3.34Bnt grading 32.75%Fe<sub>T</sub>, 43.43%SiO<sub>2</sub>, 0.046%P, 3.33%Al<sub>2</sub>O<sub>3</sub>, 0.14%MnO and 1.22%LOI. These include material classified as Indicated and Inferred Mineral Resources where the former comprises 0.62Bnt grading 39.31%Fe<sub>T</sub>, 36.05%SiO<sub>2</sub>, 0.043%P, 3.35%Al<sub>2</sub>O<sub>3</sub>, 0.11%MnO and 2.19%LOI.

In considering the 2010 Statements as reported below, SRK notes the following:

- All references to Mineral Resources are stated in accordance with the JORC Code;
- No Ore Reserves have been declared for the Mineral Assets due to the lack of multidisciplinary studies in which all aspects have been completed to a minimum of PFS level to adequately demonstrate the technical feasibility and economic viability of the Mineral Assets. Furthermore the technical studies in progress for the Mineral Assets are reliant upon significant portions of Inferred Mineral Resources without which a positive return on the initial capital outlay for development of the ZIOP cannot yet be demonstrated. The Company in conjunctions with its consultants is currently advancing the various technical studies to PFS level. Assuming successful outcome of the Zanaga PFS and subsequent FS Work Programme and Zanaga FS and that all technical aspects have been adequately addressed, it is reasonable to assume that Ore Reserves will be declared as part of the then completed Feasibility Study; and
- All Mineral Resources are derived by application of a 0%Fe<sub>T</sub> COG to all classified material falling within an optimised shell based on a LTP assumption of USc115/dmtu.

Table 4.4 presents the Indicated and Inferred Mineral Resources subdivided by lithologies for each process route. Table 4.5 presents the total Mineral Resource LTP sensitivity for each process route.

Classification	Lithologies	Tonnage			Qualitie	s		
		(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
Indicated Mineral Resourc	es							
Haematite Concentrator		333	43.52%	29.19%	0.046%	3.63%	0.10%	2.77%
	COL	59	48.97%	15.11%	0.050%	7.23%	0.10%	5.29%
	ITG	58	47.80%	21.67%	0.048%	4.29%	0.13%	3.16%
	ITF	215	40.87%	35.08%	0.045%	2.47%	0.10%	1.98%
Itabirite Concentrator		269	34.10%	44.53%	0.039%	3.01%	0.11%	1.48%
	ITC	207	34.39%	44.13%	0.038%	3.03%	0.11%	1.66%
	ITT	62	33.12%	45.87%	0.044%	2.96%	0.11%	0.88%
Total Indicated		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Inferred								
Haematite Concentrator		156	38.50%	32.17%	0.042%	7.06%	0.10%	4.15%
	COL	32	40.43%	21.89%	0.044%	10.75%	0.08%	6.89%
	ITG	30	41.52%	26.69%	0.041%	7.66%	0.09%	4.49%
	ITF	94	36.89%	37.43%	0.041%	5.61%	0.12%	3.11%
Itabirite Concentrator		2,580	30.87%	45.83%	0.047%	3.09%	0.15%	0.82%
	ITC	147	32.64%	45.62%	0.034%	3.95%	0.11%	2.23%
	ITT	43	30.26%	47.22%	0.038%	4.27%	0.11%	1.67%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Inferred		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
Mineral Resources								
Haematite Concentrator		488	41.92%	30.14%	0.045%	4.73%	0.10%	3.21%
	COL	91	45.96%	17.51%	0.048%	8.47%	0.09%	5.86%
	ITG	88	45.69%	23.36%	0.045%	5.42%	0.11%	3.61%
	ITF	309	39.66%	35.79%	0.044%	3.42%	0.10%	2.32%
Itabirite Concentrator		2,849	31.18%	45.71%	0.046%	3.09%	0.14%	0.88%
	ITC	355	33.66%	44.75%	0.036%	3.41%	0.11%	1.90%
	ITT	105	31.94%	46.42%	0.041%	3.50%	0.11%	1.21%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Mineral Resources		3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%

 Table
 4.4
 Mineral Resources (Summary by process route) 30 September 2010

Ore Lithologies	Units	Commodity Price (USc/dmtu)									
	_	50	75	85	100	115	125	150	175	200	
Tonnage	(Mt)	2,115	3,042	3,152	3,270	3,337	3,355	3,381	3,396	3,405	
- Haematite Conc.	(Mt)	471	488	488	488	488	488	488	488	488	
<ul> <li>Itabirite Conc.</li> </ul>	(Mt)	1,644	2,554	2,664	2,782	2,849	2,866	2,893	2,908	2,917	
Grade	(% Fe <sub>т</sub> )	35.22%	33.38%	33.17%	32.92%	32.75%	32.74%	32.70%	32.67%	32.66%	
- Haematite Conc.	(%Fe <sub>⊺</sub> )	42.25%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	
<ul> <li>Itabirite Conc.</li> </ul>	(%Fe⊤)	33.21%	31.75%	31.57%	31.34%	31.18%	31.18%	31.14%	31.12%	31.11%	
Grade	(% P)	0.048%	0.048%	0.048%	0.049%	0.046%	0.049%	0.049%	0.049%	0.049%	
- Haematite Conc.	(%P)	0.040%	0.040%	0.040%	0.040%	0.045%	0.040%	0.040%	0.040%	0.040%	
<ul> <li>Itabirite Conc.</li> </ul>	(%P)	0.050%	0.050%	0.050%	0.050%	0.046%	0.050%	0.050%	0.050%	0.050%	
Grade	(% AL <sub>2</sub> O <sub>3</sub> )	3.03%	3.21%	3.23%	3.29%	3.33%	3.33%	3.34%	3.34%	3.35%	
- Haematite Conc.	(%AL <sub>2</sub> O <sub>3</sub> )	4.60%	4.72%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%	
- Itabirite Conc.	(%AL <sub>2</sub> O <sub>3</sub> )	2.58%	2.92%	2.96%	3.04%	3.09%	3.09%	3.11%	3.11%	3.12%	
Waste	(Mt)	798	2,554	2,994	3,571	3,962	4,148	4,432	4,628	4,760	
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.4	0.8	0.9	1.1	1.2	1.2	1.3	1.4	1.4	

 Table
 4.5
 Total Mineral Resources Sensitivity (Summary by process route) 30
 September 2010

The current FS Work Programme is largely focused on resource definition drilling and comprises total drill metres of 68,400m of which 51,300m and 17,100m represents DD drilling and RC drilling respectively. These evaluation drilling activities for some 310 holes are scheduled for completion during 2011 and are in essence an extension of the Q4 2010 exploration drilling (17,000m) underway. The Q4 evaluation drilling is already funded as part of the Zanaga PFS, however this will not be available as part the Zanaga PFS Mineral Resource statement that is currently under preparation which assumes a data cut-off (62,000m) of 30 September 2010.

Accordingly given the definition drilling focus of the FS Work Programme no explicit Exploration Targets reportable in compliance with Clause 18.1 of the JORC Code have been defined. Notwithstanding this aspect SRK recognise the potential for depth extensions to the BIF specifically given that in certain instances the optimisation analysis extends to the full limits of the orebodies defined to date. Further exploration potential exists along strike to the north and south of the 25km of strike tested to date, both with respect to haematite and itabirite mineralisation, however to date this remains untested and no further detailed exploration has been specifically included in the Work Programmes as reported herein.

#### 4.3.5 Technical Work Completed to Date

The technical studies completed to date in respect of the ZIOP comprise the 2009 Conceptual Study and the 2009 Scoping Study for which the associated expenditures amount to US\$22.31m (30 November 2008) of which 58% (US\$13.04m – 30 June 2009) comprised expenditures for exploration, salaries and consultants. The Zanaga PFS is currently underway and scheduled for completion during Q1 2011 and the total expenditures September 2009 to 30 September 2010 amount to US\$64.37m of which 59% (US\$38.17m) comprised expenditures for exploration, salaries and consultants. Funding for the Zanaga PFS amounts to some US\$106m sourced from two separate tranches comprising US\$50m and US\$56m.

To 30 September 2010 (Table 4.6) the total expenditures in respect of the ZIOP amounts to US\$86.68m of which 59% (US\$51.21m) comprise expenditures for exploration, salaries and consultants. Of the total expenditures to date US\$73.56m report as operating expenditures and US\$13.12m report as capital expenditures.

	-		-		
Expenditure Item	Units	2009 Conceptual	2009 Scoping	Zanaga PFS	Total
Operating Expenditure					
Drilling	(US\$m)	1.38	2.29	13.13	16.80
Salaries	(US\$m)	0.20	2.18	3.41	5.79
Consultants	(US\$m)	4.84	2.16	21.63	28.62
Zanaga	(US\$m)	0.45	0.43	4.27	5.15
Pointe Noire	(US\$m)	0.49	0.36	1.79	2.64
Transportation	(US\$m)	1.36	0.78	2.71	4.84
Travel	(US\$m)	1.21	0.70	3.01	4.92
Legal/Other	(US\$m)	0.52	0.84	3.43	4.79
Subtotal	(US\$m)	10.45	9.74	53.37	73.56
Capital Expenditure	(US\$m)	1.49	0.63	11.00	13.12
Total	(US\$m)	11.94	10.37	64.37	86.68

 Table
 4.6
 Historical expenditures to 30 September 2010

The Zanaga PFS has been subdivided into two key phases with Zanaga PFS Phase I completed in June 2010 and Zanaga PFS Phase II to be completed in Q1 2011.

SRK has the responsibility for compilation of the Zanaga PFS and in addition has authoring roles for the following: geology; mineral resources; mine site geotechnical engineering and hydrogeology; tailings storage facilities; waste rock dumps; and financial modelling. The remaining technical disciplines are managed by either the Company directly or other engineering/consultancy companies mandated by the Company: mine site infrastructure (WSP); metallurgical processing (ProMet); rail transport corridor and port infrastructure (Egis); and environmental and social aspects (the Company; Hydrobiology; Synergy; Kew Gardens; and Independent Experts.

Following completion of Zanaga PFS Phase I various interim technical reports have been published which summarise the status of technical studies to date: "Zanaga Iron Ore Deposit Factual Report – Resource Model 7" completed September 2010; and the "Zanaga Iron Ore Project – Technical Project" completed September 2010.

The strategic objective of the Zanaga PFS is to assess the technical feasibility and economic viability of developing an integrated mine-rail-port operation to produce a total of 45Mtpa of marketable iron ore concentrates. Mining operations (assume open-pit mining methods to exploit both haematite lithologies and itabirite lithologies with RoM ore processing through a two separate concentrators:

- Haematite Concentrator: 15Mtpa of concentrate production which at currently assumed yields 43% indicate a required RoM feed capacity of 35Mtpa to process COL/ITG/ITF; and
- Itabirite Concentrator: 30Mtpa of concentrate production which at currently assumed yields 33% indicate a required RoM feed capacity of 92Mtpa to process ITC/ITT/BIF.
   Further expansion to 45Mtpa of concentrate production is planned which results increased RoM feed capacity of 138Mtpa, assuming similar weighted average yields.

**Mining methods** proposed comprises conventional open-pit operations: drill and blast, excavate, load and haul. Free dig techniques are assumed to be applicable for COL/ITG and ITF with all other material including waste requiring drilling and blasting. Free dig ore will be hauled directly from the open-pits and either directly tipped into mineral sizers located near to the pit entrances or stockpiled for future blending requirements. Blasted ore will either be directly tipped into ore crushers or similarly stockpiled for future blending requirements. RoM ore is then transported by a series of conveyors to the Concentrator for processing in the Haematite Concentrator or the Itabirite Concentrator. Preliminary optimisation has been completed using the latest block model supporting the 2010 Statements. Furthermore, no pit shell selections, engineered pit designs or production scheduling has been completed yet and it is likely that all mining aspects of the Zanaga PFS will be informed from the updated block models developed using all exploration drilling data captured to 30 September 2010.
Mining operations assume combined production from both higher grade (>40%Fe<sub>T</sub>) haematitic itabirite ore thereafter replaced by the lower grade (>30%Fe<sub>T</sub>) BIF ore with the build up to full production largely comprising processing of haematite ores. Thereafter production will most likely continue in proportion to the individual concentrator capacity with a 15Mtpa:30Mtpa split. Following depletion of haematite ores, concentrate production will be entirely sourced from the Itabirite Plant. The latest mining optimisation analysis indicates total RoM of 3.22Bnt grading 31.59%Fe<sub>T</sub> with an accompanying stripping ratio of 0.90t<sub>waste</sub>:t<sub>ore</sub>.

**Metallurgical processing** investigations to date have focused on preliminary assessments in respect of: mineralogy; metallurgical test-work; preliminary flowsheet design; metallurgical performance assumptions. During the 2009 Scoping Study the earlier metallurgical process route proposed by the Company assumed that the BIF material was not processed and that the target product mix assumed 50% of concentrates for the sinter market with the remaining sold as concentrate fines for the pellet feed market or as sinter fines blend.

The various metallurgical testwork programmes completed to date have largely been focused on composite samples predominantly sourced from all lithologies other than for the BIF. Furthermore the testwork samples were initially drawn from composite samples whose composite grades were generally higher than that currently reported in the latest block model estimates which support the current 2010 Statements. Accordingly and in the absence of further detailed testwork various adjustments have been made to account for: changes in the assumed flowsheet; reduced head-grades; and factoring of bench scale test results to reflect that likely to be achieved during operational scale conditions. Furthermore similar adjustments for the grades of deleterious elements have not been completed and it is currently assumed that these will remain similar to that indicated in Table 4.7 below. No deleterious qualities for concentrates produced from ITT and BIF are currently available, however initial size distribution analysis indicates that a portion of concentrates produced from these lithologies could be blended to increase the production of sinter concentrates.

The current marketing strategy assumes production of concentrate products which are either marketable as sinter feed and/or concentrate fines. Accordingly concentrate production includes two types of concentrates: a coarser concentrate suitable for sintering; concentrate fines for pellet feed or in part blended feed for sintering. Preliminary metallurgical testwork indicates that concentrates sourced from the COL/ITG/ITF and ITC material can be blended to produce concentrate which is marketable as a sinter product: by weight of concentrates sourced from COL (25%), ITG (30%), ITF (25%) and ITC (20%) (Table 4.7). To date however there has been no sintering tests undertaken for any of the concentrates produced from the various composite samples tested. Accordingly it is not possible at this stage to confirm whether a substantive portion of the concentrates sourced from the ZIOP is marketable as a sinter feed concentrate.

Table	4.7	2009 Scoping Study preliminary metallurgical testwork: concentrate
		quality

Lithology	Yield	Concentrate Qualities								
	(%)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% LOI)	(% TiO <sub>2</sub> )			
COL	78.10%	62.50%	1.94%	0.057%	2.88%	2.56%	0.17%			
ITG	51.70%	62.20%	2.40%	0.039%	2.86%	2.82%	0.06%			
ITF	68. <b>50</b> %	68.6 <b>0</b> %	1.74%	0.039%	0.36%	0.13%	0.04%			
ITC	47.40%	66. <b>90</b> %	3.65%	0.050%	0.48%	0.15%	0.01%			
Sinter Blend		64.82%	2.37%	0.046%	1.76%	1.55%	0.07%			

Table 4.8 provides an indication of the metallurgical performance parameters resulting from the recently completed mining optimisation study which indicates total production from COL/ITG/ITF and ITC. It is however important to note that the recent Fe grade of the ITF

concentrate is substantially reduced from the preliminary results and in order to achieve a minimum sinter produce Fe grade of 64.82%, concentrates from the COL/ITG/ITF/ITC would need to be blended with ITT/BIF material to address the current shortfall ( $\pm$ 1%Fe). SRK notes that significant further testwork is planned to optimise the production of both sinter feed concentrate fines for blending to produce sinter feed and/or pellet feed.

 
 Table
 4.8
 Zanaga PFS: assumed metallurgical performance parameters from the preliminary optimisation analyses

Lithology	Optir	nisation RoM		Metall	urgical Performa	ance	Optimisa	Optimisation Concentrate		
-	Tonnage (Mt)	Grade (% Fe <sub>T</sub> )	Content (MtFe)	Yield (%)	Concentrate (% Fe)	Reco∨ery (%)	Tonnage (Mt)	Grade (% Fe <sub>T</sub> )	Content (MtFe)	
COL	93	43.77%	41	41.08%	63.11%	59.24%	38	63.11%	24	
ITG	90	43.51%	39	49.71%	63.39%	72.42%	45	63.39%	28	
ITF	316	37.77%	120	41.48%	63.60%	69.85%	131	63.60%	84	
ITC	360	32.20%	116	26.38%	65.00%	53. <b>26</b> %	95	65.00%	62	
ITT	107	30.48%	33	29.99%	66.19%	65.12%	32	66.19%	21	
BIF	2,260	29.71%	671	33.64%	66.10%	74.84%	760	66.10%	502	
Total	3,227	31.59%	1,019	34.14%	65.50%	70.77%	1,102	65.50%	722	

The initial flowsheet configuration included: comminution circuits comprising two stage mineral sizers for haematite ore and single staged crushers for Itabirite ores and AG/pebble mills; coarse gravity (jigs) and fine gravity separation (spirals) and magnetic separation.

Technical studies completed in respect of other mine-site related disciplines comprise conceptual and scoping level assessments, specifically in respect of geotechnical engineering for pit slopes, tailings storage facilities, hydrology and hydrogeology. These are currently the subject of a combination of intrusive site specific information programmes in order to confirm assumed technical assumptions relied on to date. Furthermore it is important to note that the dimensioning of key infrastructure, such as the tailings storage facilities is dependent upon the finalisation of metallurgical testwork results, specifically yield. Results from the current optimisation analysis indicate that the total dry tails production is estimated at 2.13Bnt which assuming a dry density of 1.6t/m<sup>3</sup> necessitates for storage capacity of 1,328Mm<sup>3</sup>. This will require either an expansion of the current tailings facility assumed herein or in combination the development of alternative sites, identified to date.

**Concentrate transportation** currently assumes rail transportation with the current alignment of 350km in length traversing various terrain from Pointe Noire to the mine site and nominally delineated as follows: Pointe-Noire Coastal basin; Mayombé Mountains; Plateau of Great Niari Depression; Great Niari Depression; ascent of Chaillu Mountains; Chaillu Mountains and the mine site.

The current technical studies in respect of route construction are largely focused on the design of infrastructure for evaluation of: earthworks; hydraulic structures; foundation; pavement layers; and railway rolling stock. Furthermore recent changes to the design considerations have resulted in a reduction in the railway platform from 8m to the minimum of 5.92m. Preliminary estimates for construction quantities comprise: earthworks totalling 88Mm<sup>3</sup>; bridge structures comprising bridges for crossing identified rivers and to replace fills of more than 35m high (49 bridges in total are required for a total length of 7,900m); track foundation layers and pavement structures (1.9Mm<sup>3</sup>)' drainage and hydraulic structures numbering 1,050; and railway track comprises a total of 385km of rail with sleeper spacing at 1,800/km to cater for the high 40t axle load.

The principal operating specifications assumed for the Zanaga PFS are: transportation of 51Mt wet (45Mt dry at 13% moisture); fuel 150,000t; containers at 10,000 twenty foot equivalent units ("TEU"); and maximum gradients of 1.0% and 1.5% from Zanaga to Pointe Noire and Pointe Noire to Zanaga respectively.

The port facilities and associated rail head site is to be located 9km north of Pointe Noire

(the "Pointe Noire Port", hereinafter the "PNP") adjacent to the Atlantic Ocean and extends over some 2km<sup>2</sup>. The PNP facility comprises a piled access trestle extending approximately 2.0km from the beachfront into the sea with a loading platform at the seaward end of the access trestle capable of berthing cape size vessels (170,000DWT to 230,000DWT).

The current configuration comprising both on shore and off shore elements includes consideration for: loading platform and its trestle; shore protection; service labour; yard preliminary structures and associated maintenance port facilities. Key associated equipment include: support vessels; ship-loaders and conveyors; and other yard equipments.

The onshore works comprise ore rail car unloading facilities using a single line double car tipper to unload ore which will distribute to a stockyard via conveyors and conventional belt feed stackers. The stockyard capacity is assumed at one month's supply of product (3.75Mt) which will be recovered using bucket wheel reclaimers for transport to twin ship loaders via conveyor. The port site also accommodates a service port which will allow transhipment of consumables for the mine site from the PNP to the mine site rail head for onward shipment.

The off shore works comprise a trestle jetty leading to an area widened to accommodate ship loaders. Currently no breakwater or turning pockets are envisaged as being required to allow ship movements or loading. A dredge channel is proposed to connect the loading facility to the open sea using a natural break in the offshore reef.

**Power** studies are currently focused on identifying optimal consideration for generation/supply, transmission and distribution. The principal options include grid power with diesel powered standby generation and locally generated hydro power. For the mine site the principal options comprise either: power generation by HFO or diesel oil using either gas combustion turbines or diesel engines with the latter probably favoured due to their enhanced efficiency on part load and also the de-rating of gas turbines in warm climates; or electric grid power supply through purchase from Centrale Electrique du Congo ("CEC"). For the deep water port facility the preferred option is grid supply via the Société Nationale d'Électricité ("SNE") network to a dedicated substation at the port site.

The current installed power requirement the mine site is estimated at approximately 300MW comprising: On this basis annual energy usage is assumed at some 2.4TWhrs and initial indications for power purchase from CEC via 220kV lines is some USc8/kWhr with a lower limit of USc6/kWhr also under consideration. Installed power assumed for the port is 20MW with a annual energy usage of 93GWhr.

**Environmental** studies to date have largely focused on environmental and social baseline studies at the mine site, for the ESIA and the Company intends to continue with this baseline studies during 2011 for the transport corridor and port site. For the mine site the current focus includes: specialist input studies; stakeholder engagement studies; socio-economic development studies; closure planning studies; and acid-rock generation and metal leaching potential studies.

The current schedule for completion of the ESIA assumes a 10 month programme and that the completed ESIA will be subject to a public review and a technical review commissioned by the government of Congo Brazzaville ("GoCB"). Accordingly based on the above the Company anticipates that environmental authorisation will only be available during Q4 2012.

Key environmental issues identified to date include a number of both social and bio-physical considerations. The principal social issue highlighted is directly related to the requirement for a significant relocation programme in the immediate vicinity of the mine site. The principal bio-physical issues relate to:

- The presence of forest areas around the mine site which are of high biodiversity value for both plants and animals and in addition the presence of critically endangered, endangered and other species; and
- The identification of the port site as a location which is important for nesting by Endangered turtles (Olive Ridley Turtles); and
- The location of the mine site on the watershed between the basins of the Ogooué and Niari rivers. The Ogooué River and basin is part of an ecoregion with about 25% endemism of freshwater fishes, whilst the Kouilou-Niari region, which is relatively unstudied, is also suspected to be rich in freshwater fish species and endemics. The Ogooué River flows into Gabon. Discharges to the Ogooué River and/or placement of mine residue disposal facilities in the catchment of the river could necessitate involvement of the Government of Gabon in the environmental authorisation of the project if there are potential trans-boundary impacts.

The current assessment of **operating expenditures** are of a preliminary nature with a number of aspects reliant assumptions incorporated in the 2009 Scoping Study as well as preliminary analysis completed in respect of the Zanaga PFS. Furthermore certain key assumptions have not been yet established from a detailed first principal basis and accordingly also rely on either proxy benchmarks and or factorised estimates based on typical norms, specifically in respect of the transport corridor and the deep water port. The current operating expenditure assumptions include specific estimates for: mining; concentrators (Haematite Concentrator; and Itabirite Concentrator); min-site overheads; rail transportation; and port costs.

In summary and based on the data included for the ZIOP in Table 4.10 are as follows:

- Cash costs (excluding royalties) inclusive of operating expenditure contingencies (approximately 9%) of US\$28.34/t<sub>Conc</sub> on a weighted average basis comprising US\$22.92/t<sub>Conc</sub> and US\$29.65/t<sub>Conc</sub> for the Haematite Concentrator and the Itabirite Concentrator respectively;
- Cash costs (excluding royalties) inclusive of operating expenditure contingencies (approximately 4%) of US\$27.06/t<sub>Conc</sub> on a weighted average basis comprising US\$21.88/t<sub>Conc</sub> and US\$28.31/t<sub>Conc</sub> for the Haematite Concentrator and the Itabirite Concentrator respectively; and
- Cash Costs (excluding royalties) exclusive of all operating expenditure contingencies US\$25.98/t<sub>Conc</sub> on a weighted average basis comprising US\$21.05/t<sub>Conc</sub> and US\$27.17/t<sub>Conc</sub> for the Haematite Concentrator and the Itabirite Concentrator respectively;

Initial **closure cost estimates** are limited to the mine site only on the assumption that any infrastructural aspects of the transport corridor and the PNP will continue to provide post closure benefits. Accordingly the current estimate for the mine-site provides for some US\$230m which includes approximately US\$6m of terminal benefits liabilities ("TBL") and is considered overall to project an estimation accuracy of ±40%.

The **capital expenditure** estimates for the Zanaga PFS are currently of a preliminary nature and accordingly are subject to change. Furthermore it should be noted that the uncertainties associated with substantive infrastructure related projects for which both topographic relief and site specific geotechnical considerations are remain the subject of further work, are inevitably significant. Accordingly it is likely that only on completion of the Zanaga FS where due consideration for such investigations are complete will the resulting capital expenditure estimates attain the level of accuracy's approaching  $\pm 10$  to  $\pm 15\%$ .

The current project development capital expenditure (Table 4.9) for the ZIOP indicates a total requirement for investment of some US\$7.45bn comprising: base costs of US\$5.83bn; contingencies of US\$0.99bn (17% of base costs); and engineering procurement and construction management ("EPCM") of US\$0.63bn. This total is subdivided into the following reporting areas: mine site at US\$3.46bn (46%); transport corridor (33%); PNP (17%); and power (4%). Prior to finalisation of the Zanaga PFS the current capital estimates reflect similar levels of accuracy as included in the 2009 Scoping Study which was noted at  $\pm 40\%$ . It is however expected that on completion of the Zanaga PFS the capital expenditure estimates will be further refined to  $\pm 25\%$ , which on completion of the Zanaga FS will be further refined to reflect an overall accuracy of  $\pm 10\%$  to  $\pm 15\%$ .

# Table 4.9 ZIOP project capital expenditure

Capital Expenditure Item	Base	Conting	ency	EPCM	Total
	(US\$m)	(%)	(US\$m)	(US\$m)	(US\$m)
Mine Site	2,644	19%	514	306	3,463
Transport Corridor	2,074	14%	289	104	2,467
Pointe Noire Port	896	17%	152	203	1,250
Power	214	15%	32	21	268
Total	5,828	17%	986	634	7,448

In addition to the above further expenditures are required for the expansion of the Itabirite Concentrator to facilitate production of concentrate from the initial 30Mtpa to 45Mtpa on depletion of suitable material for processing in the Haematite Concentrator. The total capital expenditure required for this expansion is estimated at US\$236m which will be required to be expended during the tenth year following commencement of production over a two year period.

Preliminary estimates of sustaining capital expenditure largely reflect replacement costs for the mobile mining equipment fleet, certain fixed plant and conveyors which over the current assumed LoM production totals US\$3.36bn. These expenditures are assumed to commence in the 5<sup>th</sup> year following the first year of production through to depletion of the assumed tonnages included in the optimised shell corresponding to the LTP of USc85/dmtu.

The scheduling of capital expenditures for construction assumes a total period of some 3 years to 3.5 years with some 40% of annual production capacity achieved during the first year of processing operations. Within this period some US\$1.0bn is expended in year 1 with US\$2.1bn expended in each of the following three calendar periods and the balance thereafter for a maximum of a further two calendar periods.

Inputs	Units	Total	н	aematite Co	ncentrator			Itabirite Con	centrator	
			Subtotal	COL	ITG	ITF	Subtotal	ITC	ITT	BIF
Production	-			-						
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Ore Processed	(Mt)	3,227	500	93	90	316	2,727	360	107	2,260
	(%Fe <sub>⊤</sub> )	31.59%	39.92%	43.77%	43.51%	37.77%	30.07%	32.20%	30.48%	29.71%
	(MtFe⊤)	1,019	200	41	39	120	820	116	33	671
Yield	(%)	34.14%	42.89%	41.08%	49.71%	41.48%	32.54%	26.38%	29.99%	33.64%
Recovery	(%)	70.77%	68.19%	59.24%	72.42%	69.85%	71.40%	53.26%	65.12%	74.84%
Concentrate	(Mt)	1,102	214	38	45	131	887	95	32	760
	(%Fe)	65.50%	63.47%	63.11%	63.39%	63.60%	65.99%	65.00%	66.19%	66.10%
	(MtFe⊤)	722	136	24	28	84	585	62	21	502
Sales Revenue	(10.(1.(.)	05			05					05
Commodity Price	(USc/dmtu)	85	85	85	85	7 000	85	85	85	85
	(US\$M)	61,330	11,567	2,056	2,413	7,098	49,763	5,248	1,808	42,707
Mining	(1100.4)	4 74	4 74	1 71	1 71	1 71	4 74	1 71	1 71	1 71
Proceeding	(US\$/L <sub>Mined</sub> )	2.61	1./1	1./1	1.71	1./1	2.69	1.71	1.71	1.71
Overbeads	(US\$/t <sub>RoM</sub> )	0.69	0.69	0.69	0.69	0.69	0.60	0.60	0.60	0.60
Rail	(US\$/1 <sub>RoM</sub> )	1 91	4 91	4 91	4.03	1 01	4 91	1 01	1 01	1 01
Port	(US\$/t)	1.31	1 31	1 31	1 31	1 31	1 31	1 31	1 31	1 31
Closure	(US\$/t)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Royalty	(%)	3%	3%	3%	.24	3%	3%	.3%	.24	.24
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Mining	(US\$m)	10,500	1,627	304	293	1,030	8,873	1,172	349	7,353
Processing	(US\$m)	11,645	1,610	300	290	1,019	10,035	1,325	394	8,316
Overheads	(US\$m)	2,234	346	65	62	219	1,888	249	74	1,564
Rail	(US\$m)	5,407	1,052	188	220	644	4,354	466	158	3,731
Port	(US\$m)	1,440	280	50	59	172	1,160	124	42	993
Royalty	(US\$m)	1,840	347	62	72	213	1,493	157	54	1,281
Closure	(US\$m)	260	51	9	11	31	209	22	8	179
Total	(US\$m)	33,325	5,312	977	1,007	3,328	28,012	3,516	1,079	23,418
Capital Expenditure										
Project <sup>(1)</sup>	(US\$m)	7,704	1,499	268	313	918	6,205	664	225	5,316
Sustaining	(US\$m)	3,364	655	117	137	401	2,709	290	98	2,321
Total	(US\$m)	11,068	2,154	385	450	1,319	8,914	954	323	7,637
Expenditures										
Cash Costs	(US\$m)	33,065	5,262	968	996	3,297	27,803	3,493	1,071	23,238
Cash Costs (ex. royalty)	(US\$m)	31,225	4,915	907	924	3,084	26,310	3,336	1,017	21,957
⊺otal Cash Costs	(US\$m)	33,325	5,312	977	1,007	3,328	28,012	3,516	1,079	23,418
⊺otal Working Costs	(US\$m)	33,325	5,312	977	1,007	3,328	28,012	3,516	1,079	23,418
Unit Costs										
Cash Costs	(US\$/t <sub>Conc</sub> )	30.01	24.54	25.27	22.25	25.11	31.34	36.78	33.33	30.57
Cash Costs (ex. royalty)	(US\$/t <sub>Conc</sub> )	28.34	22.92	23.66	20.63	23.49	29.65	35.12	31.65	28.89
I otal Cash Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	25.50	22.48	25.35	31.57	37.01	33.57	30.81
i otal Working Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	25.50	22.48	25.35	31.57	37.01	33.57	30.81
(1)			-							

Table 4.10 ZIOP key performance statistics

Project capital expenditure comprising initial capital expenditure (US\$7,448) and Itabirite Concentrator expansion costs (US\$236m).
 Suptripling capital expenditure comprising replacement capital expenditure for the multipling againment and convergence and

Sustaining capital expenditure comprising replacement capital expenditure for the mobile mining equipment and conveyors based on the assumed operating period indicated by the current optimisation analysis assuming a LTP of USc85/dmtu.

# 4.3.6 Work Programme

Should Xstrata not exercise its option, the Company will require access to additional funds (see the FS Work Programme and/or the Early Work Programme) for completion of the next developmental milestone, specifically the Zanaga FS which inter alia includes ongoing exploration, completion of the Zanaga ESIA and other ongoing commitments relating to the 2010 Addendum.

Accordingly and in the event where immediate funding is required following a decision by Xstrata not to exercise its option, the Company has developed an alternative scenario as defined by the proposed continuation expenditure. (The "Continuation Work Programme"), as reported in Section 8.4 of this CPR. This in essence reflects the minimum expenditures required in ensure compliance with its commitments in respect of the Zanaga ELs. The Company would then expect to raise further funding, following completion of a positive outcome of the Zanaga PFS, to fund the FS Work Programme and/or the Early Works Programme defined herein.

The basis of the FS Work Programme (and the Early Works Programme) and any associated supporting technical information has been provided by the Company solely and explicitly does not purport to reflect the current or future views and/or commitments of Xstrata. Accordingly should Xstrata execute any or all of its options the details relating to the FS Work Programme (and the Early Works Programme), both with respect to activity and expenditure schedules may be fundamentally different to that presented herein.

Furthermore the current scope of the Zanaga PFS includes the preparation of a detailed work programme for completion of the Zanaga FS. As the FS Work Programme detailed herein predates the completion of the Zanaga PFS, SRK notes that the FS Work Programme is preliminary in nature and subject to change. Specifically the expenditure component relating to the exploration drill programme is not supported by a designed exploration programme which includes layouts of drill fences and holes.

Accordingly the reader is cautioned that completion of the Zanaga PFS and/or a decision by Xstrata to execute or not execute its option may well result in fundamental changes to the FS Work Programme as presented herein.

The FS Work Programme is largely focused on the completion of the Zanaga FS with activities and associated expenditures scheduled over a 24 month period. The development milestone achieved at this stage is a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable. Furthermore this will also be supported by the Zanaga ESIA study which is to be prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the International Council of Mining and Metals ("ICMM") sustainable development framework.

The forecasted expenditures totals US\$255.3m of which US\$226.6m is classified as operating expenditures and US\$28.7m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$167.5m and US\$87.8m respectively and include contingencies of US\$32.5m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

In addition to the FS Work Programme and, in order to fast-track certain aspects of the infrastructure components the Company has identified an "Early Works Programme". The associated expenditures is however a sub-set of the capital expenditure currently associated with the construction and commissioning of the ZIOP and ranges between US\$70m and US\$90m. Details relating to the Early Works Programme are included in Section 8.3 of this CPR.

The Continuation Work Programme is focused on ensuring the minimum required to comply with the current terms of the Decrees, the 2007 Mining Convention and the 2010 Addendum and includes associated expenditures scheduled over an 18 month period. Accordingly the development milestone achieved at this stage is substantially limited compared to that included in the FS Work Programme and will not result in: a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable; or an ESIA study prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the ICMM Sustainable Development Framework.

The forecasted expenditures for the Continuation Work Programme totals US\$57.3m of which US\$50.2m is classified as operating expenditures and US\$7.0m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$45.7m and US\$11.6m respectively and include contingencies of US\$6.6m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

### 5 GEOLOGY

# 5.1 Introduction

The following section summarises both the regional and local deposit geology of the Mineral Assets, including specific aspects of stratigraphy, deformation, deposit genesis and mineralisation. Additional information regarding the Company's Exploration Programme is discussed in Section 0 of this CPR.

# 5.2 Regional Geology

The Zanaga Iron Ore deposits are located within a north-south oriented (metamorphic) Precambrian greenstone belt in the eastern part of the "Chaillu Massif" in South Western Congo. The Chaillu Massif extends over an area of approximately 25,000km<sup>2</sup> in south-west Congo Brazzaville and the northern area of the Gabonese Republic ("Gabon"). The Chaillu Massif is an Archaean (2.5Ga) granitoid complex containing local inclusions of volcano-sedimentary sequences (greenstone belts) consisting of itabirite/banded iron formation ("BIF"), amphibolites, mica-schists and chlorite-schists. Chloritization and epidotization of amphiboles (usually green hornblende) as well as the partial or total kaolinization of plagioclase is common. Locally the Chaillu Massif is intruded by ultrabasic intrusives and pegmatites.

The Chaillu Massif shows a north-south foliation and contains two generations of granitoids, grey granodioritic to quartz dioritic biotite or biotite-amphibolite types, and pink, mostly potassic migmatites, which occur as veins cutting the grey granitoids. Locally, schists and greenstones occur within the granitoids, and have not been completely transformed by granitization.

The Zanaga Iron Ore deposits are located in a Precambrian greenstone belt within the Chaillu Massif and consist of north-south trending, deeply dipping banded iron-formations ("BIF"), amphibolite-bearing quartzites, amphibolites with residual pyroxenites and a small mass of dunite. The regional structures can be broadly subdivided into three fault and fracture populations:

- North-south striking regional lineaments: These are primarily observed in the northern and central parts of the Chaillu Massif. The BIF is orientated along this direction. Some of the mafic and ultramafic intrusives are also intruded along these faults and fractures;
- Northwest-southeast striking lineaments: These are predominantly developed in the western part of the massif; and
- Northeast-southwest striking lineaments: These are developed in the southern part of the Chaillu Massif and largely control the orientation of dolerite dykes.

# 5.3 Deposit Geology

The Zanaga ELs are located within a north-south oriented greenstone belt. The belt trends north-south and extends for over 47km in length, and is typically 0.5 to 3km in width. The mineralisation is hosted by metamorphosed volcano-sedimentary itabirites, and is interbedded with amphibolites and mafic schists. The contact with the crystalline basement is typically faulted and sheared.

The lithologies within the Zanaga Iron Ore deposits consists of itabirites/banded iron formation ("BIF"), which are thought to originate from exhalative silica- and iron-oxide-rich sediments, interbedded with basic lavas, which are later altered to amphibolites. Typically, the itabirites consist of layers of iron-rich and quartz rich meta-sediments, on a millimetre to centimetre

scale. This structure is crosscut by late intrusions and dolerite dykes, oriented NE-SW.

The geometry of the mineralisation is typically interbedded limbs of amphibolites and itabirites. The lithologies of the deposit comprise a weathering sequence, namely soil ("SOL") and canga ("CAN"), colluviums ("COL"), the weathered itabirite units: goethitic itabirite ("ITG"); friable itabirite ("ITF"); compact itabirite ("ITC") and transitional itabirite ("ITT").

The weathered itabirite units overlay un-weathered ore ("proto ore") comprising comprising itabirite/banded iron formation ("BIF"). The weathered sequence observed at Zanaga Iron Ore deposits is typical of iron ore deposits, where the surficial material demonstrates enrichment in iron above the proto ore due to a mass reduction and associated leaching of the silicate layers.

The itabirites have been subjected to intensive tropical weathering, and exhibits a typical supergene enrichment. The main units in the deposit are COL, ITG, ITF, ITC, ITT and BIF. The SOL unit at the top of the sequence is a discontinuous, soft, total iron ore ("Fe<sub>T</sub>") grade (29.6%Fe<sub>T</sub>), organic rich zone with structureless haematite/goethite clasts, which is typically less than 2m thick. The canga is a hard, haematite/goethite rich cemented unit of limited extent found capping the weathered units in Lebayi and Mboungou areas. The weathering profile is typically approximately 60m to 70m thick on average. The main lithologies in the deposit are:

- COL A zone of weakly consolidated and poorly sorted haematite clasts (+60% Fe<sub>T</sub>) in a goethite/clay matrix. Typically COL has a brown ochre colouration, with an average thickness of between 2 and 5m and has average total iron grade of approximately 46%Fe<sub>T</sub> (low of 20%Fe<sub>T</sub> and high of 62%Fe<sub>T</sub>);
- **ITG:** A friable "biscuity" unit of leached weathered itabirite containing haematite/martite, goethite and minor clay. This is interpreted to represent the largely degraded uppermost portion of the oxidised itabirite. The ITG is commonly 4m to 8m thick (typically 5m), and of relatively high grade (average 45%Fe<sub>T</sub>; low of 17%Fe<sub>T</sub>; high of 62%Fe<sub>T</sub>), and is associated with high Al<sub>2</sub>O<sub>3</sub> values (typically approximately 4%Al<sub>2</sub>O<sub>3</sub> to 8% Al<sub>2</sub>O<sub>3</sub>).
- ITF: A friable enriched itabirite, with a banded, dark grey and grey-white, highly leached, soft, friable, occasionally sandy, appearance. The layers are typically irregular, and consist of haematite, martite and silica. The ITF has an average thickness of approximately 25m, with a total iron ore grade range of between 14%Fe<sub>T</sub> to 56%Fe<sub>T</sub>. (average of 39%Fe<sub>T</sub>)
- ITC: A competent, moderately oxidised, banded brown and grey itabirite. The layers, as with ITF, typically comprise haematite, martite and silica, and tend to have irregular thicknesses. The ITC has an average thickness of approximately 25m, reaching 40m in places, with a total iron ore grade range of between 33%Fe<sub>T</sub> and 35%Fe<sub>T</sub>.
- ITT: A hard, partially oxidised itabirite, and is transitional between the ITC unit and fresh
  magnetite itabirite below. The ITT is marked by the presence of minor magnetite
  associated with the haematite layers and is commonly 2m to 3m thick, with total iron ore
  grade range of between 13%Fe<sub>T</sub> and 44%Fe<sub>T</sub> (average of 31%Fe<sub>T</sub>);and
- BIF is the fresh, hard, unoxidised, banded, magnetite itabirite and consists of magnetite, silica and occasional amphibolite,, with total iron ore grade range of 10%Fe<sub>T</sub> to 47%Fe<sub>T</sub> (average of 30%Fe<sub>T</sub>).

Structurally, the Zanaga deposit is defined by 2 to 3 parallel north-south striking, magnetically responsive limbs, which are interpreted as an anticlinal fold structure, and sheared with an

apparent sinistral sense of movement. The mineralised unit also exhibits intense microfolding within the itabirite and the mineralised package is also cut by some east-west striking lineaments, which are thought to be fault related.

Overall the drill tested iron-rich units exhibit variable surface expression widths of between 20m and a combined maximum of 600m, are tested over approximately 25km in total strike length from north to south (including truncations), and have a moderate dip towards the east. The deposit is currently open at depth, and has been modelled to the 400mRL in all areas and to 200mRL in places. The total exploration target (inclusive of the drill tested 25km) as defined by aero magnetic response is estimated at 47km.

The Zanaga Iron Ore deposits are cross-cut by network of late transverse faults with an eastnortheast to west-southwest orientation which have moderate associated movements of subkilometre scale. Other transverse faults, of northwest-southeast direction, are less frequent, and have a similar scale of movement.



Photo	Graphic Log	Regolith Classification	Lithology Classification	Lith Code	Lithology Definition	Average Drilled Thickness	Average Fe Grade	Deleterious Elements		
	<b>\$</b>	Soil	Soil	SOL	Clayey soil, few if any clasts. This portion can be purely alluvial in nature	1 m	NA	Elevated Al	501	urden
34	****	Cemented bedrock	Canga	CAN	Hematite clasts cemented by goethite	0 – 4m	50.4%	Elevated Al	301	Overb
	44 t	Colluvium	Colluvium	COL	Unconsolidated clasts with a clay matrix	6.1 m	45.8%	Strongly elevated Al (in excess of 5%)	COL	
	54			ITG	Amorphous to weakly layered unconsolidated hematite/goethite/ quartz	10.6 m	48.5%	Elevated Si, elevated Al	ITG	e Dig Zone
P.P.		Weathered bedrock	Itabirite	ITF	ltabirite, highly weathered, friable	24.0 m	42.7%	Elevated Si	ITF	Free
100				ITC	Itabirite, moderately weathered, consolidated	24.0 m	35.7%	Elevated Si	ΙΤС	
1694				Ш	Itabirite, weakly weathered	14.9 m	33.0%	Elevated Si	ITT	zone
	1	Unweathered bedrock (Protore)	Unaltered Itabirite	BIF	Magnetite unweathered itabirite	38.0m (10 – 200m)	31.6%	Elevated Si	BIF	Drill & Blast

Figure 5.2 Airborne magnetic survey<sup>(1)</sup>



<sup>1)</sup> Flown by Fugro, with aeromagnetic processing and modelling undertaken by Southern Geoscience Consultants

## 6 MINERAL RESOURCES

### 6.1 Introduction

The following section summarises the methods used by SRK to derive and classify the Mineral Resource estimates for the Mineral Assets as reported herein (the "2010 Statements"). It also presents supporting information relied upon to support the estimates and also presents SRK's view regarding the potential for delineating further Mineral Resources at the Mineral Assets.

# 6.2 Data Quality and Quantity

### 6.2.1 Historical Exploration – Pre 2007

Iron occurrences were believed to have first been discovered at the Zanaga Project in 1939 and were officially reported by the French Geological Survey in 1954. The Bureau Minier de la France d'Outre- Mer ("BUMIFOM") undertook limited exploration at Zanaga in 1955, including some rock chip sampling. This phase of exploration was considered to be unsuccessful, and the programme was abandoned.

In 1962, exploration recommenced when the licence was acquired by an individual for a period of two years.

At this time, some mineralogical studies were undertaken by a German exploration company ("ERZONKONTOR-RHUR"), which is reported to include granulometric testing.

In 1964, the licence was acquired by BUMICO, and 4 holes were drilled at random locations across the deposit in 1965. The conclusion to this phase of exploration was that there was insufficient drilling to determine the morphology of the deposit.

Between 1966 and 1967, in a response to a request by the Congolese Government, the European Development Fund ("IPCO"), through a smaller subsidiary undertook an additional 17 holes (553m in total) in the southern part of the deposit. In addition, approximately 136m of horizontal adits were also excavated, along with pitting and trenching. Some minor granulometric and crushing tests were also undertaken, which confirmed the findings of the earlier ERZONKONTOR-RHUR testwork. An estimate of approximately 400Mt at 50%Fe<sub>T</sub> to 55%Fe<sub>T</sub> was derived from this drilling and exploration data. It is not known whether this was reported in accordance with an internationally recognised reporting code for Mineral Resources and Ore Reserves.

Between June 1967 and March 1969, the United Nations Development Agency ("UNDP") undertook some exploration. This included mapping, geophysical and geochemical surveys, and some geological interpretation. A total of 39 drillholes were completed, with a total meterage of 1,503m, across the southern area of the deposit. An estimate of approximately 300Mt at 50%Fe<sub>T</sub> was stated, with approximately 7Mt having a mean grade of greater than 60%Fe<sub>T</sub>.

In 1983 Le Bureau de Recherches Géologiques et Minières ("BRGM") reviewed all the previous work completed, but primarily focused on the UNDP programme.

### 6.2.2 Current Exploration by the Company

In May 2007, following the Groups acquisition of MPD, the holder of the Mineral Assets, the Company initiated an exploration programme aimed at confirming the historical work and assessing the mineral potential of the Mineral Assets. Work undertaken between May 2007 and December 2008 included evaluation of Landsat Enhanced Thematic Mapper Satellite ("Landsat ETM") and SRTM Elevation data of the entire Mineral Assets, select pitting and

trenching, detailed ground mapping, diamond drilling totalling 4,758m and an airborne magnetic survey and interpretation. Results indicated that approximately 47km strike length of magnetic mineralisation (the magnetic itabirite proto ore) was identifiable along the Mineral Assets.

Starting in September 2007 exploration included the digging of 228 trial pits and 3 trenches, which were dug at 90° to the strike of the mineralisation. The trenches totalled 352m in length, and were typically between 5m and 6m deep. The trenches were mapped and sampled over 2m intersections. 16 pits intersected the host lithology and samples were taken from the mineralisation intersections within the pit, on 1m intervals. Samples were analysed at SGS South Africa (Pty) Ltd ("SGS South Africa") in Johannesburg using XRF for a suite of major elements, including Fe, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, P, MnO and LOI.

Drilling commenced in April 2008, with a total of 18 diamond holes completed by the end of 2008, with a total drilled metres of 4,690m (including re-drills). The drill-holes varied from PQ at the top of the hole to NQ at the base. The maximum drill-hole length was 300m. In 2009, a further 35 diamond drill ("DD") holes were completed with total drilled metres of 2,408.1m (including re-drills). In addition, 94 reverse circulation ("RC") holes were completed, with a total drilled metres of 5,771m (including re-drills).

This initial research drilling and aeromagnetic data was used to identify the extent of the Zanaga Iron Ore deposits and to develop the subsequent exploration drill programme. The accuracy of this drill programme was improved significantly by the introduction of ground resistivity surveys in April 2009, which helped to further define the near surface mineralisation.



Figure 6.1 Section showing resistivity results

Using the data from both the aeromagnetic and resistivity surveys to help determine drill site locations, the Company has drilled, to the end of June 2010, approximately 31,481m in 388 RC boreholes and 11,223m in 80 DD boreholes, including re-drilled holes, in three main areas covering 25km of the Mineral Assets.



Figure 6.2 Drilling over 25km of the 47km magnetic anomaly

### 6.2.3 Geological Data

The main methodology for obtaining subsurface information for the ZIOP has been reverse circulation and diamond drilling. The drillholes have been targeted by exploration such as surface mapping, geophysical interpretation, trenching, and topographic surveys. As the iron formation strikes approximately north-south, and dips towards the east, the majority of drilling was undertaken dipping to the west to intersect approximately perpendicularly to the mineralised units. A small minority of the holes were drilled vertically. At the ZIOP, a total of 468 drillholes (42,706m) were drilled (Table 6.1), and utilised for the current Mineral Resource estimation as at 30 June 2010.

Year	Diamond Drill-holes			Reverse	Circulation Dri	ll-holes	Т	Total Drill-holes		
	(No)	(m/hole)	(m)	(No)	(m/hole)	(m)	(No)	(m/hole)	(m)	
2008	18	261	4,690	0	0	0	18	261	4,690	
2009	35	69	2,408	94	61	5,771	129	63	8,179	
2010	27	153	4,126	294	87	25,711	321	93	29,837	
Total	80	140	11,224	388	81	31,482	468	91	42,706	

Table 6.1 Summary of recent historical drilling

Post 2009 drilling was undertaken on sections perpendicular to the general strike direction of the iron formation, with an initial spacing of approximately 400m. In subsequent drilling campaigns, the drill spacing was reduced to 200m. The deepest drill-hole depth was 440m. Core recovery was generally fair to good, with an average of 67% in the softest lithology (COL), increasing to 95% in the hardest lithology (BIF). The drill-holes were orientated at approximately 60° dipping west to 90°, and were surveyed at approximately 3m to 5m intervals using down-hole instruments.

Core is placed into core trays at the drill site, from where it is transferred to the core processing facility. Core orientation is measured by transferring core and piecing together on a V-rail (angle iron) rack, the orientation line (bottom of hole) is determined by the orientation tool recorded during drilling. The orientation line is then drawn along the entire length of the

assembled core which was then marked up, photographed, and logged for lithological, structural and geotechnical criteria. All core is marked up for sampling in 1m intervals prior to splitting using a core saw, with half core samples being taken for assay.

Post 2009 all core was logged and prepared on site at the ALC Chemex managed sample preparation laboratory. All prepared samples were then sent to ALS Chemex Laboratory, Perth, Western Australia, for analysis.

RC logging is undertaken by geologists at the rig by means of sieving representative samples and placing them on the ground. A representative sample of sieved chips for each metre is also placed in a chip tray for future reference. The RC boreholes are sampled at 2m intervals and if dry, split at the drill rigs. If the RC samples were wet, the whole sample (approximately 40kg) was collected from the sample chute on the cyclone and placed in large plastic bags. These wet samples were then dried and split using a three-tier Jones riffle splitter into approximately 3kg samples.

### 6.2.4 Sample Analysis

The core and RC samples were prepared at the onsite ALS sample preparation facility. The sample was crushed using a jaw crusher to 70% passing 2mm, and was split to 1kg using a 50:50 Jones riffle splitter. The 1kg split sample was then pulverised to 85% passing 75µm. The remainder of the crushed sample was returned to the original field sample bag and stored. Two 100g sub-samples were taken from the pulverised material, with 100g being submitted to ALS Chemex for XRF analysis, and 100g retained for onsite Niton analysis. All remaining sample was retained as a coarse reject.

Two Niton XRF instruments were employed consecutively on site during 2010. The 100g sub-sample was analysed, and was used to help guide geological logging. The Niton XRF analyses were superseded by the laboratory XRF analyses in the assay database once they were received, approximately six weeks after being despatched from site.

The assays which inform the current Mineral Resource estimates comprise some 9,421 Fe XRF assays and 6,331 Fe Niton Analyses assays subdivided as follows:

- DD: 3,508 Fe XRF assays and 1,095 Fe Niton Analyses assays; and
- RC: 5,913 Fe XRF assays and 5,236 Fe Niton Analyses assays.

In addition to grade, the core and RC samples were tested for magnetic susceptibility. The magnetic susceptibility was measured through the plastic bag for the RC samples, and directly from the core for the DD samples. The magnetic susceptibility measurements were historically divided by 1,000 before being recorded which resulted in a very small number of transcription errors. This has since been corrected and the magnetic susceptibility reading is now recorded as it is registered on the instrument screen, rather than after user modification.

# 6.2.5 Quality Assurance and Quality Control ("QAQC")

The samples were subjected to a comprehensive QAQC system, consisting of certified standards and duplicates. To date, no blank material was included in the sample stream. QAQC samples were introduced into the sample stream at a rate of 5% (1 in 20) for standards and 5% (1 in 20) for duplicates. The frequency that standards were introduced was also dependent on the length of the drillhole, as a standard was introduced every 20 samples along the length of the drillhole. All standards were sourced from Geostats Pty Ltd ("Geostats") and were submitted to ALS Chemex in Perth, Australia. Historically, (April 2008 to August 2009) PT Intertek Utama Services, Jakarta, Indonesia, was also used for sample analysis.

SRK has reviewed the available QAQC data, and consider that the standards have performed well, with a few isolated incorrect or spurious results within the data population. Overall, the standards demonstrate that there are no systematic biases introduced during assaying, and that the data received from the laboratory is both accurate and precise. The frequency of standards appears adequate to provide good quality control data for this assay database.

The field duplicate samples taken throughout the drilling campaigns performed well, with 90% of the samples reporting within 2% error. The data indicated very little spread and high correlation coefficients, which suggests very good precision, or repeatability. The frequency of duplicates compared to assays appears adequate to provide good quality control on this assay database.

Currently, the QAQC system at the ZIOP does not include the use of blanks which are generally used to guard against the occurrence of environmental (e.g. dust) and cross-sample contamination in the sample preparation facility. Such practice is common in the mining and metal sector, and its absence should be rectified in order to improve the overall confidence in the current QAQC system. Accordingly the Company should consider the acquisition of appropriate blank material which should be submitted in the same ratio (1 in 20 samples) as the standard and field duplicate QC samples.

A further current limitation is that no sample pulps from ALS Chemex were submitted to a third party ISO-accredited laboratory for check analysis, which is also considered common practice in the mining and metals sector. To rectify this deficiency at least a 10%, randomly selected subset of the pulp duplicates stored at ALS Chemex, Perth, should be submitted to an umpire laboratory for check assay. The resulting assay data should then be analysed in comparison with the ALS data.

Notwithstanding the above deficiencies SRK considers that the geological data gathered to date is of a sufficient quality for the use in the subsequent Mineral Resource estimation, specifically considering the Inferred Mineral Resource classification of the majority of the 2010 Statements. The errors identified within the QAQC analysis to date and the deficiencies highlighted are not considered to be significant. Furthermore SRK considers that no systematic errors or bias have been introduced during the sample preparation and assaying procedures.

### 6.2.6 Density Sampling

Density samples were only taken on the core samples where sampling was carried out per lithology encountered within each drill-hole. Samples of 15cm of solid core were then weighed to initially determine a "field weight" and then subsequently dried for approximately 6hr at a temperature between 50°C and 60°C to determine the "dry weight". All samples were then weighed in air, coated with liquid wax to eliminate sample porosity, and weighed again in water to facilitate estimation of bulk density.

### 6.3 Mineral Resource Estimation and Classification

### 6.3.1 Geological Modelling and Spatial Domaining

The scale of the deposit, the quantum of the geological data, and natural geological/geographic breaks in the Zanaga Iron Ore deposits necessitated its subdivision into three main zones: the North Zone; the Central Zone; and the South Zone. Based on areas of similar geological structure the Zanaga Iron Ore deposits were further subdivided into seven separate domains, of which 2 are present in the North Zone, 3 in the Central Zone and 2 in the South Zone (the South Zone and the South Zone Extension).

The North Zone is split into two separate domains, and covers a total strike length of approximately 9.7km. These domains are based on the split of the geology into relatively contiguous limbs of the folded anticline in the east, and the discontinuous limbs in the west.

The Central Zone is split into three separate domains, covering a strike length of 7.5km which reflect the three separate modelled limbs located in the central area.

The South Zone extends over a strike length of approximately 3.5km, and although the mineralisation is modelled as seven separate limbs, it has been combined into a single domain for estimation. The South Zone Extension is modelled as two limbs, but has been combined with the South Zone domain for estimation purposes.

All geological modelling was undertaken in Micromine, by the Company, and provided to SRK for the subsequent Mineral Resource estimate, which was undertaken in Datamine. As part of the Mineral Resource estimation process, SRK reviewed the interpretation and modelling of the deposit to ensure that the geological model reflects the current understanding of the geology of the deposit.

The boundaries of the six mineralised lithological units (COL, ITG, ITF, ITC, ITT and BIF) were modelled according to the lithological data recorded in the drillhole logs. The BIF wireframes were extended down-dip to the 400mRL in all areas and 200mRL in the Lebayi area. The weathering surface was derived from translating the topographic surface to between 60m and 70m below the ground surface.

Internal waste, comprising felsic and mafic (amphibolite) units, was excluded from the mineralised unit wireframes where possible. A certain amount of internal dilution is present where this differentiation has not been possible due to the limited drilling resolution.

### 6.3.2 Statistical Analysis, variography, block modelling and interpolation

Compositing was undertaken on 4m intervals, with a minimum of 2m, based on a composite length analysis. The compositing procedure will produce a shorter length composite on the footwall of the mineralisation. The shorter composites were analysed to ensure that there was no bias present, and were retained in the dataset for estimation.

Statistics and variography of the six main variables (Fe, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, Mn, P and LOI) composite data was undertaken for each of the individual domains. Variograms were produced for the down-hole, and principal along strike and down-dip directions, using Gaussian transforms and back transforms as necessary. The down-hole variograms were based mostly on a 4m lag, and directional variograms on 100m to 250m lags. Variograms were modelled with between 2 and 3 structures, with nugget effects between 4% and 15%.

The 3D block model developed assumed dimensions of 50m (X) by 100m (Y) and 10m (Z). These dimensions were selected after review of the mineralisation thickness and average drill-hole spacing across the Zanaga Iron Ore deposits. Where appropriate, sub-blocks were also utilised to improve the resolution of the geological model, however estimation of block grades were limited to parent blocks only. The weathered rock wireframe was then used to code the block model accordingly where blocks located within 60m to 70m below the current surface topography being classified as weathered and those below this as fresh.

Total iron grade was estimated into each block using Ordinary Kriging ("OK"), for each domain individually. Kriging was carried out for each of the domains separately, in three passes. The search ellipsoids were determined using quantative Kriging neighbourhood analysis ("QKNA") to optimise the search parameters such as the minimum and maximum samples, search radii etc. The first search was based on approximately 2/3 of the variogram range, with the search

parameters increasing incrementally to ensure that all of the blocks within the wireframes were filled. The anisotropy ratios of the search ellipsoids were maintained for all three passes.

For all other elements (excluding  $%Fe_T$ ) a single variogram and search ellipse was used for each zone where all lithologies were effectively combined.

Densities were assigned as constant values within each of the six individual mineralised units across all zones: COL ( $2.29t/m^3$ ); ITG ( $2.35t/m^3$ ); ITF ( $2.88t/m^3$ ); ITC ( $2.98t/m^3$ ); ITT ( $3.04t/m^3$ ) and BIF ( $3.33t/m^3$ ).

### 6.3.3 Validation

The model was validated using three separate techniques, namely a visual validation where the drill-holes are compared to the block model on a series of cross and long sections, a check estimate using IDW2 to ensure no large scale errors have been included, and sectional validation slices. In general, all three domains show acceptable validation results, with the block model reflecting the input data on both local and global scales.

### 6.3.4 Mineral Resource classification

To classify the deposit, a combination of geological complexity, quality of the data, including QAQC, results of the geostatistical analyses, and the quality of the block model, as indicated by the cross validation were used to determine the classification applied to the block model.

The Zanaga Iron Ore deposits comprise large, relatively continuous bodies of itabirite. There is potential that the deposit continuity is interrupted by large scale structural discontinuities, however there is currently insufficient drilling or structural interpretation to identify where these structures may influence the geological continuity. In addition, there is also some uncertainty regarding structural discontinuities in the down-dip direction. Domaining is based on the current geological interpretation of the deposit, and are largely based on the geological model.

The data used for the resource estimation has been subjected to an extensive QAQC programme. An extensive density sampling and analysis programme has also been undertaken and SRK considers that both the assay and density data to be of a sufficient quality for use in the estimation of the Mineral Resources as reported herein.

Grade has been estimated using OK, using robust variograms for each of the domains individually. The variography allowed the determination of reasonable search distances to be tested using QKNA. The resultant block model was validated using several methods, including visual checks, a check estimate and sectional validation slices. The block model is considered to reflect the input data on both local and global scales.

The drill-hole spacing within the Deposit is typically on 200m sections, which increases to 400m in the Northern and Southern Zones. To date, the drilling programmes have predominately targeted the haematite (COL, ITG, ITF and ITC) units. This has resulted in the majority of the drilling being relatively shallow, and not intersecting the full thickness of BIF at depth. This is also a function of the RC drilling being relatively shallow. In addition, the impact of structural discontinuities on mineralisation remain to date to be fully understood.

Currently, in the haematite (COL, ITG, ITF and ITC units) and transitional (ITT unit), the mineralisation is classified as Indicated Mineral Resources where drilling has been undertaken on 200m section spacing, and the geostatistical analyses indicate that the block model is of sufficiently high quality to support such a classification.

The BIF unit is classified as an Inferred Mineral Resource to reflect that there are few, deep

intersections within the drilling. As the majority of drilling is relatively shallow, the BIF has not been explored to the same level of detail as the overlying haematite units, which has resulted in less confidence in the geological and grade continuity, and so a lesser resource classification.

Areas of higher confidence within the model were defined by generating a three-dimensional solid, based on the drill-hole spacing, geological continuity, the quality of the data and the geostatistical analyses for the block model. These wireframes were then used to code the block model for reporting purposes.

### 6.3.5 Grade-Tonnage Analysis

Tables 6.2 through 6.4 inclusive below report Mineral Resource grade-tonnage tables for the Mineral Assets for Indicated and Inferred Mineral Resource categories and on a total Mineral Resource basis for the ZIOP. Whilst these tables report on a classification basis, SRK notes that the itabirite lithologies (ITT, BIF) comprise almost 90% of the Inferred Mineral Resources.

Tables 6.5 through 6.7 inclusive below report combined Indicated and Inferred Mineral Resource grade-tonnage tables for the Mineral Assets for the "Haematite Concentrator" (COL, ITG and ITF) lithologies and the "Itabirite Concentrator" (ITC, ITT and BIF) lithologies.

The tables below are based on reporting within the current block models informing the 2010 Statements on a constrained basis which constraint is defined by the optimisation shell derived assuming a LTP of USc115/dmtu and specifically excluding any unclassified mineralised material from informing the optimisation process. Notwithstanding this limitation the current 2010 Statement effectively includes some 96% of all Mineral Resources reported on an unconstrained basis within the block model.

Figures 6.1 through 6.5 inclusive present graphically the information included in Tables 6.2 through 6.4 inclusive respectively. Figures 6.4 through 6.8 present graphically the information included in Tables 6.5 through 6.7 inclusive respectively.

ISCOG		Tonnage			Gr	ade		
(% Fe <sub>T</sub> )		(Mt)	(% Fe <sub>T</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
60%		1	60.83%	6.09%	0.052%	3.61%	0.07%	3.21%
55%		12	57.26%	8.59%	0.052%	4.74%	0.09%	3.85%
50%		53	53.30%	14.37%	0.050%	4.54%	0.10%	3.68%
45%		124	49.87%	19.52%	0.047%	4.19%	0.10%	3.34%
40%		237	46.27%	26.21%	0.046%	3.42%	0.10%	2.76%
35%		455	42.10%	33.01%	0.043%	2.92%	0.10%	2.20%
30%		555	40.46%	35.07%	0.043%	3.06%	0.10%	2.13%
25%		586	39.80%	35.69%	0.043%	3.21%	0.11%	2.15%
20%		595	39.55%	35.89%	0.043%	3.29%	0.11%	2.17%
15%		599	39.41%	35.99%	0.043%	3.33%	0.11%	2.19%
10%		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
5%		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
0%		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Table	6.3	Grade-	tonnage	tabulation:	Inferred	Mineral Re	source cat	egory (30
		Septerr	nber 2010	))				
ISCOG		Tonnage			Gr	ade		
(% Fe <sub>T</sub> )		(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
50%		7	52.06%	15.26%	0.042%	6.20%	0.09%	4.48%
45%		29	48.10%	30.78%	0.040%	4.87%	0.11%	2.85%
40%		88	44.18%	33.27%	0.039%	4.46%	0.11%	2.55%
35%		496	38.00%	41.18%	0.044%	3.23%	0.12%	1.42%
30%		1,808	34.03%	44.09%	0.048%	2.78%	0.14%	0.88%
25%		2,429	32.50%	44.62%	0.048%	3.02%	0.14%	0.94%
20%		2,667	31.66%	44.95%	0.047%	3.23%	0.14%	0.98%
15%		2,727	31.37%	45.04%	0.047%	3.31%	0.14%	1.00%
10%		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
5%		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
		0 705	04.040/	15 050/	0.0470/	0.000/	0 4 40/	1 0 1 0 /

 Table
 6.2
 Grade-tonnage tabulation: Indicated Mineral Resource category (30 September 2010)

# Table 6.4 Grade-tonnage tabulation: Indicated and Inferred Mineral Resource categories (30 September 2010)

ISCOG	Tonnage			Grade			
(% Fe <sub>T</sub> )	(Mt)	(% Fe <sub>T</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
60%	1	60.83%	6.09%	0.052%	3.61%	0.07%	3.21%
55%	12	57.24%	8.72%	0.052%	4.78%	0.09%	3.86%
50%	60	53.15%	14.47%	0.049%	4.74%	0.10%	3.77%
45%	153	49.54%	21.64%	0.046%	4.32%	0.10%	3.25%
40%	324	45.70%	28.12%	0.044%	3.70%	0.10%	2.70%
35%	951	39.96%	37.27%	0.044%	3.08%	0.11%	1.79%
30%	2,363	35.54%	41.97%	0.047%	2.85%	0.13%	1.18%
25%	3,016	33.92%	42.88%	0.047%	3.06%	0.14%	1.17%
20%	3,262	33.10%	43.29%	0.046%	3.24%	0.14%	1.20%
15%	3,326	32.82%	43.41%	0.046%	3.31%	0.14%	1.22%
10%	3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%
5%	3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%
0%	3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%

Table6.5Grade-tonnagetabulation:haematitelithologiesIndicatedandInferred Mineral Resource categories (30 September 2010)

ISCOG	Tonnage			Grade			
(% Fe <sub>T</sub> )	(Mt)	(% Fe <sub>T</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
60%	1	60.83%	6.09%	0.052%	3.61%	0.07%	3.21%
55%	12	57.24%	8.72%	0.052%	4.78%	0.09%	3.86%
50%	60	53.15%	14.47%	0.049%	4.74%	0.10%	3.77%
45%	142	49.79%	19.60%	0.046%	4.40%	0.10%	3.43%
40%	286	46.07%	26.08%	0.044%	3.87%	0.10%	2.96%
35%	429	43.37%	29.07%	0.045%	4.31%	0.10%	3.07%
30%	473	42.43%	29.84%	0.045%	4.54%	0.10%	3.15%
25%	484	42.11%	30.07%	0.045%	4.65%	0.10%	3.18%
20%	487	41.99%	30.12%	0.045%	4.69%	0.10%	3.20%
15%	488	41.92%	30.14%	0.045%	4.72%	0.10%	3.21%
10%	488	41.92%	30.14%	0.045%	4.72%	0.10%	3.21%
5%	488	41.92%	30.14%	0.045%	4.72%	0.10%	3.21%
0%	488	41.92%	30.14%	0.045%	4.72%	0.10%	3.21%

 
 Table
 6.6
 Grade-tonnage tabulation: itabirite lithologies Indicated and Inferred Mineral Resource categories (30 September 2010)

ISCOG	Tonnage			Grade			
(% Fe <sub>T</sub> )	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
45%	11	46.05%	49.12%	0.040%	3.29%	0.15%	0.71%
40%	38	42.91%	43.49%	0.040%	2.46%	0.13%	0.80%
35%	522	37.15%	44.01%	0.043%	2.07%	0.12%	0.74%
30%	1,890	33.81%	45.00%	0.047%	2.42%	0.14%	0.68%
25%	2,532	32.36%	45.33%	0.047%	2.76%	0.14%	0.79%
20%	2,775	31.54%	45.56%	0.047%	2.98%	0.14%	0.85%
15%	2,838	31.25%	45.64%	0.046%	3.07%	0.14%	0.87%
10%	2,849	31.18%	45.65%	0.046%	3.09%	0.14%	0.88%
5%	2,849	31.18%	45.65%	0.046%	3.09%	0.14%	0.88%
0%	2,849	31.18%	45.65%	0.046%	3.09%	0.14%	0.88%

Table6.7Grade-tonnagetabulation:haematiteanditabiritelithologiesIndicatedandInferredMineralResourcecategories(30September2010)

ISCOG	Tonnage			Grade			
(% Fe <sub>T</sub> )	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
60%	1	60.83%	6.09%	0.074%	0.07%	3.61%	3.21%
55%	12	57.24%	8.72%	0.087%	0.09%	4.78%	3.86%
50%	60	53.15%	14.47%	0.099%	0.10%	4.74%	3.77%
45%	153	49.54%	21.64%	0.095%	0.10%	4.32%	3.25%
40%	324	45.70%	28.12%	0.089%	0.10%	3.70%	2.70%
35%	951	39.96%	37.27%	0.068%	0.11%	3.08%	1.79%
30%	2,363	35.54%	41.96%	0.058%	0.13%	2.85%	1.18%
25%	3,016	33.92%	42.88%	0.056%	0.14%	3.06%	1.17%
20%	3,262	33.10%	43.26%	0.055%	0.14%	3.24%	1.20%
15%	3,326	32.82%	43.36%	0.054%	0.14%	3.31%	1.22%
10%	3,337	32.75%	43.38%	0.054%	0.14%	3.33%	1.22%
5%	3,337	32.75%	43.38%	0.054%	0.14%	3.33%	1.22%
0%	3,337	32.75%	43.38%	0.054%	0.14%	3.33%	1.22%



Indicated Mineral Resources: grade-tonnage curve 6.3







Figure 6.6 Haematite Concentrator Total Mineral Resources: grade-tonnage curve





Figure 6.7 Itabirite Concentrator Total Mineral Resources: grade-tonnage curve

Itabirite Concentrator and Itabirite Concentrator Total Mineral Figure 6.8 Resources: grade-tonnage curve



#### 6.3.6 **Economic Potential**

The reporting of a Mineral Resource necessitates the application of an in-situ cut-off grade ("ISCOG") which is based on reasonable inputs given the current status of technical information available. Furthermore, SRK notes that it has become general practice to distinguish between Mineral Resources which are potentially economically mineable by openpit methods and those which are not. Accordingly, 'optimisation' analysis is generally undertaken to determine the Mineral Resource which is potentially economic by consideration of open-pit methods using a combination of the following:

- All Measured, Indicated and Inferred Mineral Resources;
- The latest available operating cost and modifying parameters separately for differing orebody lithologies;
- A price premium to the current LTP which is typically 30% to 50% higher than the latest CMF.

The principal input-parameters incorporated into the optimisation process comprise:

- Commodity Prices: Assumed LTP for concentrate fines of USc85/dmtu which on inclusion of a 35% premium provides a base of USc115/dmtu corresponding to a revenue of 1.00;
- Modifying Factors ("MF") including: ore losses (2.5%); mining dilution (5.0%); mining dilutant (0.0%Fe<sub>T</sub>);
- Metallurgical Recovery Factors ("MRF") assumed from testwork results for each of the various orebody lithologies;
- Overall slope angles defined separately for hangingwall and footwall lithologies ranging from a low of 30° for highly weathered waste and COL/ITG/ITF to 45° for fresh waste (footwall) ITT/BIF and 50° for fresh waste (hangingwall); and
- Operating Expenditure:
  - Base mining operating costs of US\$1.31/t and US\$1.38/t for free-dig material (COL/ITG/ITF) and material requiring drilling and blasting (ITC/ITT/BIF) respectively,
  - Concentrator operating expenditure of US\$3.22/t<sub>RoM</sub> and US\$3.68/t<sub>RoM</sub> for material processed through the Haematite Concentrator (COL/ITG/ITF) and the Itabirite Concentrator (ITC/ITT/BIF),
  - Overheads of US\$0.80/t<sub>RoM</sub> (including US\$0.69/t<sub>RoM</sub> for overheads and US\$0.11/t<sub>RoM</sub> for grade control costs) universally applied to all ore processed,
  - Rail Transport and Port handling costs of US\$4.91/t<sub>Conc</sub> and US\$1.31/t<sub>Conc</sub> respectively.

Additional operating expenditures for environmental closure are assumed at US\$230m which have not been explicitly included in the optimisation process. Assuming the RoM tonnage corresponding to a LTP of USc85/dmtu for declaration of 'Ore Reserves', this is an additional USc8/ $t_{RoM}$ .

For the 2010 Statements Mineral Resources are constrained to those reporting within an optimised shell representing a LTP of USc115/dmtu. Notwithstanding this constraint, SRK notes that the majority (97%) of the classified mineralised material reporting within the block model at a cut-off-grade ("COG") is contained within this shell.

Table 6.8 presents the cut-off grade calculations based on inputs assumed for the optimisation process. Specifically SRK notes that the cut-off grade calculations as presented assume a 35% premium to the previously assumed LTP of USc85/dmtu for concentrate fines.

The cut-off grades as presented are: the operating cut-off grade ("OCOG") which includes all operating expenditures required to realise all sales revenue form a tonne of RoM ore; and the marginal cut-off grade ("MCOG") which excludes certain operating expenditures, specifically mining. The resulting COGs are also determined on a RoM and in-situ basis where the prefix

'IS' differentiates for all COGs presented on an in-situ basis.

SRK recognise that the COGs as determined are somewhat arbitrary as generally the average grade of the material reporting at a cut-off grade of 0%Fe<sub>T</sub> exceeds the calculated COGs. Furthermore and within the confines of the mineralisation there is reliance on or assumptions for selective mining to COGs in the current mining studies.

Notwithstanding the above, SRK notes that the assumptions as incorporated into the optimisation process pre-dates certain additional work completed in respect of both metallurgical and operating cost assumptions. Specifically, SRK notes that the metallurgical recovery assumptions are based on testwork results derived from higher grade material than the average grades reflected in the current 2010 Statements. For a given LTP assumption it is likely that the COGs presented herein will be higher and that the resulting pit-optimisation, assuming that no further Mineral Resources are delineated at depth, may be shallower than that currently reporting to the current optimised shell. A further consideration will also be to establish appropriate relationships between assumed head grades as well as metallurgical recoveries which will in course further inform the optimisation analysis.

Table 6.9 presents a sensitivity of the resulting cut-off grades to a range of commodity prices between USc50/dmtu and USc200dmtu in USc25/dmtu increments.

Inputs	Units			Ore Litholo	gies		
		Haemat	Haematite Concentrator			e Concentrator	
	-	COL	ITG	ITF	ITC	ITT	BIF
Operating Expenditure							
Mining	(US\$/t <sub>RoM</sub> )	1.31	1.31	1.31	1.38	1.38	1.38
Processing	(US\$/t <sub>RoM</sub> )	3.22	3.22	3.22	3.68	3.68	3.68
Overheads	(US\$/t <sub>RoM</sub> )	0.80	0.80	0.80	0.80	0.80	0.80
Transportation + Port	(US\$/t <sub>RoM</sub> )	2.68	3.25	2.71	1.72	1.95	2.18
Environmental	(US\$/t <sub>RoM</sub> )	0.00	0.00	0.00	0.00	0.00	0.00
Total	(US\$/t <sub>RoM</sub> )	8.01	8.58	8.04	7.58	7.82	8.04
Royalty	(%)	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Modifying Factors							
Dilution	(%)	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Dilutant	(%Fe <sub>⊤</sub> )	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ore Loss	(%)	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Yield	(%)	43.13%	52.23%	43.56%	27.60%	31.43%	35.10%
Fe Recovery	(%Fe)	59.24%	72.42%	69.85%	53.26%	65.12%	74.84%
Concentrate Grade	(%Fe)	63.11%	63.39%	63.60%	65.00%	66.19%	66.10%
Sales Revenue							
	(USc/dmtu)	115	115	115	115	115	115
	(US\$/t <sub>Conc</sub> )	73	73	73	75	76	76
COG							
OCOG - Opex	(US\$/t <sub>RoM</sub> )	8.01	8.58	8.04	7.58	7.82	8.04
MCOG - Opex	(US\$/t <sub>RoM</sub> )	6.70	7.27	6.73	6.20	6.44	6.66
NRF	(%Fe)	57.46%	70.25%	67.76%	51.66%	63.17%	72.60%
	(USc/dmtu)	66	81	78	59	73	83
OCOG	(%Fe <sub>⊤</sub> )	12%	11%	10%	13%	11%	10%
MCOG	(%Fe⊤)	10%	9%	9%	10%	9%	8%
ISOCOG	(%Fe <sub>⊤</sub> )	13%	11%	11%	13%	11%	10%
ISMCOG	(%Fe-)	11%	9%	9%	11%	9%	8%

### Table 6.8 Cut-off grade calculations

Ore Lithologies	Units				Commod	ity Price (USo	:/dmtu			
		50	75	85	100	115	125	150	175	200
OCOG										
COL	(%Fe <sub>⊺</sub> )	28%	19%	16%	14%	12%	11%	9%	8%	7%
ITG	(%Fe⊤)	24%	16%	14%	12%	11%	10%	8%	7%	6%
ITE	(%Fe⊤)	24%	16%	14%	12%	10%	9%	8%	7%	6%
ITC	(%Fe⊤)	29%	20%	17%	15%	13%	12%	10%	8%	7%
ITT	(%Fe⊤)	25%	16%	15%	12%	11%	10%	8%	7%	6%
BIF	(%Fe <sub>⊺</sub> )	22%	15%	13%	11%	10%	9%	7%	6%	6%
MCOG										
COL	(%Fe⊤)	23%	16%	14%	12%	10%	9%	8%	7%	6%
ITG	(%Fe⊤)	21%	14%	12%	10%	9%	8%	7%	6%	5%
ITE	(%Fe⊤)	20%	13%	12%	10%	9%	8%	7%	6%	5%
ITC	(%Fe⊤)	24%	16%	14%	12%	10%	10%	8%	7%	6%
ITT	(%Fe⊤)	20%	14%	12%	10%	9%	8%	7%	6%	5%
BIF	(%Fe⊤)	18%	12%	11%	9%	8%	7%	6%	5%	5%
ISOCOG										
COL	(%Fe <sub>⊤</sub> )	13%	29%	20%	17%	15%	13%	12%	10%	8%
ITG	(%Fe <sub>⊺</sub> )	11%	26%	17%	15%	13%	11%	10%	9%	7%
ITF	(%Fe <sub>⊤</sub> )	11%	25%	17%	15%	12%	11%	10%	8%	7%
ITC	(%Fe⊤)	13%	31%	21%	18%	15%	13%	12%	10%	9%
ITT	(%Fe⊤)	11%	26%	17%	15%	13%	11%	10%	9%	7%
BIF	(%Fe⊤)	10%	23%	16%	14%	12%	10%	9%	8%	7%
ISMCOG										
COL	(%Fe⊤)	11%	24%	16%	14%	12%	11%	10%	8%	7%
ITG	(%Fe <sub>⊤</sub> )	9%	22%	14%	13%	11%	9%	9%	7%	6%
ITF	(%Fe <sub>⊤</sub> )	9%	21%	14%	12%	10%	9%	8%	7%	6%
ITC	(%Fe <sub>⊺</sub> )	11%	25%	17%	15%	13%	11%	10%	8%	7%
ITT	(%Fe <sub>⊤</sub> )	9%	21%	14%	13%	11%	9%	9%	7%	6%
BIF	(%Fe <sub>⊺</sub> )	8%	19%	13%	11%	10%	8%	8%	6%	6%

Table 6.9 Cut-off grade price sensitivity

### 6.4 Mineral Resource Statements

The Mineral Resource statements for the Mineral Assets are reported in accordance with the terms and definitions included in the JORC Code and are reported as at 30 September 2010. As at this date, the total Mineral Resources reported at a 0%Fe<sub>T</sub> COG constrained within an optimised shell, determined using a LTP of USc115/dmtu amounts to 3.34Bnt grading 32.75%Fe<sub>T</sub>, 43.43%SiO<sub>2</sub>, 0.046%P, 3.33%Al<sub>2</sub>O<sub>3</sub>, 0.14%MnO and 1.22%LOI.

Table 6.10, 6.11 and 6.12 presents the Indicated Mineral Resources, the Inferred Mineral Resources and the total Indicated and Inferred Mineral Resources by zone and lithologies respectively as at 30 September 2010. Table 6.13 presents the Indicated and Inferred Mineral Resources subdivided by lithologies as at 30 September 2010. Table 6.14 presents the Indicated and Inferred Mineral Resources subdivided by lithologies for each process route. Table 6.15 presents the total Mineral Resource LTP sensitivity for each process route.

In considering the 2010 Statements as reported below, SRK notes the following:

- All references to Mineral Resources are stated in accordance with the JORC Code;
- No Ore Reserves have been declared for the Mineral Assets due to the lack of multidisciplinary studies in which all aspects have been completed to a minimum of PFS level to adequately demonstrate the technical feasibility and economic viability of the Mineral Assets. Furthermore the technical studies in progress for the Mineral Assets are reliant upon significant portions of Inferred Mineral Resources without which a positive return on the initial capital outlay for development of the ZIOP cannot yet be demonstrated. The Company in conjunctions with its consultants is currently advancing the various technical studies to PFS level. Assuming successful outcome of the Zanaga PFS and subsequent FS Work Programme and Zanaga FS and that all technical aspects have been adequately addressed, it is reasonable to assume that Ore Reserves will be declared as part of the then completed Feasibility Study; and
- All Mineral Resources are derived by application of a 0%FeT COG to all classified material falling within a optimised shell based on a LTP assumption of USc115/dmtu.

Classification Lithology onnage (Mt) (% AL<sub>2</sub>O<sub>3</sub>) (% LOI) (% Fe<sub>T</sub>) (% SiO<sub>2</sub>) (% MnO) (%P) 38.94% 48.64% 48.22% 40.65% 34.24% 33.13% (% F) 0.044% 0.052% 0.049% 0.047% 0.038% 0.044% 2.19% 5.53% 3.14% 2.05% 1.65% 0.85% **36.50%** 15.30% 21.31% 35.13% 44.27% 45.92% 3.37% 7.56% 4.13% 2.52% 3.04% 2.92% North – Indicated 538 0.11% COL ITG ITF ITC ITT 50 49 186 194 60 0.10% 0.13% 0.10% 0.11% 0.11% **32.20%** 14.07% 23.57% 34.79% 42.21% 44.43% 0.044% 0.034% 0.038% 0.032% 0.030% 0.040% 3.22% 5.33% 5.13% 2.12% 2.79% 4.13% 0.10% 0.09% 0.12% 0.09% 0.09% 0.14% **2.20%** 3.97% 3.28% Central – Indicated 64 42.35% COL ITG ITF ITC ITT 42.35% 50.86% 45.56% 42.23% 36.49% 32.84% 9 9 1.55% 1.80% 1.72% 30 14 2 **36.05%** 15.11% 21.67% 35.08% 44.13% 45.87% 0.043% 0.050% **3.35%** 7.23% 4.29% 2.47% 3.03% 0.11% 0.10% 0.13% 0.10% 0.10% 0.11% 0.11% **39.31%** 48.97% **2.19%** 5.29% Total – Indicated 602 COL ITG ITF ITC ITT 59 58 215 207 0.050% 0.048% 0.045% 0.038% 0.044% 5.29% 3.16% 1.98% 1.66% 47.80% 40.87% 34.39% 62 33.12% 2.96% 0.88%

 Table
 6.10
 Indicated Mineral Resources (30 September 2010)

# Table 6.11 Inferred Mineral Resources (30 September 2010)

Classification	Lithologies	Tonnage			Qualiti	es		
	-	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
North Inferred		1,592	31.13%	44.99%	0.048%	3.24%	0.15%	0.83%
	COL	12	39.37%	23.81%	0.049%	12.08%	0.06%	7.80%
	ITG	11	41.25%	26.22%	0.041%	8.04%	0.10%	4.80%
	ITF	28	34.98%	40.91%	0.045%	5.45%	0.11%	3.11%
	ITC	34	27.93%	49.24%	0.036%	4.98%	0.16%	2.80%
	ITT	11	29.15%	46.26%	0.042%	4.31%	0.09%	1.73%
	BIF	1,496	31.01%	45.27%	0.049%	3.05%	0.15%	0.65%
Central Inferred		661	30.44%	46.01%	0.044%	3.89%	0.14%	1.40%
	COL	10	45.83%	16.29%	0.041%	8.39%	0.07%	5.87%
	ITG	10	43.65%	22.75%	0.042%	6.46%	0.07%	4.08%
	ITF	35	36.77%	36.60%	0.035%	5.33%	0.11%	3.11%
	ITC	75	33.55%	44.40%	0.028%	3.83%	0.07%	2.15%
	ITT	20	28.34%	49.04%	0.036%	5.38%	0.13%	2.25%
	BIF	511	29.08%	47.80%	0.047%	3.61%	0.15%	1.01%
South Inferred		483	33.06%	43.94%	0.046%	2.79%	0.13%	1.05%
	COL	10	36.38%	25.13%	0.043%	11.50%	0.11%	6.81%
	ITG	9	39.51%	31.64%	0.040%	8.50%	0.09%	4.55%
	ITF	31	38.76%	35.21%	0.046%	6.09%	0.13%	3.10%
	ITC	39	35.03%	44.80%	0.046%	3.28%	0.13%	1.87%
	ITT	13	34.08%	45.23%	0.040%	2.55%	0.09%	0.76%
	BIF	382	32.13%	45.30%	0.047%	2.12%	0.13%	0.57%
Total Inferred		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
	COL	32	40.43%	21.89%	0.044%	10.75%	0.08%	6.89%
	ITG	30	41.52%	26.69%	0.041%	7.66%	0.09%	4.49%
	ITF	94	36.89%	37.43%	0.041%	5.61%	0.12%	3.11%
	ITC	147	32.64%	45.62%	0.034%	3.95%	0.11%	2.23%
	ITT	43	30.26%	47.22%	0.038%	4.27%	0.11%	1.67%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%

# Table 6.12 Total Mineral Resources (30 September 2010)

Classification	Lithology	Tonnage			Qualitie	s		
		(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
North (Ind+Inf)		2,130	33.11%	42.85%	0.047%	3.27%	0.14%	1.17%
	COL	62	46.83%	16.96%	0.051%	8.44%	0.09%	5.97%
	ITG	60	46.96%	22.20%	0.048%	4.84%	0.12%	3.44%
	ITF	214	39.91%	35.88%	0.047%	2.91%	0.10%	2.19%
	ITC	228	33.29%	45.01%	0.038%	3.33%	0.12%	1.82%
	ITT	70	32.53%	45.97%	0.044%	3.13%	0.11%	0.98%
	BIF	1,496	31.01%	45.27%	0.049%	3.05%	0.15%	0.65%
Central (Ind+Inf)		724	31.49%	44.79%	0.043%	3.83%	0.14%	1.47%
	COL	19	48.20%	15.24%	0.041%	6.95%	0.08%	4.97%
	ITG	19	44.58%	23.14%	0.040%	5.82%	0.09%	3.70%
	ITF	65	39.27%	35.77%	0.033%	3.86%	0.10%	2.40%
	ITC	88	34.01%	44.05%	0.028%	3.66%	0.07%	2.10%
	ITT	22	28.79%	48.57%	0.036%	5.26%	0.13%	2.20%
	BIF	511	29.08%	47.80%	0.047%	3.61%	0.15%	1.01%
South (Ind+Inf)		483	33.06%	43.94%	0.046%	2.79%	0.13%	1.05%
	COL	10	36.38%	25.13%	0.043%	11.50%	0.11%	6.81%
	ITG	9	39.51%	31.64%	0.040%	8.50%	0.09%	4.55%
	ITF	31	38.76%	35.21%	0.046%	6.09%	0.13%	3.10%
	ITC	39	35.03%	44.80%	0.046%	3.28%	0.13%	1.87%
	ITT	13	34.08%	45.23%	0.040%	2.55%	0.09%	0.76%
	BIF	382	32.13%	45.30%	0.047%	2.12%	0.13%	0.57%
Total (Ind+Inf)		3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%
	COL	91	45.96%	17.51%	0.048%	8.47%	0.09%	5.86%
	ITG	88	45.69%	23.36%	0.045%	5.42%	0.11%	3.61%
	ITF	309	39.66%	35.79%	0.044%	3.42%	0.10%	2.32%
	ITC	355	33.66%	44.75%	0.036%	3.41%	0.11%	1.90%
	ITT	105	31.94%	46.42%	0.041%	3.50%	0.11%	1.21%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%

Classification	Lithologies	Tonnage			Qualiti	es		
	5	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
Indicated Mineral Resources		-	_	_	-	-	-	
Haematite		540	40.01%	34.93%	0.043%	3.40%	0.11%	2.35%
	COL	59	48.97%	15.11%	0.050%	7.23%	0.10%	5.29%
	ITG	58	47.80%	21.67%	0.048%	4.29%	0.13%	3.16%
	ITF	215	40.87%	35.08%	0.045%	2.47%	0.10%	1.98%
	ITC	207	34.39%	44.13%	0.038%	3.03%	0.11%	1.66%
Itabirite		62	33.12%	45.87%	0.044%	2.96%	0.11%	0.88%
	ITT	62	33.12%	45.87%	0.044%	2.96%	0.11%	0.88%
	BIF	0	0.00%	0.00%	0.000%	0.00%	0.00%	0.00%
Total Indicated		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Inferred Mineral Resources								
Haematite		303	35.65%	38.71%	0.038%	5.55%	0.11%	3.22%
	COL	32	40.43%	21.89%	0.044%	10.75%	0.08%	6.89%
	ITG	30	41.52%	26.69%	0.041%	7.66%	0.09%	4.49%
	ITF	94	36.89%	37.43%	0.041%	5.61%	0.12%	3.11%
	ITC	147	32.64%	45.62%	0.034%	3.95%	0.11%	2.23%
Itabirite		2,432	30.77%	45.84%	0.048%	3.04%	0.15%	0.73%
	ITT	43	30.26%	47.22%	0.038%	4.27%	0.11%	1.67%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Inferred		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
Mineral Resources								
Haematite		843	38.45%	36.29%	0.041%	4.17%	0.11%	2.66%
	COL	91	45.96%	17.51%	0.048%	8.47%	0.09%	5.86%
	ITG	88	45.69%	23.36%	0.045%	5.42%	0.11%	3.61%
	ITE	309	39.66%	35.79%	0.044%	3.42%	0.10%	2.32%
	ITC	355	33.66%	44.75%	0.036%	3.41%	0.11%	1.90%
Itabirite		2,494	30.82%	45.84%	0.048%	3.04%	0.15%	0.74%
	ITT	105	31.94%	46.42%	0.041%	3.50%	0.11%	1.21%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Mineral Resources		3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%

Table6.13Mineral Resources (Summary by lithology) 30 September 2010

 Table
 6.14
 Mineral Resources (Summary by lithology) 30 September 2010

Classification	Lithologies	Tonnage			Qualiti	es		
	-	(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
Indicated Mineral Resource	es					_	_	
Haematite Concentrator		333	43.52%	29.19%	0.046%	3.63%	0.10%	2.77%
	COL	59	48.97%	15.11%	0.050%	7.23%	0.10%	5.29%
	ITG	58	47.80%	21.67%	0.048%	4.29%	0.13%	3.16%
	ITF	215	40.87%	35.08%	0.045%	2.47%	0.10%	1.98%
Itabirite Concentrator		269	34.10%	44.53%	0.039%	3.01%	0.11%	1.48%
	ITC	207	34.39%	44.13%	0.038%	3.03%	0.11%	1.66%
	ITT	62	33.12%	45.87%	0.044%	2.96%	0.11%	0.88%
	BIF	0	0.00%	0.00%	0.000%	0.00%	0.00%	0.00%
Total Indicated		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Inferred								
Haematite Concentrator		156	38.50%	32.17%	0.042%	7.06%	0.10%	4.15%
	COL	32	40.43%	21.89%	0.044%	10.75%	0.08%	6.89%
	ITG	30	41.52%	26.69%	0.041%	7.66%	0.09%	4.49%
	ITF	94	36.89%	37.43%	0.041%	5.61%	0.12%	3.11%
Itabirite Concentrator		2,580	30.87%	45.83%	0.047%	3.09%	0.15%	0.82%
	ITC	147	32.64%	45.62%	0.034%	3.95%	0.11%	2.23%
	ITT	43	30.26%	47.22%	0.038%	4.27%	0.11%	1.67%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Inferred		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
Mineral Resources								
Haematite Concentrator		488	41.92%	30.14%	0.045%	4.73%	0.10%	3.21%
	COL	91	45.96%	17.51%	0.048%	8.47%	0.09%	5.86%
	ITG	88	45.69%	23.36%	0.045%	5.42%	0.11%	3.61%
	ITF	309	39.66%	35.79%	0.044%	3.42%	0.10%	2.32%
Itabirite Concentrator		2,849	31.18%	45.71%	0.046%	3.09%	0.14%	0.88%
	ITC	355	33.66%	44.75%	0.036%	3.41%	0.11%	1.90%
	ITT	105	31.94%	46.42%	0.041%	3.50%	0.11%	1.21%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Mineral Resources		3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%

 Table
 6.15
 Total Mineral Resources Sensitivity (Summary by process route) 30

 September 2010

Ore Lithologies	Units				Commodit	y Price (USc	/dmtu)			
-	-	50	75	85	100	115	125	150	175	200
Tonnage	(Mt)	2,115	3,042	3,152	3,270	3,337	3,355	3,381	3,396	3,405
- Haematite Conc.	(Mt)	471	488	488	488	488	488	488	488	488
- Itabirite Conc.	(Mt)	1,644	2,554	2,664	2,782	2,849	2,866	2,893	2,908	2,917
Grade	(% Fe <sub>т</sub> )	35.22%	33.38%	33.17%	32.92%	32.75%	32.74%	32.70%	32.67%	32.66%
- Haematite Conc.	(%Fe <sub>T</sub> )	42.25%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%
- Itabirite Conc.	(%Fe⊤)	33.21%	31.75%	31.57%	31.34%	31.18%	31.18%	31.14%	31.12%	31.11%
Grade	(% P)	0.048%	0.048%	0.048%	0.049%	0.046%	0.049%	0.049%	0.049%	0.049%
- Haematite Conc.	(%P)	0.040%	0.040%	0.040%	0.040%	0.045%	0.040%	0.040%	0.040%	0.040%
- Itabirite Conc.	(%P)	0.050%	0.050%	0.050%	0.050%	0.046%	0.050%	0.050%	0.050%	0.050%
Grade	(% AL <sub>2</sub> O <sub>3</sub> )	3.03%	3.21%	3.23%	3.29%	3.33%	3.33%	3.34%	3.34%	3.35%
- Haematite Conc.	(%AL <sub>2</sub> O <sub>3</sub> )	4.60%	4.72%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%
- Itabirite Conc.	(%AL <sub>2</sub> O <sub>3</sub> )	2.58%	2.92%	2.96%	3.04%	3.09%	3.09%	3.11%	3.11%	3.12%
Waste	(Mt)	798	2,554	2,994	3,571	3,962	4,148	4,432	4,628	4,760
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.4	0.8	0.9	1.1	1.2	1.2	1.3	1.4	1.4

# 6.5 Exploration Programmes and Exploration Targets

The current FS Work Programme is largely focused on resource definition drilling and comprises total drill metres of 68,400m of which 51,300m and 17,100m represents DD drilling and RC drilling respectively. These exploration drilling activities for some 310 holes are scheduled for completion during 2011 and are in essence an extension of the Q4 2010 exploration drilling (17,000m) underway. The Q4 exploration drilling is already funded as part of the Zanaga PFS, however this will not inform the Zanaga PFS Mineral Resource statement which is currently under preparation which applied a data cut-off (61,724m, 625 holes) of 30 September 2010.

Accordingly given the definition drilling focus of the FS Work Programme no explicit Exploration Targets reportable in compliance with Clause 18.1 of the JORC Code have been defined. Notwithstanding this aspect SRK recognise the potential for depth extensions to the BIF specifically given that in certain instances the optimisation analysis extends to the full limits of the orebodies defined to date. Further exploration potential exists along strike both with respect to haematite and itabirite mineralisation, In particular, the aeromagnetic anomaly which extends over 47km of which around 25km has been drill tested. However to date this remains untested and no further detailed exploration has been specifically included in the Work Programmes as reported herein.

# 7 TECHNICAL WORK COMPLETED TO DATE

# 7.1 Introduction

The following section includes discussion and comment on the status of technical studies completed to date and in progress in respect of the ZIOP. Accordingly the focus herein is to provide sufficient technical detail to both accurately reflect the current status and to support both the Mineral Resource as reflected in the 2010 Statements and the Work Programmes. Furthermore, SRK notes that the current Zanaga PFS is in progress and scheduled for completion during Q1 2011, accordingly the technical information presented herein which supersedes the 2009 Scoping Study is subject to change. Given the nature of large scale bulk commodity projects which require significant transport infrastructure and the level of current site specific data, it is likely that certain elements will remain classified at scoping study level until partway through completion of the scope as outlined in the FS Work Programme.

# 7.2 Technical Studies

The technical studies completed to date in respect of the ZIOP comprise the 2009 Conceptual Study and the 2009 Scoping Study for which the associated expenditures amount to US\$22.31m (30 November 2008) of which 58% (US\$13.04m – 30 June 2009) comprised expenditures for exploration, salaries and consultants. The Zanaga PFS is currently underway and scheduled for completion during Q1 2011 and the total expenditures to 30 September 2010 amount to US\$64.37m of which 59% (US\$38.17m) comprised expenditures for exploration, salaries and consultants. Funding for the Zanaga PFS amounts to some US\$106m sourced from two separate tranches comprising US\$50m and US\$56m.

To 30 September 2010 the total expenditures in respect of the ZIOP amounts to US\$86.68m of which 59% (US\$51.21m) comprise expenditures for exploration, salaries and consultants. Of the total expenditures to date US\$73.56m report as operating expenditures and US\$13.12m report as capital expenditures.

	•		•		
Expenditure Item	Units	2009 Conceptual	2009 Scoping	Zanaga PFS	Total
Operating Expenditure					
Drilling	(US\$m)	1.38	2.29	13.13	16.80
Salaries	(US\$m)	0.20	2.18	3.41	5.79
Consultants	(US\$m)	4.84	2.16	21.63	28.62
Zanaga	(US\$m)	0.45	0.43	4.27	5.15
Pointe Noire	(US\$m)	0.49	0.36	1.79	2.64
Transportation	(US\$m)	1.36	0.78	2.71	4.84
Travel	(US\$m)	1.21	0.70	3.01	4.92
Legal/Other	(US\$m)	0.52	0.84	3.43	4.79
Subtotal	(US\$m)	10.45	9.74	53.37	73.56
Capital Expenditure	(US\$m)	1.49	0.63	11.00	13.12
Total	(US\$m)	11.94	10.37	64.37	86.68

 Table
 7.1
 Historical expenditures to 30 September 2010

# 7.2.1 Study level definitions

The technical studies completed to date range significantly both in respect of the overall level of study completed and in respect of specific disciplines within the individual studies. The classification of the studies completed to date in this CPR are dependent upon a combination of: the scope completed; the availability of site specific information; reliance on generic technical-economic assumptions; and the degree of site specific engineering design work completed. Given this range and the planned future technical studies to be completed by the Company, SRK notes the following general guidelines:

- Feasibility Study means a comprehensive study of a mineral deposit in which all geological, engineering, legal, operating, economic, social, environmental and other relevant factors are considered in sufficient detail so that it could reasonably serve as the basis for a final decision by a financial institution to finance the development of the deposit for mineral production. For the avoidance of doubt, this would commonly ensure that the technical feasibility and economic viability of the mineral deposit has been demonstrated on a multi-disciplinary basis to what is commonly known as "bankable standards". In a Feasibility Study the declaration of Ore Reserves would be expected and the economic viability of the mineral deposit could be demonstrated with sole reliance on the depletion of the Ore Reserves without inclusion of Mineral Resources. In parallel to the development of the Feasibility Study it is normally expected that an ESIA would have been completed. Typical contingencies included within the capital expenditure estimate range between 10% and 15% and accuracy ranges are typically ±15%;
- Pre-Feasibility Study means a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors which are sufficient for a qualified person, acting reasonably, to determine if all or part of the Mineral Resource may be classified as an Ore Reserve. For the avoidance of doubt this would commonly ensure that the technical feasibility and economic viability of the mineral project has been demonstrated on a multi-disciplinary basis to PFS levels and accordingly the declaration of Ore Reserves would be expected. SRK notes that such studies are not normally dependent on Inferred Mineral Resources to demonstrate economic viability and generally include appropriate contingencies (20% to 25%) with respect to capital expenditures to account for the lower amount of site specific engineering designs completed compared to that normally included in a Feasibility Study. Furthermore it is also general industry practice to acknowledge that such studies in reflecting a lower degree of accuracy are accompanied by higher accuracy/sensitivity

ranges (±20%). Key deliverables of a Pre-Feasibility Study would include a recommendation of a single and sufficiently positive technical and economic outcome such that advancement to Feasibility Study level is warranted;

Scoping Study means a study that includes an economic analysis of the potential viability of Mineral Resources taken at an early stage of the project prior to the completion of a PFS. A Scoping Study may be based on Measured, Indicated, or Inferred Mineral Resources or a combination of any of these and include disclosure of forecast mine production rates and may contain capital costs to develop and sustain the mining operation, operating costs. For the avoidance of doubt a Scoping Study would seek to establish the mining method and process route to establish the nature and scale of the mineral project. A Scoping Study would have limited site specific data in respect of key operating assumptions and would only address certain disciplines on a high level fatal flaw basis. Both the contingency (>30%) and accuracy/sensitivity (±30%) associated with key assumptions are generally higher than that assumed for a PFS. Key deliverables of a Scoping Study would include the determination of sufficiently positive technical and economic outcomes such that advancement to PFS level is warranted.

A Scoping Study is preliminary in nature, in that it generally includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Ore Reserves, and there is no certainty that the technical and economic aspects presented will be realised; and

 Conceptual Study means a study that incorporates inherently lower level of accuracy and confidence with respect to technical and economic parameters normally included in a Scoping Study. A Conceptual Study may only include Inferred Mineral Resources and/or further assumptions regarding Exploration Targets. Accordingly site specific data may be limited and reliance on generic assumptions derived from comparable situations is common.

# 7.2.2 2009 Conceptual Study

The 2009 Conceptual Study as completed by MPD summarises the results of various technical studies completed between October 2006 and January 2009 and in addition various archived reports. In the period leading up to 31 December 2008 the Company had invested a total of US\$11.9m, of which US\$3.10m and US\$8.80m were invested to 31 December 2007 and in 2008 respectively. Of this total amount some 53% of total expenditure related to drilling, salaries and external consultants and 12% of total expenditure comprised capital items, with the remaining expenditures comprising costs associated with in and out of country support services.

The principal activity focus areas during this phase comprised: exploration (including geophysical and drilling); infrastructure investigations; environmental and social studies; metallurgical testing; and conceptual economic analysis.

The principal conclusions arising from the 2009 Conceptual Study were as follows:

- An Exploration Target with tonnage ranging from 1.0Bnt to 1.5Bnt and grade ranging from 45%Fe<sub>T</sub> to 50%Fe<sub>T</sub>. At this state no Mineral Resources reportable in accordance with an internationally recognised reporting code had been defined;
- The potential for development of an integrated operation targeting the production of either concentrate fines for the sinter market and/or iron ore pellets: 45Mtpa concentrate fines

for sinter (+65%Fe); and 30Mtpa concentrate fines and pellets. In all instances an openpit mine, concentrator, rail corridor and deep water port is proposed with additional pellet plants included for the 30Mtpa case;

- Off-mine infrastructure requirements for the 45Mtpa concentrate fines option to include a 350km to 500km rail transport corridor and a new deep water port capable of handling bulk carriers in excess of 150,000dwt;
- An initial capital expenditure requirement ranging between US\$5bn and US\$6bn with the higher cost assuming the inclusion of pelletising plants; and
- Operating expenditure per unit of concentrate fines ranging between US\$12.40/t to US\$14.30/t (US\$24.30/t<sub>Pellets</sub>), again with the higher amount reflecting the pelletising scenario.

### 7.2.3 2009 Scoping Study

The 2009 Scoping Study, published in September 2009 summarises the results of various technical studies and in addition presents the results of additional work completed by the Company, SRK and other consultants.

Total exploration activity which informed this study comprised:

- Aeromagnetic surveys which indicated the potential presence of magnetic mineralisation over a total length of 47km. In addition from April 2009 further geophysical resistivity surveys were completed to provide greater definition of the near surface mineralisation;
- Drilling of some 147 drill-holes for a total drilled length of 12,851m comprising 38 DD holes (7,708m) and 94 RC holes (5,773m). These drill-holes comprised mixed spacing ranging from 100m to 400m within the Central Zone and 200m to 1,600m in the South Zone; and
- A total of 1,083 one metre composite samples within the mineralised sequence.

The 2009 Scoping Study focused on the assessment of the potential for continuous production of 45Mtpa concentrate fines over a minimum 20 year period. The concentrate fines was also assumed to be suitable for sintering with contained grades ranging between 61%Fe and 68%Fe. In particular the geological work identified an Exploration Target comprising tonnages ranging between 1.1Bnt and 2.4Bnt and grading between 36%Fe<sub>T</sub> and 50%Fe<sub>T</sub> situated within the leached itabirite haematite mineralisation down to a depth of 60m. In addition a further geological analysis identified a BIF Exploration Target down to a depth of 200m with tonnages ranging up to 2.2Bnt and grading 30%Fe<sub>T</sub>. Notwithstanding the above, SRK notes that at this stage no Mineral Resources reportable in accordance with an internationally recognised reporting code was identified.

A conceptual mine plan was developed which assumed mining of 1.4Bnt of haematite ore grading between 36%Fe<sub>T</sub> and 50%Fe<sub>T</sub> at a stripping ratio of  $0.81t_{waste}$ :tore. Furthermore the open-pit mining method assumed that 60% of the orebody could be mined using bucket-wheel excavators ("BWE") and the remainder using conventional shovel and trucks.

Mine site geotechnical and hydrogeological work completed at this stage was limited and largely conceptual in nature which resulted in substantive recommendations for collation of site specific data to establish engineering design and base-line criteria.

Preliminary metallurgical testwork focused on the haematite mineralisation yielded reasonable qualities for concentrate fines with size distributions which could be considered appropriate for sintering. Notwithstanding this consideration no actual sintering metallurgical testwork was

undertaken and at this stage this potential remained unsupported by physical results. Furthermore, no metallurgical testwork was completed in respect of the BIF to establish the potential for processing to produce a saleable product.

Concentrator operating assumptions included RoM throughput at 71Mtpa with mass yields of 63% to produce 45Mtp of concentrate fines grading 68% for the sinter market.

Initial transport corridor assessments indicated that rail transport was preferable over pipeline and this was largely informed from a combination of assumed concentrate products and certain geographical/topographic constraints in respect of transportation. Initial deep water port investigations identified a preferred site which was recommended for further geotechnical investigations.

Environmental and Social studies were completed which highlighted the following key considerations: the requirement for relocation of 8 villages including some 3,000 inhabitants; location of large mammal and primate habitats in the surrounding areas; water management specifically given the sites contribution as a headwater catchment area. Accordingly significant base-line survey's were recommended to develop appropriate benchmarks for the broader ESIA process as the project design criteria are further established.

Initial project capital expenditure was estimated at US\$5.23bn with a construction period of three years prior to a three year build up to full production. Cash operating costs (excluding royalties) per unit of concentrate fines were estimated at US\$16.45/t.

Assuming a long term price of USc80/dmtu and assuming the minimum free carry consideration, the preliminary economic analysis indicated a post-tax pre-finance cash-flow net present value ("NPV") of US\$2.5bn at a real discount factor of 10% and an accompanying internal rate of return ("IRR") of 17%.

Accordingly the study concluded that advancement to a PFS stage was warranted in order to further refine the technical feasibility and economic viability of the ZIOP.

# 7.2.4 Zanaga PFS

The Zanaga PFS has been underway since September 2009 and to date has resulted in total expenditures to 30 September 2010 of US\$64.37m with completion assumed in Q1 2011 and funding totalling US\$106.00m. The Zanaga PFS has been subdivided into two key phases with Zanaga PFS Phase I completed in June 2009 and Zanaga PFS Phase II to be completed in Q1 2011.

SRK has the responsibility for compilation of the Zanaga PFS and in addition has authoring roles for the following: geology; mineral resources; mine site geotechnical engineering and hydrogeology; tailings storage facilities; waste rock dumps; and financial modelling. The remaining technical disciplines are managed by either the Company directly or other engineering/consultancy companies mandated by the Company: mine site infrastructure (WSP); metallurgical processing (ProMet); rail transport corridor and port infrastructure (Egis); and environmental and social aspects (the Company; Hydrobiology; Synergy; Kew Gardens; and an Independent Expert ).

Following completion of Zanaga PFS Phase I various interim technical reports have been published which summarise the status of technical studies to date:

- "Zanaga Iron Ore Deposit JORC Report Resource Model 7" published September 2010; and
- "Zanaga Iron Ore Project Technical Project" published September 2010.

Completion of Zanaga PFS Phase I resulted in the publication of the first Mineral Resource statement reported in accordance with an internationally recognised reporting code for the ZIOP as reported herein (see Section 6.4). The current statement is supported by exploration through to 30 June 2010 and includes a total drilled length of 42,706m of which 11,224m is from 80 DD holes and 31,482m is from 388 RC holes. The 2010 Statements report total Mineral Resources of 3.34Bnt grading 32.75%Fe<sub>T</sub> and 0.046%P of which 0.84Bnt grading 38.45%Fe<sub>T</sub> reports as haematite ore and 2.49Bnt grading 30.82%Fe<sub>T</sub> reports as itabirite ore. Further technical work is underway based on additional exploration activities completed to 30 September 2010 comprising: 16,313m from 100 DD holes; and 45,411m from 525 RC holes. Accordingly an updated Mineral Resource statement will be produced as part of the Zanaga PFS Phase II stage and published in the Zanaga PFS during Q1 2011.

The following sections provide a summary of all technical work completed to date in respect of all disciplines other than for geology and Mineral Resources which have been previously reported in Section 0 and Section 0 of this CPR. Furthermore as the Zanaga PFS is not scheduled for completion before Q1 2011, the technical details are of a preliminary nature and accordingly are subject to change given the substantive body of work underway and which at the time of writing this CPR is incomplete.

# 7.3 Mining Engineering

The following section includes discussion and comment on the mining engineering related aspects of the ZIOP. Accordingly focus herein is in respect of: mine design and mining methods; modifying factors; geotechnical engineering; mine-site hydrology and hydro-geology; equipment selection; and inputs to and results from the recently completed open-pit optimisation analysis.

### 7.3.1 Mine Design and Mining Method

The mining engineering technical studies, as incorporated into the various technical studies, have to date focused on conceptual considerations both in respect of mining strategy and potential resources. Specifically the earlier strategic assessments focused on the production of between 30Mtpa and 45Mtpa of concentrate sourced solely from 'theoretical' haematite orebodies over a period exceeding 20 years with some 60% of the material being assumed as free-dig and the remaining 40% requiring drilling and blasting. Mining method options considered included: standard truck and shovel; bucket-wheel excavators; and continuous surface miners and trucks. In addition to these combination scenarios were also considered.

The 2009 Scoping Study concluded that a standard truck and shovel operation was optimal given: its improved operational flexibility; the requirement for selective mining of lithologies for potential separation and blending; and the ability to facilitate incremental build-up without excess spare capacity.

For the Zanaga PFS, the mine design considerations largely follow recognised practices where open-pit optimisation techniques are applied to the underlying block model and incorporate the following:

- Selection of appropriate technical inputs including operating expenditures, modifying factors (including mining losses, dilution and dilutant), metallurgical process recoveries, long-term commodity prices and geotechnical parameters;
- Preliminary optimisation using the Whittle Four-X software;
- Ultimate shell and staged pit shell selection;
- Practical engineering pit design and production scheduling; and

 Reporting of Indicated and Inferred Mineral Resources which are contained within the final engineering design pits.

To date only preliminary optimisation has been completed using the latest block model supporting the 2010 Statements. Furthermore, no pit shell selections, engineered pit designs or production scheduling has been completed yet and it is likely that all mining aspects of the Zanaga PFS will be informed from the updated block models developed using all exploration drilling data captured to 30 September 2010.

The current mining method proposed comprises conventional open-pit operations: drill and blast, excavate, load and haul. Free dig techniques are assumed to be applicable for COL/ITG and ITF with all other material including waste requiring drilling and blasting. Free dig ore will be hauled directly from the open-pits and either directly tipped into mineral sizers located near to the pit entrances or stockpiled for future blending requirements. Blasted ore will either be directly tipped into ore crushers or similarly stockpiled for future blending requirements. RoM ore is then transported by a series of conveyors to the concentrator for processing in the **Haematite Concentrator** or the **Itabirite Concentrator**.

It is assumed that two temporary ore stockpiles (109Mt Haematite ores and 30Mt Itabirite ores) will be required to attain the required processing ratio from the various lithologies. These will be located located adjacent to the Northern and Central crusher / mineral sizer facilities, sized 87Mt and 51Mt respectively. Temporary drainage ditches will be required around these features to drain surplus runoff to sedimentation ponds.

Waste rock (approximately 2.9Bnt) will be hauled by truck to one of three waste dumps (North Dump 1; Central Dump 2; and South Dump 3) located along the eastern side of the Zanaga Ridge. The principal design considerations for the waste rock dumps are: that final dump height does not exceed the height of the ridge (660mRL); and that all dumps will be contoured to improve visual aspects and to control rainwater runoff. All dumps are assumed to have maximum overall slope angles of 18°, maximum bench slope angles of 26° and raise heights of 10m.

Preliminary maximum equipment specification indicates a requirement for: 17 tracked loading units (ranging from 29m<sup>3</sup> to 6.5m<sup>3</sup>); five wheel loading units (20m<sup>3</sup>); 85 haul units (220t); 15 tracked dozers (D10 to D11); 13 drill rigs (6" to 9" and 9" to 12"); 9 graders; and miscellaneous support equipment including: wheel dozers; water carts; explosive trucks; fuel service trucks; and other light vehicles. Equipment efficiencies initially assumed for haul trucks and primary loading units assume effective utilisation of 64% and 69% respectively (80% availability; 80% utilisation).

# 7.3.2 Modifying Factors

With respect to the assumed modifying factors, the Zanaga PFS currently assumes mining losses of 2.5%, dilution of 5% and dilutant grades/qualities of 0.00% for all ore lithologies. No detailed work has yet been completed to support the selection of these parameters, however SRK notes that these are similar to typical iron ore deposits dominated by BIF tonnage. Notwithstanding the above, further work completed as part of the Zanaga PFS will seek to determine whether separate modifying factors should be defined for the varying lithologies where iron mineralisation changes from gradational to sharp drop offs.

### 7.3.3 Geotechnical Engineering

Geotechnical engineering investigations have to date focused on:

Establishing geotechnical mine design criteria largely based on empirical analysis;

- Assessing the potential excavatability of ore and waste material, specifically focusing on that which is considered to be free-dig and that requiring drilling and blasting;
- Development of data gathering model and geotechnical model which seeks to define key characteristics including material strength, structure, groundwater;

Resource estimation to date has identified that up to three/four mineralised bodies are generally present in cross sections with horizontal widths of intersected thicknesses ranging from 25m to 340m and individual mineralised zones averaging some 150m each. Waste separation vary significantly and the preliminary optimisation analysis indicate that pit geometry ranges from 1 to 10km in length with maximum widths of 800m to 1,000m and depths of up to 370m (ultimate pit crest at 570mRL to pit floor at 200 mRL)..

The current geotechnical model relies on the subdivision of the lithologies into three broad categories:

- Weathered Oxide Zone representing the upper 40m and comprising hanging wall rocks to completely weathered material with soil (95% to 100%) to very weak (5MPa) and occasionally weak rock strengths. The COL and ITG units comprise shallow colluviums and goethitic itabirite which overlies portion of the orebodies, with the lateral extent presently unknown. The ITF (80% soil to 5MPa strength) unit lies within the oxide zone and is considered to be friable and accordingly free-dig. Waste rock present comprises amphibolitic and schistose waste which is completely weathered or highly weathered comprising clayey silt material with limited remnant structure but strengthening vertically;
- Moderately Weathered Oxide Zone and Transition Zone which lie immediately below the Weathered Oxide Zone and extends to approximately 100m below surface. Ore lithologies comprise ITC (50% less than RQD=30%, 30% greater than RQD=70%: rippable to blasting) and ITT (transitional between ITC and BIF) which appear to gradually reduce in friability with depth, however display a high degree of anisotropy due to banding between harder ores and the softer silica banding. Waste lithologies are assumed to be homogenous within the transition zone at this stage, however these will most likely be susceptible to impact of water; and
- Fresh Zone extending to depths in excess of 200m where ore lithologies comprise ITT and very strong (50% greater than RQD=80% and >50MPa) silicified BIF which is significantly reduced in friability with banding orientation likely to lessen impact on slope stability. The waste lithologies can be broadly sub-divided into two key units comprising:
  - Felsic rock: classified as strong and competent and characterised by low fracture frequency and reasonable joint conditions,
  - Mafic rock: classified as strong and competent but less geotechnically favourable than the Felsic rock and accordingly domaining will be important. Characterised by high fracture frequency and poorer joint conditions.

Table 7.2 summarises the indicative excavatability of the different zones identified.

# Table 7.2 Summary of indicative excavtability

Location	Average Depth (m)	Comments
Weathered Oxide zone	<40m	Free dig
Moderately weathered oxide and transition zones	<60m	Free dig and blasting
Fresh Rock	>60m	Blasting

Large scale structural interpretation to date is based on historical models derived from aerial magnetic data which has been supplemented by recent structural reviews. In summary the orebodies are more complex than the simple stratiform geometry initially considered.

Accordingly significant site specific data gathering and technical analysis is required to advance this to PFS level. Due to the high degree of surface weathering however, physical verification of the structure is difficult given limited outcrop data and associated mapping limitations.

The geotechnical field programme commenced in March 2010 which resulted in the drilling of some 60 holes with depths ranging from 60m to 280m using triple tubed diamond drill-holes with full core orientation using the ACT system. Samples of material at 20m intervals or on change of lithology, geotechnical or geomechanical properties have been collected for testing which is currently underway. Data collated during this process comprise:

- Full structural logs;
- Full geotechnical domain logs;
- Point Load Testing ("PLT") in suitable material comprising axial and diametral; and
- Structural summary logging for detailing of large scale features

The programme has however being delayed and in respect of structural orientation around half of the results are considered to have low to intermeaditate confidence.

Historical groundwater impacts have largely resulted in the weathering profile and associated material strength profiles noted to date. Whilst the friable and silicified ITF and ITC material may be aquifers, these will dewater easily, however the BIF is expected to have reasonably high joint controlled permeability. The depressurisation characteristics of the weathered clayey materials are likely to be low, however these are limited to some 40m in thickness and hence the impact on shallow slope angles in these materials to the stripping ratio should be limited. Notwithstanding the above associated hydrogeological conditions are relatively unknown and as site specific investigations are underway the potential impact in respect of geotechnical stability is limited.

Seismicity in the area is initially considered to be low and hence peak ground accelerations are likely to be low for sensitive structures.

With respect to excavatability, initial investigations indicate the following: the weathered oxide zone will be rippable; the moderately weathered oxide and transition zone whilst noting some potential for rippability will largely require drilling and blasting; and the competent fresh rock will require drilling and blasting. SRK notes that the BIF comprise extremely strong rocks which also displays extreme hardness and abrasiveness.

Trafficability on the weathered ore rocks is likely to be reasonable due to their free digging nature, however rutting in friable materials are likely and deterioration of bench crests and sloughing of bench faces is probable, particularly in consideration of high average rainfall and high intensity rainfall events. Trafficability on the low friction, low strength clay waste material will be poor and accordingly engineered surfacing on friable and clayey roads will be necessary.

The key focus of the current geotechnical investigation is the completion of additional drilling and analysis to enable: further geotechnical domaining to define zones of similar characteristics; completion of excavatability studies to confirm the degree of rippable material in the weathered and moderately weathered zones; and completion of structural orientations to determine the prevalent jointing patterns which may influence the current pit slopes. Substantive analysis of the hydrogeological environment is required to further inform the preliminary slope angles defined to date.

Table 7.3 below presents the preliminary overall and inter-ramp slope angles for the ZIOP
open-pits.

Table	7.3	Preliminary geotecl	nnical slope (overall and inter-ram	np) angles
Lithologies			Hangingwall	Footwall
			(°)	(°)
COL/ITF/ITG <sup>(1)</sup>			30	30
ITT <sup>(2)</sup>			45	45
BIF <sup>(2)</sup>			50	45
Waste				
		highly weathered	30	30
		moderately weathered	40	45
		fresh	50	45

uliminary apotochnical clone (overall and inter ramp) analog

Overall slope angle (2) Inter-ramp slope angle

#### 7.3.4 Mine-site Hydrology and Hydrogeology

Water infrastructure in the immediate area of the Mineral Assets are limited, however the average annual rainfall is high, making the landscape hydrologically dynamic. High rainfall intensity storms coupled with steep sided hills and valleys makes the potential for erosion high, though natural vegetation cover mitigates this under normal conditions.

The hydrology in the immediate area is characterised by its dendritic pattern and high drainage density, however the steep-sided valleys can be masked by dense vegetation in the contributing tributaries of larger rivers. The iron ore deposits lie on a ridge running north to south, which itself lies at an approximately 30° angle to the main watershed within the region. The Loungou River is the only river that cuts-through the orebody from west to east. The upper section of the Loungou River catchment indicates that the catchment cuts through the mineralised ridge with all drainage flowing in a north-easterly direction. Under near-low flow conditions, where the Loungou River dissects the mineralised ridge the measured flows (April 2009) range from 2m<sup>3</sup>/s to 4m<sup>3</sup>/s. At this point the catchment is approximately 120km<sup>2</sup> suggesting that flows reach an average of 11m<sup>3</sup>/s in the wet season compared with an estimate low-flow of 1.5m<sup>3</sup>/s.

The average annual rainfall based on data collected at the site between October 2008 and August 2010 is 3,710mm. Rainfall is not however equally distributed throughout the year with monthly rainfall ranging from effectively zero in the dry season (June through August) to over 500mm in the wet seasons (March through April and October through November).

Hydrological monitoring at the Mineral Assets is ongoing and include: surface water levels using continuous monitoring loggers in rivers at two locations and monthly manual measurements at six other stations; V-notch weirs to measure flows manually during monthly site visits; borehole water levels using continuous monitoring loggers in two boreholes and installation of groundwater monitoring piezometers in August 2010; and water guality on a quarterly basis.

A groundwater monitoring network has been maintained and developed since August 2009. This is currently providing a baseline for the ESIA as well as informing the water study aspects of the Zanaga PFS. Observation bore-holes, totalling some 182 bores are currently in use for groundwater level monitoring. This is providing a comprehensive dataset of the exploration area, and particularly in the more concentrated areas of exploration drilling: the North Zone; and the Central Zone. Initial results indicate that:

Groundwater levels indicate that the piezometric surface whilst intricate, broadly mirrors the surface topography. At higher elevations the water table is over 50m below ground surface whilst 10m to 30m is more typical elsewhere. The unsaturated zone thins towards the many valleys that transect the ridge slopes where springs are a common occurrence;

- Groundwater levels typically peak in early June and are lowest in December. As the rainy season commences in October/November there is a clear lag between rainfall and groundwater response with a typical range of 1m to 2m across the 12-month period;
- Springs occur within steep-sided transecting valleys along both the west and east sides of the Zanaga ridge. These have not yet been comprehensively mapped, however Light Detection and Ranging ("LIDAR") has identified some 75 spring features along the length of the Zanaga ridge which is equivalent to one spring every 500m of ridge line on both sides of the ridge;
- Aquifer delineation and characterisation of groundwater flow within the ridge geology and the surrounding crystalline granitoid basement is currently underway. This includes a combination of laboratory testing of rock samples, airlift testing within resource boreholes and pumping test programmes; and
- Groundwater quality assessment is at a preliminary stage and initial results indicate: low total dissolved solids (<10mg/l); pH ranging between 4.5 and 5.5; temperature ranging between 24°C and 25°C; dissolved iron concentrations less than 0.5mg/; and low concentrations of other metals.

Furthermore it is evident that the surrounding villages located along the Zanaga ridge use the natural springs for water supply with a typical village having multiple spring sources.

Dewatering of groundwater within and around the proposed open-pit areas will most likely be necessary for management of pit inflows and slope stability, specifically when mining the weathered oxide zone which is likely to have a higher storage capacity and permeability than the underlying fresh zone. The current technical studies assume that substantive dewatering of the fresh zone will be limited as the presence and characteristics of structural zones through and/or bounding the mineralised zones which have relatively high permeabilities have not yet been identified.

# 7.3.5 Optimisation results

Table 7.4 presents the results of the preliminary optimisation analysis recently completed using the block model which supports the 2010 Statements. SRK notes that these are preliminary in nature and do not incorporate any detailed engineering pit designs, accordingly it is likely that the stripping ratio will increase on inclusion of ramp access and incorporation of practical design considerations. As a guide SRK considers design efficiencies which are within 10% of additional waste moved to be acceptable specifically if one assumes that 100% of the RoM ore is achieved.

Figure 7.1 presents the results of the preliminary optimisation analysis for the ZIOP where the principal parameters include: RoM tonnage (Bnt); grade (%Fe<sub>T</sub>); stripping ratio ( $t_{waste}:t_{ore}$ ); and cash costs (USc/dmtu) varying with commodity prices. It is important to note that the results of the current optimisation analysis is simplified in that it does not assume any variation in iron recovery with total iron ore grade. Furthermore the inputs are based on assumed average yields for each lithological type in order to input the unit operating expenditures for rail and port costs. The combined impact of the latter simplifications for the current shell corresponding to USc85/dmtu results in an over-estimate of the cash costs as noted below where the equivalent cash cost (excluding royalties) and expressed per tonne of concentrate is determined at US\$29.43/tConc. Revision of this estimate which is inclusive of a 9% contingency to a weighted average 4% contingency results in US\$27.06/tConc with US\$28.31/t<sub>conc</sub> for the Itabirite Concentrator and US\$21.88/t<sub>conc</sub> for the Itabirite Concentrator

# Concentrator.

Statistic	Unite		Commodity Price							
Statistic		50	75	85	100	115	125	150	175	200
		(USc/dmtu)	(USc/dmtu)	(USc/dmtu)	(USc/dmtu)	(USc/dmtu)	(USc/dmtu)	(USc/dmtu)	(USc/dmtu)	(USc/dmtu)
Tonnage	(Mt)	2,165	3,114	3,227	3,348	3,410	3,434	3,462	3,477	3,486
Haematite Conc.	(Mt)	482	500	500	500	500	500	500	500	500
Itabirite Conc.	(Mt)	1,683	2,614	2,727	2,848	2,910	2,934	2,962	2,977	2,986
Grade	(% Fe <sub>T</sub> )	33.55%	31.80%	31.60%	31.35%	31.23%	31.18%	31.14%	31.12%	31.11%
Haematite Conc.	(%Fe <sub>T</sub> )	40.24%	39.93%	39.92%	39.92%	39.92%	39.92%	39.92%	39.92%	39.92%
Itabirite Conc.	(%Fe <sub>T</sub> )	31.63%	30.24%	30.07%	29.84%	29.74%	29.69%	29.66%	29.64%	29.63%
Waste	(Mt)	747	2,482	2,919	3,494	3,883	4,069	4,351	4,547	4,680
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.3	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.3
Fe Recovery	(%)	69.76%	70.67%	70.77%	70.89%	70.94%	70.97%	70.99%	71.00%	71.00%
Haematite Conc.	(%)	68.15%	68.18%	68.19%	68.19%	68.19%	68.19%	68.19%	68.19%	68.19%
Itabirite Conc.	(%)	70.34%	71.30%	71.40%	71.53%	71.57%	71.61%	71.62%	71.63%	71.64%
Yield	(%)	35.85%	34.32%	34.14%	33.92%	33.81%	33.77%	33.73%	33.71%	33.70%
Haematite Conc.	(%)	43.21%	42.89%	42.89%	42.89%	42.89%	42.89%	42.89%	42.89%	42.89%
Itabirite Conc.	(%)	33.74%	32.68%	32.54%	32.34%	32.25%	32.22%	32.19%	32.17%	32.16%
Concentrate Tonnage	(Mt)	776	1,069	1,102	1,136	1,153	1,160	1,168	1,172	1,175
Haematite Conc.	(Mt)	208	214	214	214	214	214	214	214	214
Itabirite Conc.	(Mt)	568	854	887	921	939	945	953	958	960
Concentrate Grade	(Mt)	65%	65%	65%	66%	66%	66%	66%	66%	66%
Haematite Conc.	(Mt)	63%	63%	63%	63%	63%	63%	63%	63%	63%
Itabirite Conc.	(Mt)	66%	66%	66%	66%	66%	66%	66%	66%	66%
Operating Expenditure										
Mining	(US\$/t <sub>Moved</sub> )	1.72	1.71	1.71	1.71	1.71	1.71	1.72	1.72	1.71
Processing	(US\$/t <sub>RoM</sub> )	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Haematite Conc.	(US\$/t <sub>RoM</sub> )	6.65	6.62	6.64	6.63	6.63	6.64	6.62	6.62	6.63
Itabirite Conc.	(US\$/t <sub>RoM</sub> )	6.83	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82
Selling	(US\$/t <sub>RoM</sub> )	0.35	0.51	0.57	0.67	0.76	0.83	0.99	1.16	1.33
Total	(US\$/t <sub>RoM</sub> )	9.45	10.37	10.62	10.95	11.22	11.35	11.66	11.92	12.14
Cash Cost (inc Royalty)	(US\$/t <sub>Conc</sub> )	26.35	30.23	31.10	32.30	33.19	33.62	34.56	35.36	36.01
	(USc/dmtu)	40	46	47	49	51	51	53	54	55
Cash Cost (exc Rovalty)	(US\$/tcoor)	25.38	28.75	29.43	30.33	30.93	31.16	31.61	31.92	32.08

# Table 7.4 Preliminary optimisation results





# 7.4 Mineral Processing

The following section includes discussion and comment on the mineral and metallurgical processing related aspects of the ZIOP. Accordingly focus herein is in respect of: mineralogy; metallurgical testwork; preliminary flowsheet design; metallurgical performance assumptions.

#### 7.4.1 Mineralogy and Sampling

The iron ore deposits at the ZIOP comprise six main lithologies: COL; ITG; ITF; ITC; ITT and BIF; which represent the results of a weathering profile with depth from the original BIF proto ore.

Composite samples were prepared for the various testwork programmes using DD core sourced from the 2008 and 2009 exploration drilling campaigns. Initially composite samples were composited only for the five uppermost lithologies with a BIF sample only added during the course of testwork. Where samples permitted, the lithologies were further separated by: total iron grade with high and low grades having approximately 5% higher or lower, respectively than the average sample grade; and geographical location within the orebody as defined by the three main ore zones, North Zone, Central Zone and South Zone.

The target quantity of ore per composite sample was 100kg to 150kg and where permissible 3m intervals were selected. Whilst this was not possible for the COL and ITG composites, samples were also taken from all available drill-holes. Including the BIF sample a total of 19 composite samples were presented for testwork.

Head assays were completed for all 19 samples and included: Fe; FeO; SiO<sub>2</sub>; Al<sub>2</sub>O<sub>3</sub>; CaO; MgO; P; S; Na<sub>2</sub>O; K<sub>2</sub>O; Mn; TiO<sub>2</sub>; V; LOI; and Magnetite. These generally indicated the following general trends with depth: decreasing Fe<sub>T</sub> grade; increasing magnetite grade; increasing silica content; decreasing alumina content; and decreasing LOI. The measured levels of all other elements, particularly potential penalty elements such as P, S, Ti and V were all low.

The mineralogy report confirms that the lithology types represent a weathering profile down through the orebody, from the upper lithologies, containing greater levels of goethite and limonite, through to the lower lithologies, containing greater levels of magnetite. The dominant iron mineral in all samples was identified as martite. Iron ore mineralisation is present as both coarse particles of aggregates with sizes of up to 10mm, and as finer particles down to 5µm to 10µm, mainly of magnetite locked inside larger quartz grains. The gangue minerals identified were chalcedony, chlorite, minnesotatite, quartz and talc, of which quartz was the dominant occurrence.

# 7.4.2 Testwork objectives

The initial testwork programme was scoped without consideration for the BIF which was only included during the Zanaga PFS Phase 1 stage. Furthermore given the relatively large number of iron ore lithologies, the testwork programme was intended to explore the potential commonality between the lithology types, in order to reduce the number of potential flowsheets, preferably to no more than two. In addition, the testwork programme was to focus on the production concentrate fines suitable for the sinter market such that a minimum of 50% of all concentrate production was to meet such specification in the initial years of the ZIOP.

The key criteria for sinter feed concentrate fines are: at least 30% to 40% + 1mm; less than 40% -0.150mm; low Si0<sub>2</sub> level less than 4% to 5%; low  $Al_2O_3$  level less than 2% desirable; and concentrate grades of approximately 65%Fe.

Given these parameters, the general philosophy that was developed for the testwork programme was to use gravity separation for the range of particle sizes for which gravity separation is applicable, i.e. for sizes of the order of 50µm and above, as gravity is a relatively low cost process option and does not discriminate between the different iron oxide minerals, e.g. haematite, magnetite, martite etc. For particle sizes below those for which gravity separation is feasible, the preferred process route was magnetic separation. While magnetic

separation can be technically challenging when there is a mix of iron oxides present, it was considered that magnetic separation represented a less technically risky, and lower cost, option than flotation.

Flotation is widely applied to the Brazilian itabirites, where "reverse" flotation is used to remove silica from the residual iron oxide, however this process is best suited where there is only a single gangue mineral present, such as silica. Given the expected gangue content at the Mineral Assets, subsequently confirmed in the testwork programme, the iron ore lithologies were not considered to be ideally suited to the application of reverse flotation. "Direct" flotation, i.e. the removal of iron oxide from the gangue, is technically very challenging and is rarely applied.

Testwork conducted during the 2009 Scoping Study concluded that the ITF, ITC and ITT lithologies could be processed using a combination of magnetic separation and flotation following grinding to a size that would render this material as concentrate fines suitable for the production of pellets or possibly as a sinter fines blend. A coarser product could be produced from the COL and ITG by screening alone, and that this material could be combined with that from the ITF, ITC and ITT to produce a blended concentrate for the sinter market.

Some gravity amenability testwork was conducted as part of the 2009 Scoping Study, and while this option was rejected at that point, on review of this testwork, the Company considered that the testwork did show some potential for gravity separation. Furthermore given the testwork methodology, it was considered unlikely that this testwork would have fully demonstrated the potential of gravity separation. Accordingly the Zanaga PFS Phase 1 metallurgical testwork programme was developed from first principles, rather than being an extension or development of the 2009 Scoping Study testwork programme.

#### 7.4.3 Laboratory Beneficiation testwork

The aim of the initial beneficiation testwork was to test the amenability of the various lithologies to recovery by gravity separation at relevant particle sizes, and by magnetic separation at sizes finer than those suited to gravity separation. For the initial programme, gravity separation was simulated by Heavy Liquid ("HL") tests, and magnetic separation was simulated by using a Davis Tube ("DT").

A DT test was conducted on the -0.063mm fraction from samples crushed to -1.0mm, as well as on a sample of the whole ore ground to -0.04mm. The HL tests were conducted at separation specific gravity ("SG") of 3.3 and 3.9.

Following a review of the initial laboratory testwork, conducted on the initial 6 samples, various modifications and additions were made to the programme for the remaining 13 samples. These included: Low Intensity Magnetic Separation ("LIMS") tests; rougher Wet High Intensity Magnetic Separation ("WHIMS") test on LIMS tailing; and cleaner WHIMS test on rougher WHIMS concentrate.

For **gravity separation** the initial set of HL tests indicated that the COL, ITG and ITF lithology types could be processed at a crush size suited to the production of concentrate fines suitable for sintering i.e. -6.3 mm. The ITC, ITT and BIF however would require grinding even finer than the 1.0mm top size used in this testwork. These conclusions were reached based on the size-by-size assays and the assays of the heaviest fraction (+3.9 SG) from the HL tests conducted on these samples.

For the COL, ITG and ITF lithologies, an increase in  $Fe_T$  in the coarse size fractions was noted, whereas for the ITC and ITT, the  $Fe_T$  in the coarser size fractions was lower than for the finer size fractions. This upgrading to the coarser sizes for the COL, ITG and ITF will be

of benefit to the performance of the gravity separation stages treating these size fractions, however the corresponding downgrading for the ITC, ITT and by extension the BIF will be to the detriment of gravity separation at coarser sizes.

An improvement in product grade (i.e. higher  $Fe_T$ , lower silica and alumina) was noted into the finer size fractions in each case. The grades achieved in concentrates at a 6.3mm top size for the COL, ITG and ITF however were considered acceptable for sintering. For the ITC and ITT, the conclusion was reached that a top size of the order of 0.315mm was required in order to achieve an acceptable product grade, particularly in terms of silica, where a target level of 5% SiO<sub>2</sub> was considered appropriate.

The results from the remaining 13 samples exhibited similar behaviour to the initial 6 samples in the HL tests.

Within the size range applicable for **spiral separation**, i.e. -1.0mm +0.063mm, for the most part the lowest SG fractions (<3.3 SG) exhibited very high silica contents, indicating a high degree of liberation of quartz in this size range. The average silica content in this size range for all 19 samples was 82% SiO<sub>2</sub>, increasing to 91%SiO<sub>2</sub> if the COL and ITG samples are excluded.

# 7.4.4 Pilot Plant beneficiation testwork

Following the review of the initial laboratory testwork, a series of pilot scale tests was developed, to test the performance of the ores at a larger scale and on equipment more like what would be utilised in practice. For gravity separation, tests were conducted using jigs and spirals.

The pilot jig tests results suggest that further investigation and testwork is required in order to improve the performance of jig separation on the iron ore lithologies. When crushed to -6.3mm, some of the ITF material appeared to be flaky in shape, and this may be a factor in the poorer than expected jig performance.

The spiral test results show that two stages of spiral separation – roughing and cleaning – are required, with the cleaner concentrates assaying in excess of 65%Fe in each case. Spirals should be able to achieve in excess of 90% of the performance of the equivalent HL test. For the ITC, the spiral actually outperformed the HL test, both in terms of Fe recovery and mass yield. For the ITF, the mass yield to the cleaner spiral concentrate was approximately 90% of that achieved in the HL tests on the ITF samples at a grade of 65%Fe.

For magnetic separation, tests were conducted using a Medium Intensity Magnetic Separation ("MIMS") unit and a High Gradient Magnetic Separation ("HGMS") unit.

# 7.4.5 Magnetic separation

The DT tests conducted on the -0.063mm residual fraction from the HL tests exhibited similar grades and similar or slightly higher mass yields than those achieved in the whole ore DT tests. The concentrate grades achieved in the DT tests, ranged from 67.9%Fe to 70.3%Fe, and 0.60%SiO<sub>2</sub> to 3.02%SiO<sub>2</sub>; the silica generally increasing with depth.

The bench scale LIMS tests recovered slightly less material to a slightly lower Fe grade than the respective DT tests, although this difference was less significant for the lower depth lithologies. For these tests the concentrate grades ranged from 66.5%Fe to 68.2%Fe, and 2.03%SiO<sub>2</sub> to 3.74%SiO<sub>2</sub>.

The MIMS recovered between two and three times the amount of concentrate recovered by the LIMS. For the ITF material, this was achieved with essentially no loss of product quality.

For the ITC sample, there was a slight reduction in Fe and increase in silica grade in the MIMS test over the LIMS test. A second pass MIMS test conducted on the ITF sample recovered an insignificant quantity of additional concentrate (less than 1%), indicating that a single pass across the MIMS roll is sufficient.

The laboratory WHIMS tests indicated that a single WHIMS pass is unlikely to produce a product of acceptable quality – the single pass WHIMS concentrate grades varied from 53.3%Fe for the COL sample to 62.1%Fe for the ITF (North) sample. From these tests, the only lithologies for which two stage WHIMS produced an acceptable concentrate were the ITF and possibly the ITC, given that these concentrates would be blended with higher Fe, lower SiO<sub>2</sub> concentrates from gravity and LIMS/MIMS processing.

The HGMS tests were conducted on tailings material from the MIMS test for the combined ITF sample. These results indicate that the Jones type WHIMS separator and the HGMS separator performed similarly on the ITF material.

#### 7.4.6 Comminution testwork

The Zanaga PFS Phase I comminution testwork comprised Point Load Tests ("PLT") to determine the amenability of the iron ore lithologies to mining using bucket wheel excavators. Some 20 to 30 individual pieces were handpicked from all lithologies with the exception of BIF. Following this and as a lead in to the Zanaga PFS Phase II testwork samples were subsequently selected for the following comminution testwork: bond rod mill work index ("BRMWI"); bond ball mill work index ("BBMWI"); bond abrasion index ("BAI"); and semi-autogenous grinding ("SAG") mill comminution tests.

The PLT results whilst ruling out the use of bucket wheel excavators for mining, as these have a maximum hardness limit of the order of 10MPa, indicate that the upper lithologies at least would be amenable to being crushed using mineral sizers, for which a practical upper hardness limit of the order of 100MPa is advisable. For the ITT, conventional, i.e. jaw or gyratory, crushing is probably advisable, as RoM sized material is likely to present both perpendicular and parallel to the bedding. By extension, the BIF is likely to be harder still.

The BAI test results indicate that ITC, ITT and BIF could be considered as "mildly" abrasive; the upper lithologies are essentially non-abrasive. The reported BBMWI values are mostly relatively low at less than 13kWh/t, with one value representing a moderately hard figure of 15.5kWh/t. There appears to be no significant variations in values of the BBMWI with depth.

# 7.4.7 Preliminary flowsheet considerations

During the 2009 Scoping Study the earlier metallurgical process route proposed by the Company assumed that the BIF material was not processed and that the target product mix assumed 50% of concentrates for the sinter market with the remaining sold as concentrate fines for the pellet feed market or sinter fines blend.

Accordingly the assumed process plant consisted of a number of parallel and roughly equivalently sized process lines (modules), probably 8 or maybe 6 depending on sizing of the mills. Nominally 4 of these lines would be producing concentrates for the sinter market (fed with COL, ITG and ITF) in the Haematite Concentrator and the other four producing concentrate feed for the pellet market (fed with ITC and ITT) in the Itabirite Concentrator. To produce 45Mtpa of combined product, the RoM feed rate was assumed at approximately 100Mt, resulting in an assumed 12.5Mtpa per process line (for 8 lines). The principal plant configurations assumed:

Haematite Concentrator comprising: comminution circuit comprising single stage crush

and SAG mill to -6mm; coarse gravity separation via jigs; fine gravity separation with spirals (two to three stages); and magnetic separation using LIMS, MIMS and WHIMS; and

 Itabirite Concentrator comprising: comminution circuit comprising a single stage crush and SAG/ball mill to -0.3mm; fine gravity separation with spirals (two to three stages); and magnetic separation using LIMS, MIMS and WHIMS.

The modules would be commissioned in stages, for example 2 per year for 4 years. Given initial assessments for stockpiling considerations it was assumed that a more optimal consideration would be to initially maximise the proportion of COL/ITG/ITF treated and to reduce this over time. The concept therefore was to start with maybe 5 or 6 of the 8 modules configured for Sinter Fines, then over time for 2 to 4 of the modules to be converted to concentrate production for pellet feed or sinter fines blend.

Conversion would require: addition of a second stage of grinding; removal of the jig stage; no change to the spiral circuit, as the capacity of this circuit was essentially identical for each configuration – or at least they would be engineered to be identical; and increased magnetic separation capacity.

The current flowsheets proposed by ProMet considers separate flowsheets for the production of concentrates for the sinter market and concentrate fines with no ability to interchange certain aspects. Accordingly ore is fed in proportion to its occurrence in the deposit. Furthermore initial consideration was that a separate flowsheet was being considered for the ITC, which is no longer the case. Rather the current proposal is that ITC will be fed into either plant with 25% of it over the LoM being fed to the Haematite Concentrator and 75% to the Itabirite Concentrator. Notwithstanding this amendment, the mining optimisation analyses and reporting thereof assumes that all COL/ITG/ITF is processed in the Haematite Concentrator.

The key process units are essentially the same as described above, except that WHIMS is listed as optional, and this option is not currently being considered as part of the Zanaga PFS. Again a series of parallel circuits is being considered for each plant and overall plant throughputs are as follows:

- Haematite Concentrator to produce 15Mtpa of product; and
- Itabirite Plant to produce 30Mtpa of product expandable to 45Mtpa of product on cessation of processing through the Haematite Concentrator.

SRK notes however that the recent testwork results, specifically in respect of  $Fe_T$  recovery and yield indicates that further revisions to the proposed capacities of individual circuit components will be required and that based on the current assumed weighted average yields for feed to the Haematite Concentrator and the Itabirite Concentrator the annual throughput is planned at 35Mtpa and 92Mtpa respectively. For full production of the 45Mtpa of concentrate from the Itabirite Concentrator it is likely that this will need to be increased to 138Mtpa.

# 7.4.8 Preliminary flowsheet: Haematite Concentrator

The Haematite Concentrator is currently assumed to process COL, ITG and ITF in order to produce a total of 15Mtpa of concentrate which is considered to be suitable for sale as a sinter feed product.

The main **plant design** is based on crushing the ore with sizers to below 50mm. The product is then screened at 8mm with the oversize reduced to below 8mm using high pressure grinding rolls ("HPGR"). The combined products will be rescreened at 1mm with the -8+1mm

jigged to grade. The -1mm is cycloned at 65µm with the coarse size processed by a three stage spiral circuit and the fines by two stage magnetic separation – low intensity and medium intensity. The rougher spiral tails provide a final tails while other spiral tails are reground to improve yield. The final concentrates are filtered/screened to below 8.5% moisture while tails are thickened prior to dam disposal.

A primary crushing station will be installed (4,500tph) comprising of a two stage sizer system with the primary sizer discharging directly to the secondary sizer. The combination will reduce the size to 50mm. This combination could be in a mobile format which might be advantageous for mining the upper layers of the deposit. An assumption has been made that this material will be difficult to handle in a conical stockpile due to its clay content and this has led to a reduction in nominal operating hours to 7,000 since in plant storage to absorb minor disruptions is limited. The mining operation should plan for at least 30% rehandle to allow for FEL feeding of the plant during low productive periods from the mine. Product from the crushing section will be stored in a 3,000t bin to provide some plant stability.

For the **HPGR** circuit ore will be withdrawn from the storage bin and dry screened at 8mm. Low screen efficiency will not be a problem since the HPGR can handle the full range of size. The -8mm will be transferred to the jig section and there will be a tripper and bins ahead of the jigs to provide additional plant stability. The +8mm material will be transferred to the HPGR feed bin and then to the HPGR. The discharge of the HPGR will pass through a splitter with the edge material recycled while the centre product is fed to the jig feed bins.

For the **JIG** circuit, 5m wide jigs at a nominal feed rate of 50t/m of jig, is being considered and roughly one third of the new feed is expected to end up at the jigs. Jig feed will be withdrawn from the feed bins and fed to double deck wet screens – with 8mm and 1mm screen decks. The screens will provide even distribution across the jigs and the concept is either two screens to cover the width of the jig or a 4.5m wide screen. The jig concentrate will exit through the bottom of the jig with the discharge controlled by the discharge screen while the tails will be dewatered on a screen. The tails will be directed to a rod mill feed bin.

In the **Rod Mill** circuit the aim is to reduce all material below 1mm operating in open circuit. Since half the feed to the jigs is expected to be removed as concentrate then the rod mill will need to grind 500tph – and two 1.8MW mills will be needed. The rod mill preferentially reduces the coarsest material which avoids the need for recycling and reclassification. All the -8mm material – tails and 8mm screen undersize are combined in a storage bin and withdrawn as required by the mills. Mill discharge is either pumped to a set of screens or directly pumped to a cyclone feed pump. The section product will be pumped to cyclones to split at  $75\mu$ m – the -1mm+75µm going to spirals and the -65µm to LIMS. The cyclones may be replaced by Derrick screens at a slightly coarser size if this is technically and economically viable.

In the **spirals circuit** the screen undersize material will be cycloned at D50 of 65µm with the underflow being sent to the spiral circuit and the overflow to the magnetic separation circuit. The slurry will be diluted to 35% solids and split into the various spiral distributors. Approximately 2,000tph are expected to be diverted to spirals implying 16 banks of 12 triple spirals for the rougher section. These will produce a rougher concentrate for cleaning, a middling fraction for regrinding and a tails fraction. The concentrates are pumped to a cleaner section – roughly 600tph and a further 12 banks of 12 triple spirals and the concentrate of these to another 10 banks of re-cleaners.

Rougher middlings, cleaner middlings and tails will be sent to 2 x 2MW ball mills for grinding to -65µm while re-cleaner middling and tailings products are re-circulated to the feed. These

mills are nominally the same size as the rod mills for commonality of spares and will operate in close circuit with cyclones.

The final **magnetic circuit** will consist of triple drum LIMS to produce a final concentrate with the tailings combined and dewatered in cyclones. The cyclone underflow will feed a bank of double drum MIMS while the cyclone overflow will probably report to the tailings thickener. MIMS tailings will gravitate or be pumped to the tailings thickener.

The **spiral concentrate and LIMS/MIMS concentrate** will be combined and pumped to a concentrate thickener and thickened to 70% solids. This will be stored in agitated storage equivalent to 8 hours production. From the storage section the concentrate will be filtered to 8.5% moisture using disk or ceramic filters and conveyed to one of two rail loading bins or the product storage yard. The jig concentrate could go directly to the storage bins though this might require a second screen to accelerate drainage.

**Tailings** will gravitate to the tailings thickener – the plant will have at least two thickeners – and the tailings thickened to 55% solids. This will be pumped to the tailings storage facility.

Water will be recovered from the thickeners and probably from the tailings dam and recycled. With full recycling the overall water usage will be roughly  $0.8m^3/t$  while internal recycling will be the equivalent of  $4m^3/t$ .

# 7.4.9 Preliminary flowsheet: Itabirite Concentrator

The Itabirite Concentrator will be a four line autogenous grinding plant with provision for haematite and magnetite recovery. The grinding will require each line to contain a 15MW autogenous mill, a 9MW ball mill and a 5MW ball mill. It is envisaged that each line will be independent to the tailings thickeners though the concentrate and filtering circuit may eventually be combined.

The plant design is based on crushing the ore to -250mm and grinding to -5mm in a fully autogenous mill. The -5mm material will be magnetically concentrate using LIMS, followed by scavenging with MIMS. The combined magnetic fraction will then be ground to 100% passing -500µm, nominally 80% passing 250µm, where it will be separated into a +75µm fraction and a -75µm fraction. The former will be concentrated in spirals while the latter is concentrated in two stages of magnetic separation. Some of the rougher spiral tails will be discarded but cleaner tailings will be reground to below 75µm. The combined product will be thickened and filtered to below 8.5% moisture for transportation.

For the **primary crushing circuit** ore from the pit will be crushed in one of two primary gyratory crushers – nominally 60-89 machines to -250mm. These machines will be direct fed by truck. It is proposed that these machines are sited close to the main concentrator – though a semi mobile arrangement may be a more suitable arrangement. The crusher product will feed one of two tripper conveyors which will be situated in common gallery with both trippers capable of distributing to all four lines. This will provide a degree of redundancy and minor blending. The arrangement is similar to that of Hibbing Taconite (shown below) which is feeding 9 parallel lines. The current plan would be to have only a nominal dump pocket under the crusher but have a conveyor capable of pulling out at crushing rate onto the tripper feed belts.



Figure 7.2 Hibbing Taconite ore stockyard and plant

In the **autogenous circuit** the ore will be withdrawn from four tunnels to each mill – with each tunnel containing three apron feeders to give some back up capability but also to maximise the live capacity of the stockpile. The aim is that the stockpile will have 8 hours live capacity with a further 24 hours in dead storage. The twin feed to the stockpile means that this type of capacity should be sufficient. The autogenous mills will be 10.9m (36ft) diameter mills – nominally 15MW with twin 7.5MW drives. The discharge will be to vibrating screens screening at 5mm with the oversize recycled to the mill by conveyors and the undersize pumped to a bank of LIMS. At project start up no external crushers are planned though the circuit will be designed to allow these to be retrofitted.

For **rougher magnetic** separation it is a common experience that at relatively coarse sizes a substantial proportion of haematite is retained in the magnetite lattices and are collected on LIMS units – being released as the ore is ground finer. Since this plant is designed to handle the ITT transition ores then this effect will be enhanced by including a scavenging MIMS section to maximise recovery of the weathered magnetite.

At this stage ProMet has assumed that roughly 50% of the tailings can be generated at this point – and the proposed testwork programme will test that. This represents roughly 25% of the feed material. Slurry at 45% solids will be pumped to a twin LIMS distributor eventually feeding up to 10 magnetic separators on each line with the tailings being fed to a conjoined MIMS unit in a rougher/scavenger configuration. The possible gauss level of this second drum is currently being investigated. Tailings will gravitate to tailings cyclones with the cyclone overflow feeding a thickener and the cyclone underflow joining the thickener underflow stream

In the **secondary grinding circuit** concentrate will be screened at 500µm on multi deck parallel screens (Derrick screens) to produce a -500µm product with the oversize feeding a 9MW ball mill. The Derrick screens have the advantage of keeping coarse silica in the grinding circuit and significantly reducing re-circulating loads and are much less susceptible to misreporting than a cyclone circuit.

The ball mill will grind to 80% passing 300µm with a 50% re-circulating load with the discharge being pumped back to the screens. As ore data becomes available consideration will be given to building these mills as pebble mills to reduce the transportation issues with large quantities of grinding media.

In the **spirals circuit** the screen undersize material will be cycloned at D50 of 65µm with the underflow being sent to the spiral circuit and the overflow to the magnetic separation circuit. The slurry will be diluted to 35% solids and split into the various spiral distributors. Approximately 1,000tph are expected to be diverted to spirals implying 8 banks of 12 triple spirals for the rougher section. These will produce a rougher concentrate for cleaning, a middling fraction for regrinding and a tails fraction. The concentrates are pumped to a cleaner section – roughly 600tph and a further 6 banks of 12 triple spirals and the concentrate of these to another 6 banks of re-cleaners. Rougher middlings, cleaner middlings and tails will be sent to a 5MW grinding mill for grinding to -65µm while recleaner middling and tailings products are re-circulated to the feed.

The regrind circuit will consist of a 5MW ball mill situated in the grinding aisle in closed circuit with cyclones.

The final **magnetic circuit** will consist of triple drum LIMS to produce a final concentrate with the tailings combined and dewatered in cyclones. The cyclone underflow will feed a bank of double drum MIMs while the cyclone overflow will probably report to the tailings thickener. MIMS tailings will gravitate or be pumped to the tailings thickener.

For **concentrate handling** the spiral concentrate and LIMS/MIMS concentrate will be combined and pumped to a concentrate thickener and thickened to 70% solids. This will be stored in agitated storage equivalent to 8 hours production. From the storage section the concentrate will be filtered to 8.5% moisture using disk or ceramic filters and covered to one of two rail loading bins.

Tailings will gravitate to the tailings thickener – the plant may well have a thickener per line – and the tailings thickened to 55% solids. This will be combined with the coarse thickener bypass material and pumped to a tailings dam.

Water will be recovered from the thickeners and the tailings dam and recycled. With full recycling the overall water usage will be roughly  $0.8m^3/t$  while internal recycling will be the equivalent of  $8m^3/t$ .

#### 7.4.10 Metallurgical performance parameters: summary results and Zanaga PFS assumptions

The various metallurgical testwork programmes completed to date have largely been focused on composite samples predominantly sourced from all lithologies other than for the BIF. Furthermore the testwork samples were initially drawn from composite samples whose composite grades were generally higher than that currently reported in the latest block model estimates which support the current 2010 Statements. Accordingly and in the absence of further detailed testwork various adjustments have been made to account for: changes in the assumed flowsheet; reduced headgrades; and factoring of bench scale test results to reflect that likely to be achieved during operational scale conditions.

Furthermore, various metallurgical testwork have sought to define relationships between grade (%Fe<sub>T</sub>) and Fe recovery and yield. These however only extend to a lower grade of 36%Fe<sub>T</sub> and furthermore the metallurgical testwork in respect of BIF comprises a single sample.

Table 7.5 provides a summary of the composite grades of the samples and the then assumed

feed grades as noted in the 2009 Scoping Study. Table 7.6 presents the various concentrate qualities as sourced from the various lithologies. Accordingly achieving sinter product blend qualities were achieved by assuming a blend by weight of concentrates sourced from COL (25%), ITG (30%), ITF (25%) and ITC (20%).

Notwithstanding the above, it is important to note that there have been no sintering tests undertaken for any of the concentrates produced from the various composite samples tested. Accordingly it is not possible at this stage to confirm whether a substantive portion of the concentrates sourced from the ZIOP is marketable as a sinter feed concentrate. Potential for production of concentrate which is marketable as sinter feed concentrate is largely based on the concentrate qualities sourced from the COL/ITG/ITF with no specific indicators for such potential for the larger BIF Mineral Resource identified to date. Table 7.7 presents a summary of the preliminary metallurgical testwork for various lithologies and assuming specific process routes as well as size fractions. Table 7.8 includes the recent summary of the zanaga PFS. Specifically these also cover various process stages including jigs, spirals and magnetic separation options for all principal lithologies.

Following various flowsheet adjustments considered by Promet (Table 7.9) the preliminary metallurgical performance characteristics were further adjusted to reflect consideration of the preliminary in-situ block model grades as well as factoring to provide plant scale-up practicalities. Specifically the Fe recoveries were relied on as constant recoveries per lithology type in the mining optimisation process. A future refinement of this will consider the establishment of detailed relationships with Fe<sub>T</sub> grades.

Table 7.10 presents the results of the optimisation where the resulting Fe recoveries in combination with assumed concentrate grades are then utilised to back calculate the associated yields. In this instance impact of dilution, dilutants and the optimisation results in a reduction in overall yields from 35.68% to 34.14%. A key consideration in this analysis and assuming that the concentrate blends as noted in Table 7.5 remain applicable, then the total sinter blend produced amounts to some 149Mt which represents some 14% of total concentrate production. The limiting factor in this regard is current distribution of COL/ITG/ITF and ITC within the current block model and further increases in this material is dependent upon a combination of additional testwork and further exploration to identify additional Haematite Mineral Resources within the current exploration lease boundaries.

Unless the flowsheet operating conditions are amended, e.g finer grind, it is unlikely that the metallurgical test results as incorporated reported in Table 7.5 will be attained in practice given the reduced feed grades noted in the lasts optimisation analysis. In this instance both Fe recovery and to some extent yield may well be less than that currently assumed. Notwithstanding the above, further testwork is currently underway to establish appropriate relationships between RoM feed grades, Fe recovery and yield for the various iron ore lithologies noted.

Table	7.5	2009 Scoping Study composite grades and assumed feed gra	Ides
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Lithology	Composite Grade	Assumed Feed Grade
	(% Fe <sub>т</sub> )	(% Fe <sub>T</sub> )
COL	58.40%	50%
ITG	58.00%	50%
ITF	50.50%	44%
ITC	41.70%	36%
ITT	34.00%	31%
BIF	n/a	31%

 Table
 7.6
 2009 Scoping Study preliminary metallurgical testwork: concentrate quality

Lithology	Yield			Concentrate Q	Qualities			
	(%)	(% Fe)	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% LOI)	(% TiO <sub>2</sub> )	
COL	78.10%	62.50%	1.94%	0.057%	2.88%	2.56%	0.17%	
ITG	51.70%	62.20%	2.40%	0.039%	2.86%	2.82%	0.06%	
ITF	68.50%	68.60%	1.74%	0.039%	0.36%	0.13%	0.04%	
ITC	47.40%	66.90%	3.65%	0.050%	0.48%	0.15%	0.01%	
Sinter Blend		64.82%	2.37%	0.046%	1.76%	1.55%	0.07%	

# Table 7.7 2009 Scoping Study preliminary metallurgical testwork: process circuit results

Lithology	Process	Product	Yield	Fe Recovery	Grade
			(%)	(%)	(% Fe)
COL	Screening (-32mm +6.35mm)	Lump	40.00%	42.70%	62.40%
COL	Screening (-6.35mm +2mm)	Sinter Fines	43.00%	46.00%	62.50%
ITG	Screening (-32mm +6.35mm)	Lump	37.00%	39.40%	61.80%
ITG	Screening (-6.35mm +2mm)	Sinter Fines	19.00%	20.40%	62.20%
ITF	-150µm, LIMS	Sinter Fines	58.60%	79.40%	68.60%
ITF	-150µm, LIMS+WHIMS	Sinter Fines	68.50%	92.30%	68.30%
ITC	-150µm, LIMS	Sinter Fines	47.40%	74.90%	66.90%
ITC	-150µm, LIMS+WHIMS	Sinter Fines	61.20%	92.10%	63.70%
ITT	-150µm, LIMS	Sinter Fines	54.00%	87.80%	59.50%
ITT	-150µm, LIMS+WHIMS	Sinter Fines	57.40%	92.00%	58.60%
ITF	-150µm, de-slime, flotation	Sinter Fines	36.00%	49.00%	69.10%
ITC	-150µm, de-slime, flotation	Sinter Fines	26.40%	40.70%	69.00%
ITT	-150µm, de-slime, flotation	Sinter Fines	28.50%	52.90%	68.50%

# Table 7.8 2010 Zanaga PFS preliminary metallurgical testwork: process circuit results

Sample	Process	Yield	Fe Recovery		Qualities	
•	Stage	(%)	(%)	(% Fe)	(% SiO <sub>2</sub> )	(% AL <sub>2</sub> O <sub>3</sub> )
COL Average	Jig	4.70%	-	66.70%	1.78%	1.93%
	Spiral	19.40%	-	64.90%	2.33%	2.61%
	MIMS	25.10%	-	65.00%	2.39%	2.19%
	WHIMS	37.60%	55.00%	62.90%	3.05%	3.50%
ITG (South) Average	Jig	11.40%	-	66.10%	2.20%	1.11%
	Spiral	27.40%	-	65.30%	3.14%	1.28%
	MIMS	40.50%	-	65.40%	3.95%	1.03%
	WHIMS	48.40%	69.00%	64.40%	4.97%	1.13%
ITF (North) Average	Jig	14.80%	-	64.90%	5.58%	0.68%
	Spiral	38.70%	-	65.20%	4.62%	0.65%
	MIMS	44.00%	-	65.30%	4.53%	0.64%
	WHIMS	51.80%	84.20%	65.20%	4.75%	0.62%
ITC Average	Spiral	13.20%	-	65.10%	5.54%	0.45%
	MIMS	31.90%	-	65.10%	6.24%	0.40%
	WHIMS	44.50%	77.10%	64.10%	7.20%	0.44%
ITT Average	Spiral	18.20%	-	65.40%	6.31%	0.47%
	MIMS	34.40%	-	65.20%	6.03%	0.53%
	WHIMS	43.10%	79.20%	63.20%	7.76%	0.69%
BIF (North) Average	Spiral	24.00%	-	65.80%	6.22%	0.24%
	LIMS	42.40%	77.50%	67.80%	4.53%	0.19%

# Table 7.9 Zanaga PFS: block model adjusted metallurgical performance characteristics </t

Lithology	Preliminary B	Preliminary Block Model Analysis			Block Model Adjusted			
	Tonnage	Grade	Content	Yield	Concentrate	Recovery		
	(Mt)	(% Fe <sub>T</sub> )	(MtFe)	(%)	(% Fe)	(%)		
COL	91	45.95%	42	43.13%	63.11%	59.24%		
ITG	88	45.71%	40	52.23%	63.39%	72.42%		
ITF	310	39.66%	123	43.56%	63.60%	69.85%		
ITC	354	33.69%	119	27.60%	65.00%	53.26%		
ITT	105	31.94%	34	31.43%	66.19%	65.12%		
BIF	2,235	31.00%	693	35.10%	66.10%	74.84%		
Total	3 183	33 01%	1 051	35 68%	65 50%	70 78%		

Table 7.10 Zanaga PFS: mining optimisation analysis (USc85/dmtu)

Lithology	Optin	nisation RoM		Metallu	urgical Performa	ance	Optimisa	tion Concentration	ate
	Tonnage	Grade	Content	Yield	Concentrate	Recovery	Tonnage	Grade	Content
	(Mt)	(% Fe <sub>т</sub> )	(MtFe)	(%)	(% Fe)	(%)	(Mt)	(% Fe)	(MtFe)
COL	93	43.77%	41	41.08%	63.11%	59.24%	38	63.11%	24
ITG	90	43.51%	39	49.71%	63.39%	72.42%	45	63.39%	28
ITF	316	37.77%	120	41.48%	63.60%	69.85%	131	63.60%	84
ITC	360	32.20%	116	26.38%	65.00%	53.26%	95	65.00%	62
ITT	107	30.48%	33	29.99%	66.19%	65.12%	32	66.19%	21
BIF	2,260	29.71%	671	33.64%	66.10%	74.84%	760	66.10%	502
Total	3,227	31.59%	1,019	34.14%	65.50%	70.77%	1,102	65.50%	722

# 7.5 Tailings Storage Facilities ("TSF")

Following completion of the 2009 Scoping Study the projected throughput of processed ore has increased dramatically and assuming a concentrate production requirement of 45Mtpa is currently projected at some 130Mtpa which gives dry tailings arisings of 85Mtpa. At an assumed LTP of USc85/dmtu the total tailings arisings is estimated at 2.13Bnt which assuming a dry density of 1.6t/m<sup>3</sup> necessitates for storage capacity of 1,328Mm<sup>3</sup>.

To date three potential sites have been identified:

- Base Site 1 located within 3km of the currently proposed ZIOP Concentrator location and with total storage capacity of 922Mm<sup>3</sup>. This will include a paddock style arrangement with waste rock embankments constructed in specific valley locations around the TSF footprint. Tailings arisings will be pumped form strategic positions in order to fill the valleys within the TSF boundaries. The area has been disturbed and access routes exist for site investigation. An upstream construction method will be used with waste rock deposited directly upon coarse tails. The final embankment height is projected at some 85m to the 645mRL;
- Northern Site 2 is located to the northwest of open-pit 1 and 10km from the ZIOP Concentrator and has total storage capacity of 572Mm<sup>3</sup>. This will be a valley type impoundment with 40m high embankments to the north and is located in rugged virgin forested area with the watershed draining north into the Gabon. A staged construction is possible: 315Mm<sup>3</sup> expanding to 572Mm<sup>3</sup>; and
- Southwest Site 3 with storage capacity of 334Mm<sup>3</sup> is located approximately 14km southwest of open-pit 2 and has 50m high embankments to the south and west. Construction will be a valley type impoundment and the site is located in rugged virgin forested area on the western boundary of the Mineral Assets. The watershed drains south into the Congo Brazzaville and a significant pipeline will be required to transport tailings arisings for deposition.

It is evident that a second facility in addition to Base Site 1 will be required unless a possibility exists to deposit tailings in the mined out pits through careful sequencing. Base Site 1 has been recently evaluated with the principal advantages being:

- Proximity to the ZIOP Concentrator thereby reducing pumping related operating expenditure;
- Location in relatively low lying and flat topography within valley features;
- Ease of water management for decanting and pumping back to the ZIOP Concentrator; and
- Minimal disturbance to virgin forested areas.

The key disadvantages are related to: the larger surface area which will be prone to desiccation during the dry season and leading to dust formation; the increased volumes of waste rock required for the starter dyke constriction around the perimeter; and should acid rock drainage ("ARD") issues arise with the tailings arisings, a liner system may be required. Accordingly the substrate should be investigated to establish the presence of low permeability clay material.

SRK notes that the embankment walls may need to be constructed from borrow material as insufficient volumes of waste rock may not be available from open-pit 1. Ongoing investigations include: determination of a detailed water balance; geotechnical site investigations and laboratory analysis to define foundation conditions for engineering designs.

# 7.6 Water Management

The average yield of surface water catchments around the proposed development area has been determined from field measurements which indicate that 1,908m<sup>3</sup>/day/km<sup>2</sup> in November and 1,400m<sup>3</sup>/day/km<sup>2</sup> in February. These measurements approximate to 14% of the monthly average of net precipitation that occurred during the specific measurement month. Average run-off during the rainy season is believed to be closer to 30% (based on regional flow records).

Drainage in the Loungou Catchment flows in a north-easterly direction to eventually joining the Ogooué River. The Loungou and other drainage systems to the north and south, including the Lefou system, drain northeast towards the Ogooué River. South of the Loungou watershed and east of the Lefou watershed the Gounongo River catchment drains in a south-westerly direction and drains the Niari and Kouilou River catchments.

The Ogooué River is the principal river of the Gabonese Republic ("Gabon") and is some 1,200km long. The Ogooué River rises in the northwest of the Bateje Plateaux near Kengue in Congo Brazzavile and passes through the Mineral Assets to the east of the ridge. Accordingly the Mineral Assets are located within the headwaters of the Ogooué River and the Ogooué Basin mostly consists of undisturbed rainforest and grasslands as well as well as extensive fauna.

Initial water demand for the mine site is based on the wash requirements for one tonne of water per one tonne of concentrate (40% of the water is recycled). Accordingly for an estimate of 130Mtpa to produce 45Mtpa of concentrate, some 125Mlpd will be required.

The Loungou River may present a potential source for water extraction, however further investigation of the flow conditions is required. Recent analysis indicates that there is sufficient water to support say 30Mtpa of concentrate, however significant further work is required in order to demonstrate the most appropriate long term sustainable solution. Furthermore in order to combat any shortfall in the dry season it may be necessary to establish a supply storage structure, e.g. a dam on a smaller tributary. For start up and in the first years of production, the Tailings Storage Facility will comprise water retaining structures to collect, store water that will be delivered to the plant to meet water make up requirements.

For the deep water port facility water is likely to be required for maintaining a minimum moisture content for the concentrate as well as assisting in dust suppression. Based on a range of between 30Mtpa and 45Mtpa of concentrate product some 1Mlpd to 1.5Mlpd will most likely be required. In this instance groundwater abstraction would appear to be the most likely source possibly comprising a well-field of low yielding abstraction boreholes. SRK notes the main risk of abstraction in coastal regions as being saline intrusion i.e. drawing in saline water into a previously freshwater environment.

The current open-pit optimisation shells daylight in the immediate vicinity of the Loungou River which dissects the Zanaga Ridge. Should development of these pits not be limited then surface water diversion will be necessary. Notwithstanding this aspect, smaller diversions, culverts or other surface water management will likely be required given the general amount of surface water present.

The principal risks with respect to water management would appear to be not identifying a sustainable supply for mineral processing at the mine site at 45Mtpa concentrate production limit. In addition potential for trans-boundary disputes relating to potential flow and quality impacts exists, specifically in respect of the Ogooué River, a sensitive and important resource in neighbouring Gabon. Other risks comprise hydrogeological considerations for the open-pit

mining operations, specifically with respect to potential requirements for de-watering and/or management of ingress from surface water.

# 7.7 Infrastructure

The following section includes discussion and comment on the mine-site and transport corridor infrastructural aspects of the ZIOP. Accordingly focus herein is in respect of: the mine-site; railway transport corridor; and the deepwater port. In addition technical details are presented in respect of the current status of site specific investigations as well as the degree of technical work completed to date.

# 7.7.1 Mine site



The mine site infrastructure is under the joint responsibility of WSP, EGIS, ProMet and SRK. The preliminary mine-site layout assumes:

- All waste rock dumps located to the east of the iron ore deposits located on the Zanaga ridge;
- Three distinct open-pits broadly centred on the North Zone (open-pit 1), Central Zone (open-pit 2) and the South Zone (open-pit 3)of the iron ore deposits;
- The ZIOP Concentrator located immediately to the west of the open-pit 2;
- TSF facilities comprising: Base Site 1 located to the west of the ZIOP Concentrator; and Site 2 located to the northwest of open-pit 1. Base Site 1 is located outside of the current Mineral Assets' licence boundary as is the south-western portion of Site 2;
- Primary access including: upgrading of existing roads; development of new roads including the potential diversion road located to the east of the iron ore deposits; establishing the connection to the proposed railway transport from the southern licence boundaries of the current Mineral Assets;
- Materials handling facilities comprising belt conveyors, stackers, bucket wheel re-claimers and train loading stations; and
- A residential camp located immediately to the north of the TSF at Site 2.

Two potential borrow material sites have been identified in the immediate vicinity of the Mineral Assets: a southerly dipping strong pegmatitic intrusive unit located in the centre of the lease area and to the north of the current camp location; and a granitic unit which lies to the east of the iron ore deposits.

The intrusive material comprises a very strong rock, however this may have the potential to degrade, and accordingly various physical and mineralogical testing is planned during the near future. Furthermore the intrusion is cross-cut by the Lougou River, however given the apparent size of the of the intrusion and the volume of construction material required any impact on the Lougou River should be avoidable. Whilst the granite is similarly very strong, the lateral/areal extent is currently unknown. Grab samples have been sourced from both types of material and initial analysis indicates that these are suitable materials, however larger samples are required to confirm borrow material suitability.

General site investigations of the planned mine site infrastructure are currently underway and comprise preliminary boreholes and trial pitting supplemented with geotechnical logging with Soil Penetration Testing ("SPT") testing and sampling for laboratory testing.

# 7.7.2 Power Supply

Power studies are currently focused on identifying optimal consideration for generation/supply, transmission and distribution. Given the scale of proposed operations and location both reliability and security of energy supply are the overriding considerations.

For the mine site the principal options comprise either:

- Power generation by HFO or diesel oil using either gas combustion turbines or diesel engines with the latter probably favoured due to their enhanced efficiency on part load and also the de-rating of gas turbines in warm climates; or
- Electric grid power supply through purchase from Compagnie Electrique du Congo ("CEC").

For the deep water port facility the preferred option is grid supply via the Société Nationale d'Electricité ("SNE") network to a dedicated substation at the port site.

The current installed power requirement for the mine site is estimated at approximately 300MW comprising: mining operations (4MW); crushing (10MW); conveying (19MW); concentrator (250MW: **Haematite Concentrator** 75MW; **Itabirite Concentrator** 175MW); product stockpile and layout (11MW); and services (7MW). On this basis annual energy usage is assumed at some 2.4TWhrs and initial indications for power purchase from CEC via 220kV lines is some USc8/kWhr with a lower limit of USc6/kWhr also under consideration. Installed power assumed for the port is 20MW with an annual energy usage of 93GWhr.

#### 7.7.3 Materials Handling

Concentrate products are stockpiled at the mine site with stackers prior to reclaiming and loading onto rail wagons for shipment to the port site where the wagons are unloaded and products stockpiled prior to reclaiming for ship loading.

Materials handling equipment at the minesite includes belt conveyors, stackers, bucket wheel reclaimers and train loading station. Port site equipment includes train tipplers, belt conveyors, stackers and bucket wheel reclaimers. The capex for materials handling equipment is detailed in Table 7.11 and reflect potential savings (US\$425m) as indicated by the results of a recent Dynamic Simulation study which are not relected in the total project capital expenditure provided in Table 7.17.

 Table
 7.11
 Preliminary materials handling capex

Designation	Mine Site Capital Expenditure (US\$m)	Port Site Capital Expenditure (US\$m)
Main equipment	36	83
Transport & Construction	54	124
Earthworks	36	65
I&E	37	86
Total	163	358
Spares	1	2
On costs	38	83
Contingencies	24	54
Total including contingencies	226	497

#### 7.7.4 Transport Corridor

The transportation of concentrates from the ZIOP concentrator has been the subject of various technical studies specifically assessing the technical feasibility and associated economic efficiency of both rail and pipeline options over an initial route length of 440km. The 2009 Scoping Study resulted in favouring rail over pipeline given the Company's strategic focus on the production of concentrate fines which is suitable for sintering. The size distribution specification of this product is approximately 42% by weight passing 150µm, which in conjunction with its rheological characteristics make this concentrate unsuitable for transportation via the cheaper pipeline alternative. Pipeline transportation would necessitate further grinding to enable suspension of solid such that practical pump velocities and power requirements are economically viable. The Company further assumes that the market premium achieved for sinter fines exceeds the balance of additional comminution and filtration costs and the reduction in transportation costs arising from the pipeline option.

The various rail route options/configurations assessed during the 2009 Scoping Study comprised a total of 8 options which also focused on a key consideration of whether to continue with existing Cape gauge (1,067mm) or to introduce new Standard gauge (1,435mm). Furthermore where rail tracks exist the options considered were to: refurbish existing Cape gauge superstructure; re-gauge existing rail line with new Standard gauge superstructure; construct new track (earthworks and superstructure) alongside existing rail line. In all scenarios additional works for curve easement are required in order for the heavy and long iron ore trains to operate at suitable speed.

The route options considered can be broadly described as north-south and east-west and consider potential routes for connection to the existing rail network: Loudima to Pointe Noire for the north-south option; and Mossendjo to Point Noire for the east-west option. Two of the options considered comprised entirely of new tracks. The length of the new track required from the mine site to Loudima is approximately 215km and the length of the track to be upgraded between Loudima and the port site was 220km. Analysis of the various options including a net present cost approach based on a 25 year operation and a discount rate of 13% per annum indicated that the north-south route via Loudima as the optimal scenario with Standard gauge providing improved economic performance over Cape gauge at transport rates greater than 25Mtpa.

The preferred transport corridor currently under assessment as part of the Zanaga PFS assumes the construction of a single line rail corridor connecting the mine site and the deep port facility at Pointe Noire. This change is a direct result from the decoupling of the road and rail alignments by replacing the proposed continuous road parallel to the rail alignment with a series of access points.



Figure 7.4 Railway alignment and profile

The current analysis supersedes that originally proposed in the 2009 Scoping Study and has resulted in a shorter 350km length traversing various terrain from Pointe Noire to the mine site and nominally delineated as follows: Pointe-Noire Coastal basin; Mayombé Mountains; Plateau of Great Niari Depression; Great Niari Depression; ascent of Chaillu Mountains; Chaillu Mountains and the mine site.

The current technical studies in respect of route construction are largely focused on the design of infrastructure for evaluation of: earthworks; hydraulic structures; foundation; pavement layers; and railway rolling stock. Furthermore recent changes to the design considerations have resulted in a reduction in the railway platform from 8m width to the minimum of 5.92m width.

A key factor in the design construction and subsequent capital cost estimation is the accuracy of topographic data as well as the completion of site specific geotechnical assessments. In respect of the former SRTM 90m grid data has been used to generate a terrain model for input to the Zanaga PFS. This however has a number of limitations as the SRTM90 signal is a reflection of tree canopy elevation which requires careful understanding of the inherent difficultly in accurately interpreting ground elevations. Other limitations include: a combination of missing data and infilling using SRTM300 data leading to a loss of resolution; signal losses where slopes in the order of 40° from the horizontal are present resulting in "masking" of steep features; and masking of stream beds and narrow steep sided gullies due to vegetation growth and "tree canopy smoothing".

The current route analysis has provided preliminary estimates for the following quantities:

- Earthworks totalling 88Mm<sup>3</sup> and comprising 47Mm<sup>3</sup> of cuts and 41Mm<sup>3</sup> of fills. These assessments are reduced from previous technical analysis following: limiting the new build for the railway platform and upgrading of existing roads; reduction of the railway platform from 8m to 5.92m; shortening of the overall route; and replacement of significant fills with bridges;
- Bridge Structures comprising bridges for crossing identified rivers and to replace fills of more than 35m high. The current assessment indicates that some 49 bridges in total are required for a total length of 7,900m: 30 bridges (<50m: 1,200m); 10 bridges (50m to 100m: 860m); and 9 bridges (>100m: 5,800m). The uncertainties accompanying this estimate are invariably significant due to the requirement to: complete a detailed longitudinal profile; complete an assessment of the geotechnical foundation material for each site; and determine the type of bridge (concrete, mixed metal/concrete or metal) suitable for each crossing;
- Track foundation layers and pavement structures comprising sub-grade, blanket and ballast with total volume of 1.9Mm<sup>3</sup>;
- Drainage and hydraulic structures numbering 1,050 and comprising 350 concrete box culverts, 700 spiral wound steel culverts and about 700km of ditches and concrete gutters for drainage of platforms (concrete and unlined). These have been determined assuming type ratios for the project environment where the route alignment comprise: waterfalls, diverging ditches and the draining network's downstream protection structures; and
- The railway track comprises a total of 385km of rail with sleeper spacing at 1,800/km to cater for the high 40t load. The sleeper construction is assumed as mono-block prestressed concrete sleepers which incurs less maintenance than alternative wood construction. The current design assumes a single track rail line with passing places using conventional rail design methodologies. This is considered to be generally appropriate for the type infrastructure and usage proposed and whilst offering significant capital expenditure savings may result in reduced efficiency in maintenance of the rail infrastructure and provision of emergency support.

Table 7.12 presents the preliminary capital expenditure estimates for the railway track and associated infrastructure which does not include: rolling stock (US\$222m); road construction and upgrade for project construction (US\$107m); and contingency/on-costs (US\$43m): which are all included in the total project capital included in Table 7.17.

Table 7.12 Preliminary railway capex

Designation	Capital Expenditure (US\$m)
Mobilisation / demobilisation	173
Preliminary works / Ground preparation	37
Earthworks	605
Pavement / fourndation layers	101
Drainage and hydraulic structures	297
Structures	326
Railway track	207
Total	1,746
Technical contingencies (15%)	262
Engineering (5%)	87
Total including contingencies	2,095

The principal operating specifications assumed for the Zanaga PFS are: transportation of 51Mt wet (45Mt dry plus 13% moisture); fuel 150,000tpa; containers at 10,000 twenty foot equivalent units ("TEU"); and maximum gradients of 1.0% and 1.5% from Zanaga to Pointe Noire and Pointe Noire to Zanaga respectively. Ore trains will be hauled by 4,300 HP diesel locomotives (equivalent to type SD70Ace produced by EMD) with wagons having capacity of 137t. Accordingly at some 350 operating days per year the transportation requirements necessitates some 8 trains per day with 136 wagons hauled by 4 locomotives with each train being some 1.6km long. General cargo and fuel will be transported by one weekly train with 18 tank wagons (97m<sup>3</sup> capacity) and 24 container wagons (double stack) hauled by two 1,500HP locomotives.

In order to progress the current technical studies to Feasibility Study level a significant further site specific investigations are required to provide a sufficiently detailed foundation for the required level of technical analysis. Specifically, SRK notes the following key components:

- Review SRTM90 with new LIDAR base topographic modelling to establish optimal route alignment;
- Geophysical surveys using both ultra ground penetrating radar and seismic refraction to estimate rock volumes within main cuttings (greater than 20m deep);
- Complete intrusive site investigation to validate slope angles: boreholes and laboratory testing);
- Complete hydrogeological study and modelling along proposed alignment route;
- Complete preliminary borrow pit surveys to identify sources of material for construction. Specifically an earth works balance within reasonable truck haul distances;
- Complete numerical slope stability analysis to establish the upper and lower bound slope angles, specifically as the slope angles proposed are considered steep for long term stability within regions of high rainfall;
- Establish whether similar axle loads have been reliably used for similar heavy freight
  operations in similar climatic and topographic conditions; and
- Conduct further analysis to address issues of rail maintenance and recovery of catastrophic system failures (e.g. derailments): current assumptions only allow for relatively minor maintenance equipment. Further analysis is also required to address ballast tamping, rail realignment, rail cracking, welding inspection and sectional rail replacement.

#### 7.7.5 Port

The proposed deep water port and rail head site is located 9km north of Pointe Noire (the "Pointe Noire Port", hereinafter the "PNP") adjacent to the Atlantic Ocean and extends over some 2km<sup>2</sup>. The 2009 Scoping Study identified four potential sites with site 2 being the

preferred option with others (specifically sites 3 and 4) being ruled out due: to higher capital and operating expenditure (including high maintenance) resulting from long access trestles and dredged access channels. Site 1 indicated the lowest capital and operating expenditure, however rail access was limited due to the nearby population centre and the loading platform would also be exposed to deep ocean waves as a result of a lack of protection by means of shallow water.

The PNP facility comprises a piled access trestle extending approximately 2.0km from the beachfront into the sea with a loading platform at the seaward end of the access trestle capable of berthing cape size vessels. Cape size vessels are those ships originally too large to transit the Suez Canal having to pass either Cape of Good Hope or Cape Horn to travel between oceans. Standard cape size bulk carriers ("Bulkers") are around 170,000t deadweight ("DWT"); Cape size vessels with drafts less than 18.91m are able to navigate the Suez Canal. Iron ore carriers of approximately 230,000t DWT are in regular use and some operations are able to ship with very large iron ore carriers ("VLOCs") of around 325,000t DWT. Further considerations for the establishment of the PNP are the technical feasibility and economic viability of further dredging to facilitate the use of VLOCs.





The current configuration comprising both onshore and offshore elements includes consideration for: loading platform and its trestle; shore protection; service labour; yard

preliminary structures and associated maintenance port facilities. Key associated equipment include: support vessels; ship-loaders and conveyors; and other yard equipments.

The onshore works comprise or rail car unloading facilities using a single line double car tipper to unload ore which will distribute to a stockyard via conveyors and conventional belt feed stackers. The stockyard capacity is assumed at one month's supply of product (3.75Mt) which will be recovered using bucket wheel reclaimers for transport to twin ship loaders via conveyor. The port site also accommodates a service port which will allow transhipment of consumables for the mine site from the PNP to the mine site rail head for onward shipment.

The offshore works comprise a trestle jetty leading to an area widened to accommodate ship loaders. Currently no breakwater or turning pockets are envisaged to allow ship movements or loading. A dredge channel is proposed to connect the loading facility to the open sea using a natural break in the offshore reef.

The principal reporting areas for capital estimation in respect of the PNP are subdivided into the following key areas:

- Marine works: mobilisation/demobilisation; main dredging works; trestle; loading platform and mooring dolphins; shore protection; service harbour; and navigational aids;
- Port yard: dry works/site preparation; civil works; buildings; general facilities and networks; handling equipment; ship-loaders; conveyor lines; other equipment; tugboats and other boats; and support vehicles; and
- Materials handling: train loading stations; belt conveyors; stackers; and bucket-wheel reclaimers.

The physical characteristics of the marine works proposed comprise:

- Channel: 185m wide with a 20.7m dredging level to secure a minimum depth during operations of 19.7m;
- Mooring Pockets extending 350m by 75m each and dredged to 23m to secure minimum depth during operations of 22.0m;
- Trestle: 2.0km long with a width of 8.50m; and
- Loading platform and mooring dolphins: 330m long and 27m wide.

 Table
 7.13
 Preliminary port capex

Designation	Capital Expenditure (US\$m)
Marine works	221
Port yard	43
Other	52
Total	316
On-cost (23.2%)	73
Contingency(1.9%)	47
Total including contingencies	437
Upgrade for use of 250,000 DWT vessels	25
Total	462

The current configuration incorporates the results of the recently completed dynamic simulation study which includes the complete materials handling system from mine to port. This has resulted in various adjustments to the previously assumed considerations including: a reduction in stockpile capacities at the mine site (1 week live stock, plus dead stock) and the DWP (2 weeks live stock, plus dead stock); and a reduction in the number of equipment including one train loading station at the mine site, one railcar dumper and one rotary ship-loader at the DWP.

Subsurface conditions at site 2 comprise: beach sands and dune deposits; marshy areas of mangrove; loose sands with rock at depth; and both near surface and deep water tables.

An onshore geotechnical investigation is currently underway to provide characterisation of the ground conditions for construction, this programme comprises: offshore seismic survey along the trestle and dredge line; onshore seismic survey; 60m deep boreholes located on the seismic survey lines; trial pits; and plate tests. The deep bore-holes will be used to correlate the onshore seismic survey results and to enable interpretation between onshore and offshore conditions. It is expected that this will enable sufficient characterisation of the local ground conditions to support capital cost estimation at a PFS level.

The technical investigations completed to date for both the onshore and offshore components are to some degree limited in that: for the onshore analysis for coastal erosion, drainage (particularly within the stockpile areas), and explosive storage and handling is incomplete; and similarly for the offshore aspects assessments of wind and wave action, sediment transport, geotechnical conditions, requirements for hard dredging and potential subsea blasting, and surf zone bathymetry is also required. Notwithstanding the above the following are planned for completion during the Zanaga PFS and the Zanaga FS stages including:

- Completion of onshore geotechnical and near-shore geophysical investigations to establish foundation and ground water conditions including verification of dredging and trestle supports which are currently anticipated to be driven piles;
- Development of a "service harbour" and inward/outward philosophy including storage and warehousing facilities;
- Development of coastal erosion models and establishment of "standoff" distances for port facilities dependent upon erosion estimates; and
- Collection of sea state, current and sedimentation transport data to assess berthing conditions, berth availability and requirements for maintenance dredging.

SRK notes that no offshore intrusive testing (Cone Penetration Test ("CPT") or boreholes) are planned during completion of the Zanaga PFS and this aspect of the investigation is planned for the Zanaga FS.

# 7.8 Environmental Management

The following section includes discussions and comment regarding the current status of environmental and social aspects of the ZIOP including: a summary of the current local regulatory and international standards to be applied; the current interpretation of the environmental setting; the status of environmental work completed to date as part of the Zanaga PFS; and a summary of the key environmental issues likely to impact the ZIOP.

# 7.8.1 Regulatory approvals required for development of the ZIOP

Both mining and environmental legislation require that an Environmental and Social Impact Assessment ("ESIA") is completed for the ZIOP. The Law on Protection of the Environment (Law 03-1991) requires that an environmental assessment is undertaken for all economic development projects in Congo Brazzaville (Article 2). Specifications for implementation of this provision are given in the decree on social and environmental impact assessment (Decree 415-2009). This decree expects that an ESIA will:

- Enable the project proponent to plan, devise and implement a project which minimises
  negative environmental impacts and maximises the benefits from costs and efficiency;
- Ensure the authorities can grant authorisation with full knowledge of the facts; and
- Ensure public understanding of the project development programme and its effects on the environment and the populations concerned.

The ESIA procedure is explained in Articles 15 to 42 of the Decree 415-2009 for which the key points are:

- The proponent must notify the government of the proposal to undertake the Project and intention to undertake an ESIA process;
- Permission must be obtained from the government to embark on the ESIA process and will be based on a terms of reference ("ToR") for the ESIA (the "ESIA ToR");
- The GoCB (specifically the Ministry of Environment: the "MoE") must approve of the consultants or organisation/s appointed to undertake the ESIA;
- During the ESIA, the project proponent must remain in contact with the MoE to ensure all requirements are satisfied;
- Stakeholder engagement is required at the beginning of the ESIA process and a public hearing must be held after the ESIA report has been submitted for review and approval;
- There must be a register of all comments made by stakeholders;
- The public hearing gives rise to a memorandum which forms an integral part of the approval dossier for the environmental impact notice or survey; and
- A technical approval commission is convened within fifteen days of the date of receipt of the memorandum and has a maximum of three months from the date on which the promoter files the dossier, to examine the environmental impact notice or survey report.

The 2010 Addendum contains Environmental Commitments in Article 8 and the main commitments are as follows:

- MPD will ensure that the environmental and social aspects of the project/ operation will comply with Congolese environmental regulations as a whole and international good practice, as defined by the World Bank Group;
- MPD will undertake an ESIA for the ZIOP. The Zanaga ESIA will be undertaken in specific stages and the government will be invited to participate in each stage of the ESIA process;
- The GoCB will be required to advise on relevant legislation and permits required for the project during the ESIA process and will facilitate permitting processes required to undertake the baseline studies;
- The GoCB will allocate staff for participation in the ESIA process and the staff will be assisted, as necessary, by national or international experts;
- MPD undertakes to use teams of local consultants or experts at each stage of the ESIA process and to foster high-quality local expertise in this field; and
- A fee of CFA20m will be paid by MPD for the services the State will be required to perform as part of the ESIA process from the date of delivery of the draft detailed plan until the effective issuance of the environmental licence and related terms of reference.

The steps in the ESIA and environmental authorisation process that are defined in the Addendum comprise: drafting and approval of the terms of reference (6 months); selection of consultants and experts to draw up the ESIA (3 months); performance of the studies (10 months); public enquiry (3 months); technical assessment committee (6 months); and the issue of the environmental licence (1 month). These correlate with the ESIA procedure given in Decree 415-2009.

The 2010 Addendum has a provision on meeting of deadlines (Article 8.3). This states that the periods defined in the Addendum give the maximum time allowed for performing the

activity concerned. Given the impact of a possible delay on the jointly agreed programme of studies and works, each party undertakes to organize itself in such a way as to perform any activity it is tasked with within the set deadlines. A deadline may be extended only in exceptional circumstances and for duly justified reasons. In the event of a deadline not being met for any reason whatsoever, the parties shall meet to organize a process for speeding up the remaining activities, making up for lost time and ensuring that the environmental licence can be issued by the date originally planned.

# 7.8.2 International Standards

The Company has committed in the 2010 Addendum to the 2007 Minerals Agreement to undertake the ESIA for the ZIOP in a manner that: (a) satisfies the requirements of the regulations of Congo Brazzaville; and (b) meets the standards of best international social and environmental impact assessment practice, as developed by the International Finance Corporation ("IFC").

The IFC Performance Standards published in April 2006 are entitled: (1) Social and Environmental Assessment and Management System; (2) Labour and Working Conditions; (3) Pollution Prevention and Abatement; (4) Community Health, Safety and Security; (5) Land Acquisition and Involuntary Resettlement; (6) Biodiversity Conservation and Sustainable Natural Resource Management; (7) Indigenous Peoples; and (8): Cultural Heritage. SRK notes that all of the IFC Performance Standards are applicable to the ZIOP.

IFC Performance Standard 1 establishes the importance of: integrated assessment to identify the social and environmental impacts, risks, and opportunities of projects; effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and the client's management of social and environmental performance throughout the life of the project.

IFC Performance Standards 2 through 8 present requirements to avoid, reduce, mitigate or compensate for impacts on people and the environment, and to improve conditions where appropriate. Where social or environmental impacts are anticipated, the client is required to manage them through its Social and Environmental Management System consistent with Performance Standard 1 (IFC website, March 2009).

The IFC Performance Standards are matched with corresponding Guidance Notes that provide guidance on the requirements contained in the standards and on good sustainability practices to help clients improve project performance. These Guidance Notes are updated on a regular basis. The most recent versions were published in July 2007.

In addition to the IFC Performance Standards, the Company intends to observe the World Bank Group Environmental, Health and Safety Guidelines (known as the 'EHS Guidelines') that are relevant to the Zanaga project. Among these are: EHS General Guidelines; EHS Guidelines for Mining; EHS Guidelines for Ports, Harbours, and Terminals; EHS Guidelines for Electric Power Transmission and Distribution; EHS Guidelines for Waste Management Facilities; and EHS Guidelines for Water and Sanitation Facilities.

Furthermore, the Company intends to observe other international standards that are recognised by the IFC and the International Council on Mining and Metals ("ICMM") and also African Development Bank standards and guidelines. Together, the IFC standard and these other standards keep abreast of developments in international law.

The Company has commissioned the compilation of a social and environmental design criteria report, which summarises key principles and criteria defined in legislation and international standards that need to be taken into account in the planning and design of the Zanaga project.

#### 7.8.3 Environmental Setting

**Physical Environment:** The main geomorphological zones of the Congo Brazzaville are, from west to east: the Pointe Noire Coastal Basin, the Mayombe Mountain Range, the Great Niari-Nyanga Depression, the Chaillu Massif, the Bateke Plateau and the northern parts of the country. The mine site is located on the eastern side of the Chaillu Massif, near the Bateke Plateau. The marine terminal is located in the Pointe Noire Coastal Basin. The rail route between the mine and marine terminal will traverse the Chaillu Massif, the Great Niari-Nyanga Depression, which is about 200km wide, the rugged Mayombe Mountain Range and then plains of the Pointe Noire Coastal Basin.

The climate in Congo Brazzaville is tropical with high levels of humidity and high rainfall. The climate is fairly consistent year-round, with the average day temperature being a humid 24°C and night time temperature of 16°C to 21°C. Rainfall is seasonal with a pronounced dry season extending between June and September and a short dry spell in the January-February period. Annual rainfall is typically 1,200mm in the coastal regions and in excess of 2,000mm in the Chaillu Mountains.

The mine site weather station has recorded an average of 3,700mm over the past two years suggesting a micro-climate with atypically high rainfall compared with surrounding areas. The highest 24 hour rainfall recorded over this period was 186mm. The dominant winds at the mine site are from the west-south-westerly and the south-westerly sectors. The winds are generally of low strength.

The mine site topography features steep hills and valleys. The Zanaga Ridge is a headwater and catchment divide for two regional river systems; the Ogooué River catchment to the north east which flows across the border into Gabon and the Niari River catchment to the south west which joins the Kouilou River, one of the major drainages of Congo Brazzaville.

The Zanaga ridge supports a water table which is elevated above the surrounding topography and springs are common where transverse valleys incise the sides of the ridge. These springs provide water sources for villages located along the crest of the ridge.

The transport corridor crosses numerous watercourses (about 180 catchments) between the mine site and Pointe-Noire. Ground water along the transport route is expected to occur dominantly in fractured aquifers with, in many lithologies, perched aquifers in the weathered zone. The coastal zone is likely to support aquifers in sands, coarse clastic and alluvium deposits.

The groundwater at the mine site is generally of good quality but is slightly acidic and with slightly elevated levels of silver, aluminium, selenium and zinc. Groundwater quality is variable along the transport corridor but the overall quality is good, although groundwater from the Chaillu Mountains is slightly acidic. Elevated levels of cadmium, zinc and lead have been detected in groundwater from the Mayombé Mountains, these are considered to be naturally occurring.

Work on the acid rock drainage and metal leaching potential of ore, tailings and waste rock from the Zanaga resource to date indicates that this is low.

**Biological Environment:** The vegetation between the mine site and the marine terminal is comprises forest, savanna and grasslands. Moist broadleaf forests predominate in the mountainous areas; on the Chaillu Mountains and the Mayombé Mountains. The mine site is on the eastern side of the Chaillu Massif close to the Bateke Plateau. The vegetation of the

Bateke Plateau and the Great Niari-Nyanga Depression is a mix of dry and moist forests, savanna and grasslands.

Habitats in the Congo Brazzaville are considered to be important for the conservation of large mammals in Africa. They feature an abundance of mammals including primates, such as gorillas and chimpanzees, forest elephants and African buffalo. They are also important for the conservation of small mammals, birds, amphibians, reptiles, and invertebrates. The moist forests that occur on the Chaillu Mountains and the Mayombé Mountains are known to be areas of high biodiversity and particularly rich in animal life.

The Congo Brazzaville fauna includes several species listed by the International Union for the Conservation of Nature ("IUCN") as Critically Endangered (western lowland gorilla), Endangered (Chimpanzees Pan troglodytes), Vulnerable (Mandrill *Mandrillus sphinx*, Hippopotamus *Hippopotamus amphibius*), Near-Threatened (forest elephant *Loxodonta africana cyclotis*, White-bellied *Pangolin Manis tricuspis*, Giant pangolin *Manis gigantea*, Golden Cat *Felis aurata*, Leopard *Panthera pardus*, Bongo *Tragelaphus eurycerus*) as well as other, more locally threatened species such as Forest Buffalo *Syncerus caffer nanus*, assorted smaller primates and small to medium-sized ungulates, carnivores and birds.

The main biodiversity conservation threats in the Congo Brazzaville, and neighbouring countries, are:

- Hunting of large mammals by humans for bushmeat and because certain parts of some animals are believed to bring good luck or good health;
- Extensive logging of forests;
- In-migration to logged areas and conversion of land to agriculture; and
- Insufficient areas strictly protected from logging.

Civil wars in the past have also resulted in extensive destruction of habitats, primarily due to large-scale massive movements of refugees.

Two protected areas have been identified in the vicinity of the project as follows:

- The Batéké Plateau National Park, which is in Gabon next to Gabon-Congo border, about 20km from the mine site; and
- The Dimonika Reserve in the Mayombé Mountains, which has to be taken into account in decisions on the alignment of the rail transport route.

The governments of Gabon and Congo Brazzaville are considering a trans-boundary conservation area, with the GoCB creating a national park adjoining the Batéké Plateau National Park on the Congo side of the border. The new national park which is under consideration is currently referred to as the "Ogooué-Leketi area". Should this conservation area be gazetted as a national park, the two national parks will form a contiguous transboundary area of over 6,000km<sup>2</sup>. The exploration licence area comprising the Mineral Assets extends into the Ogooué-Leketi area.

The Dimonika Reserve was established in 1988 by Government Decree. It has total area of 1,360km<sup>2</sup> with three zones as follows: a central zone (910km<sup>2</sup>), two buffer zones (200km<sup>2</sup> and 70km<sup>2</sup>) and an influence zone (180km<sup>2</sup>). No settlement or activities are allowed in the central zone, except for logging activities approved before 1988 and scientific, educational or tourism activities, which are allowed under control of Ministry of Environment.

The vegetation in the vicinity of the mine site is largely forest with small areas of savanna and grassland. The forest includes unlogged mixed forest, selectively logged forest, marsh forest, open forest and secondary forest.

The predominant vegetation on crest of the Zanaga ridge is grassland and savanna with dense forest in valleys of watercourses draining the site.

Studies of animals in the vicinity of the mine site undertaken to date have provided insight on the conservation status of the site, habitat quality and human impact. Twenty-one species of mammals have been recorded in these studies, including several on the Red List (internationally threatened species) of the IUCN such as gorilla, chimpanzee, elephant, and giant pangolin. Other species included four monkey species, various forest antelopes, forest buffalo, and red river hog. The results of the ornithological inventory showed that at least 180 bird species in 39 families occur in the Mineral Assets area.

The human impact on habitats in the vicinity of the mine site is high: previous and current logging activities have created a network of access roads in much of the area, which has facilitated access by commercial hunters. A logging camp (SICOFOR concession) has been built in the south of the current Mineral Assets licence boundary. It has been found that the hunting is most abundant near villages and along the Ogooué River. The hunting is mainly for commercial gain (not for the pot) and most goes to large markets such as Simonbondo, from where it is sold on to the urban centres in the DRC and Congo Brazzaville.

Botanical baseline studies have identified about 900 plant species in the vicinity of the mine site. Many of these have not been recorded before, which can be attributed to the fact that the Congo Brazzaville is probably the most poorly botanically known forested country in Tropical Africa and there is a paucity of previous botanical survey work in the Chaillu Massif forest area, especially on the DRC side of the border. The botanists currently consider that it is unlikely that any of the species identified are actually endemic to the ZIOP site and further work is required to confirm this. Numerous plant species of conservation priority have been identified in the forest near the mine site, but none have been identified from the grassland, savanna or from the forest –grassland interface.

Surveys of the marine and coastal habitats around the proposed site of the marine terminal north of Pointe Noire are underway. The site appears to be important for the nesting of Olive Ridley turtles (Endangered).

**Social Environment:** Numerous communities living in the vicinity of the mine site have been identified however communities that could be affected by the transport route and marine terminal developments have not been studied yet. Studies of these communities will commence when decisions on preferred alignment/s of the railway line have been taken.

The communities in the vicinity of the mine site are located along the Sibiti (Congo Brazzaville) to Franceville (Gabon) laterite road running along the crest of the Zanaga ridge. There are 8 villages, with a total population of between 3,000 and 3,500, in the possible footprint of the mine site. The total population of the villages has increased by about 4% in the last year.

There are also villages that lie just outside the area that could be disturbed by the mine and mine infrastructure that own or have access to assets in the area. These villages are Kingani, Komono, and Langa.

Social baseline studies have been undertaken in the vicinity of the mine site. The communities are composed of the Bantu speaking Ba-teke, Ba-Kota and Ba-bamba, and the indigenous Babongo. The Babongo can be classified as vulnerable people; they are largely excluded from mainstream society and in some instances experience prejudice and discrimination. The communities rely on subsistence agriculture and forests for their livelihoods. Livelihoods are limited by limited physical access to markets.

There is some illegal artisanal gold mining activity within the Mineral Assets licence boundaries, and these activities are reportedly mostly carried out by foreigners from the DRC.

Religious practice in the Project area is predominantly Christian (Catholic, Pentecostals and Protestantism). The local population also adheres to spiritual religious beliefs around ancestral spirits. Community members reported that ancestral spirits needed to be consulted with regards to land affairs. Sacred sites are an important part of the local culture and identified sites have been mapped.

There is a high level of poverty in the communities, which is compounded by weak public services. There is limited access to and quality of schools and healthcare locally. There is also lack of proper sanitation facilities. However, there is relatively good access to adequate drinking water. Each village has at least three springs which provide drinking water throughout the year.

Education levels in the communities are low. Very few individual have secondary, high school, university or vocational qualifications.

Communicable diseases prevalent in the area include respiratory tract infections, intestinal parasites, cholera and diarrhoea bacillary dysentery, typhoid, skin infections and HIV/ AIDS. There are limited government programmes in place to adequately address these health problems. The ability for community members to access medical facilities and medicines is hindered by lack of funds and poor transport to the major towns.

# 7.8.4 Status of technical work completed: ESIA

In September 2010, the Company embarked on the environmental authorisation process for the ZIOP. This was marked by submission of framework Terms of Reference ("ToR") for the ESIA for the project to the MoE. The Company however can only commence with the official ESIA for the project when the ESIA ToR have been developed in consultation with government officials, subject to a public review and then approved by the MoE. The Company currently envisages that this will take approximately six months to complete.

The current schedule for completion of the ESIA assumes a 10 month programme and that the completed ESIA will be subject to a public review and a technical review commissioned by the government of Congo Brazzaville ("GoCB"). The technical review will be undertaken by a committee composed of officials from relevant Ministries and external technical experts. Furthermore it is assumed that the public and technical consultation/review will require a further nine months to complete. Accordingly based on the above the Company anticipates that environmental authorisation will only be available during Q4 2012.

Notwithstanding the above limitations the Company has commissioned much of the environmental and social baseline work at the mine site for the ESIA and intends to continue with this baseline studies during 2011 for the transport corridor and port site. As part of the process for development of the ESIA ToR the Company intends to summarise the work undertaken to date in a report that will be submitted to the GoCB.

The work programme for the ESIA has been broadly defined in the 2010 Addendum:

- Determination, approval and publication of the ESIA ToR (6 months);
- Selection and engagement of ESIA consultants (3 months);
- Undertaking ESIA investigations and preparing an ESIA report (10 months);
- Public review (3 months);
- Review by the technical evaluation committee (6 months);

- Agreement between the Company and the committee for technical evaluation on the social and environmental management plan (2 months); and
- Issue of environmental authorisation for the project by inter-ministerial decree (1 month).

The Company envisages that there will be ongoing collaboration between the ESIA specialists and the GoCB committee for technical evaluation of the ESIA during the ESIA process including regular technical and progress meetings.

# 7.8.5 Status of technical work completed: specialist study input

The environmental and social specialist studies being undertaken for the ZIOP to date include preliminary studies including: social studies; studies on terrestrial biodiversity; water studies; freshwater aquatic studies at the mine site and along the transport corridor; marine studies at the port site; soil mapping; a noise baseline study; and an air quality baseline study.

In general, the studies at the mine site have been detailed while those of the port area and along the transport corridor have been at a desk-top level coupled with limited field work for social, water (surface and groundwater), soil and sediments and freshwater aquatic aspect. No baseline work has been commenced for ambient air quality or background noise levels at present.

The environmental and social baseline studies programme for the ZIOP began in 2008 with scoping investigations for the project's 2009 Scoping Study. The initial investigations focused on the socio-economic and biodiversity characteristics of the area around the ore deposit. A gap analysis for the project was also conducted focusing on the recognised phases of the ESIA (i.e. scoping, baseline, impact assessment and management planning). These initial investigations were broadened during the Zanaga PFS in both subject and area of investigation.

The specialist studies programme during the feasibility study will include baseline studies to address gaps in the 2009 Scoping Study and the Zanaga PFS information and investigations to address specific issues.

The baseline investigations have been undertaken by local and international specialists. The Company requires that data are collected using scientifically accepted sampling methodologies and chemical analyses of samples are undertaken by internationally certified laboratories.

Some of the marine studies are being undertaken by the project engineering team, specifically studies of coastal hydrography and hydrology under the auspices of EGIS, the project infrastructure engineers. Baseline sampling has also commenced for the dredging assessment of the proposed navigation channel and possible spoil disposal location

The social, biodiversity (including marine dredging assessment) and water sets of baseline studies are the most important and complex sets of baseline studies.

All social studies completed to date have been undertaken by Synergy. A detailed baseline study of communities at the mine site has been completed which has covered demographics, communication, land and resettlement, livelihoods, sacred site mapping, socio-economic development needs and community well being. Detailed profiles of each of the villages in the area of the mine site have been completed. This study also covered district development plans and infrastructure and services in the Bambama, Komono, and Sibiti District Management Area. At present, the transport route and port site have only been studied at a desk-top level coupled with brief site visits. Products of the social studies to date include: a social baseline report; a scoping health impact assessment; documents advising MPD on

social policies, community relations and stakeholder engagement and social development planning; and a resettlement policy framework.

Social studies to be undertaken during the feasibility study include: detailed baseline studies at the port site and along the preferred transport route; studies required as part of the DUP process and resettlement programme; a health impact assessment; and studies aimed at identifying and realising opportunities for community development by the ZIOP.

The plant biodiversity studies have been supervised by the Kew and the work undertaken to date includes:

- Compilation of inventory of plant species occurring on and around the mine site with assistance from local botanists;
- Studies of the likely conservation value of the vegetation at the site of the marine terminal and of forests and savannah along the alternative transport routes based on remote sensing analysis and necessary ground-truthing;
- Input to mapping of sensitive areas in the vicinity of the project infrastructure; and
- Capacity building of the National Herbarium.

The animal biodiversity studies for the project are being undertaken with guidance from the an Independent Expert, an international conservation non-governmental organisation ("NGO") which has been assisting the GoCB manage the protected areas of the country for the last 20 years. The work completed to date includes surveys of mammals and birds in the vicinity of the mine site, which have provided insight on the conservation status of the site, habitat quality and human impact. Current and future work includes the following studies for:

- Freshwater ecology in the catchments of the Ogooué and Niari Rivers by Hydrobiology;
- Marine ecology in the vicinity of the port site by Hydrobiology;
- Surveys of marine turtle nesting activity are being undertaken at the site of the marine terminal by Rénatura Congo;
- Bushmeat consumption and demand in the project area;
- Input to mapping of sensitive areas in the vicinity of the project infrastructure;
- Scoping of baseline studies to be undertaken during the Zanaga FS including studies of butterflies, amphibians and reptiles present at the mine site;
- Scoping of other studies to be undertaken during the Zanaga FS including a study of biodiversity management measures, including biodiversity offsets.

Additional biodiversity work currently being undertaken includes:

- Mapping of habitats and sensitive areas in the vicinity of project infrastructure;
- Detailed work in and around the Dimonika Reserve to provide input to project planning decisions on the alignment of the railway line in the region of the reserve (this work is being undertaken by the Company, Kew, an Independent Expert and Biodiversity Consultants).

The water baseline studies being undertaken for the project include monitoring and characterisation and analysis of water catchments and SRK is currently undertaking these studies. A surface and groundwater monitoring network has been established for the mine site. Flows of rivers and springs, groundwater levels and water quality are being monitored at the site. Water monitoring along the transport corridor and at port site has commenced, the monitoring programme will be refined when decisions on alignment of the transport route have

been taken. There is one meteorological station at the mine site and there are intentions to establish more weather stations for the project. Water catchments in the vicinity of the mine site and along the transport route have been delineated. The water studies include a geochemical characterisation study to assess the acid rock drainage and metal leaching potential of ore, tailings and waste rock from the ZIOP.

The water studies have been planned to provide the understanding of the water environment that is needed to define impacts on water quality and water users. They are also planned to provide input into engineering planning and design decisions, particularly with respect to alternative sites and layouts for infrastructure, design of water management infrastructure and design of the mine and mineral processing residue disposal facilities.

# 7.8.6 Status of technical work completed: stakeholder engagement

The Company has consulted with stakeholders as follows:

- GoCB officials, including representatives of the MoE and the Ministry of Mines and Geology ("MMG"), on the ESIA process to be followed, in the drafting of the environmental section of the 2010 Addendum and the draft ESIA ToR;
- The social baseline studies undertaken at the mine site used participatory processes to collect data on communities in the vicinity of the mine site, including focus group meetings and interviews. The techniques were applied to ensure engagement with a range of community stakeholders, including elders, men, women and Babongo. As a result of the participatory approach taken, communication has increased between the local community and the Company; and
- The Company has appointed several community liaison officers, many of whom are from communities in the vicinity of the mine site, and a Community Relations Manager to facilitate information sharing between the project team and local communities on a daily basis.

The stakeholder consultations undertaken by the Company to date have not been in the mould of a formal stakeholder engagement process. For a stakeholder engagement process to be recognised in terms of IFC Performance Standard 1, it needs to be systematic and documented. There must be a record of stakeholders, all stakeholder engagements, disclosure documents and discussions with stakeholders.

A stakeholder engagement plan ("SEP") has not been completed for the ZIOP yet and a grievance mechanism has not been established yet, but the Company is working on these and intends to have these in place before the start of the official ESIA process. These intentions are acceptable in terms of GoCB legislation and the wording of the IFC Performance Standards. It is however critical that a proper SEP and formal systematic stakeholder engagement is established soon for the following reasons:

- The project has actually progressed quite far with environmental and social assessment work in the form of baseline studies, even though it has not yet embarked on the official ESIA process; and
- Poor community relations and communication could lead to opposition to development of the mine from within the country, difficulties in accessing land, increased costs and delays, risks to legal licence to operate.

The IFC Performance Standards specifies that stakeholder engagement should begin early in the impact assessment process and that the nature and frequency of engagement should be a function of the nature and significance of impacts on the affected communities. Stakeholder engagement is an on-going process and its purpose is to build and maintain over time a constructive relationship with communities affected by the project, over the life of the project.

Both a SEP and a grievance mechanism are required in terms of IFC Performance Standard 1. The SEP is needed to guide stakeholder engagement during the life of the project, through to closure. It is a dynamic document and that will change focus during the life of the project. The grievance mechanism serves to receive and facilitate resolution of the affected communities' concerns and complaints during the life of the project.

The guidance notes supporting IFC Performance Standard 1 indicate that a SEP needs to be in place before the start of the ESIA and that, for large projects, the grievance mechanism should be established from the beginning of the ESIA process and be in place during construction and operations to the end of the project.

# 7.8.7 Status of technical work completed: resettlement programme

One of the products of the social studies undertaken to date is a framework for the project's resettlement process. Other tasks in the resettlement process are as follows: authority and community consultation; household and community surveys; identification and evaluation of resettlement sites; determination and negotiation of entitlements and compensation; income restoration and sustainable development initiatives; resettlement planning, scheduling, budget and responsibilities; production of resettlement action plans (RAPs); and implementation of resettlement and compensation.

The above tasks will be coupled with monitoring to assess whether the goals of the resettlement and compensation plan are being met.

It is expected that it will take 16 months to complete the tasks in the above list and the corresponding DUP process. The Company intends that the resettlement planning will be: carefully integrated with the DUP process; undertaken in accordance with the requirements of the IFC Performance Standards; and aligned with the project planning schedule.

# 7.8.8 Status of technical work completed: socio-economic development

Both international standards and local mining legislation reflect an expectation that the project will contribute towards socio-economic development and expect that effort is invested in enhancing the socio-economic benefits of the project.

The Company expects all parties working on the project to participate in the identification of the needs of local communities and opportunities to contribute to socio-economic development in the communities. The Company is also working on principles to guide community development projects and has identified a number of projects that could be implemented during the Zanaga PFS and Zanaga FS that could contribute to the project's social licence to operate and will provide experience and lay the foundations for longer-term community development projects. The range of projects under consideration includes health, education, water supply, road improvements and local procurement projects. The projects will be selected, planned and implemented in consultation and partnership with government and communities. Sustainability will be a key criterion in the selection of community development projects.

# 7.8.9 Status of technical work completed: closure planning

A conceptual closure plan is currently being developed for the project. The current Zanaga PFS assessment will be updated during the Zanaga FS and will be included in the ESIA. The plan is based on the following aims:

- To inform the engineering design process to facilitate designs that assist with closure;
- To develop productive and sustainable after-uses of the sites that are acceptable to the GoCB;
- To protect public health and safety;
- To alleviate or eliminate environmental damage;
- To re-use valuable attributes of the ZIOP;
- To minimise adverse socio-economic impacts; and
- To provide an indication of the capital and ongoing costs of closure.

Initial closure cost estimates are limited to the mine site only on the assumption that any infrastructural aspects of the transport corridor and the PNP will continue to provide post closure benefits. Accordingly the current estimate for the mine-site provides for some US\$260m which includes approximately US\$6m of terminal benefits liabilities ("TBL") and is considered overall to project an estimation accuracy of  $\pm 40\%$ .

# 7.8.10 Status of technical work completed: acid rock generation and metal leaching potential

A number of technical studies have been completed in order to assess the acid rock drainage ("ARD") and metal leaching ("ML") potential. To date this has focused on the haematite and itabirite (excluding the BIF) ore, likely tailings material and waste rock associated with the development of the ZIOP. Only limited testwork has been completed on BIF ore and accordingly this aspect remains the subject of further analysis.

In order to enable rapid assessment static testing was completed on the principal lithologies which included: 15 waste rock samples; 4 samples of Itabirite ores; and 4 samples of tailings material sourced from processing of itabirite ores (excluding BIF). Acid base accounting ("ABA") was completed on all samples and net acid generation ("NAG") tests were completed on all waste rock samples which indicated detectable sulphide levels. In order to ascertain the short and longer term potential for metal release additional strong acid leach assay ("SALA") and short term leaching tests as well as NAG tests were also completed. A further four samples of tailings decant water were also collected from the earlier metallurgical testwork programme in order to assess potential water quality during processing.

In summary the results of the ABA and NAG testwork indicate that the all ores, waste rock and tails (excluding those associated with BIF, yet undetermined) are characterised by low (<0.5% by weight) sulphide-sulphur contents. Accordingly it is unlikely that the weathered material will be acid forming. Notwithstanding this aspect, should ARD potential be identified the low inorganic carbon content of the materials indicates that there is also limited potential for acid buffering.

Whole rock assays ("WRA") were also completed on similar material types (identified above) in order to identify parameters that were enriched above average crustal abundance. Based on the result of this analysis short and long-term mobility of specific elements were assessed through completion of short-term and NAG leach tests. De-ionised water leaching of these materials produced cirum-neutral to moderately alkaline leachates (pH 6.6 to 8.9). Metal concentrations (other than for manganese) were found not to exceed International Monetary Fund ("IMF") effluent water quality standards. This indicated that although several environmentally sensitive elements are present at elevated concentrations in the ore, tails and waste rock, they are not readily mobile and are unlikely to be leached in the short-term. Furthermore, the release of most parameters was found to be controlled by their solubility and accordingly their mobility will be directly related to contact with water.
The long-term potential for metal release during sulphide oxidation in the waste rock under prolonged weathering conditions was assessed by analysis of the NAG leachates which gives an indication of the maximum potential metal release that would occur given complete sulphide oxidation. In this instance less than 25% of the SALA sample inventory was found to be mobilised during NAG testing. In particular, iron concentrations were below analytical detection limits in the leachates, indicating that iron is unlikely to be mobilised under long-term weathering conditions. Elevated release of manganese and vanadium was however identified during NAG testing which testing reflects intensive oxidising conditions. It is however considered unlikely that under normal oxidising conditions these elements will be readily mobilised as their typical mineralised occurrence is generally stable.

Further work scheduled for completion during the Zanaga PFS and Zanaga FS includes:

- Analysis of BIF ore composites, BIF tailings and tailings decant waters;
- Completion of Kappa tests to determine the long term leaching of itabirite ore and tailings materials; and
- Infill sampling of the waste rock materials and possible kinetic testing on selected samples in order to fully quantify the long-term impact of waste materials.

#### 7.8.11 Key environmental issues

The main environmental issues associated with the development of the ZIOP comprise various bio-physical and social aspects which are currently the subject of various investigations underway. Tables 7.10 through Tables 7.12 inclusive provides a summary of the key issues and certain relevant background in this regard.

Table 7.14 Social issues

Is	ssues	Relevant background	
1	. Relocation of families, homesteads, villages and	Managing socio economic impacts and benefits is priority for the project.	
	community infrastructure.	International standards and mining legislation expect mining projects to bring the social and	
2	. Job creation, preferential employment of locals and training of locals.	economic benefits to the country hosting the resource and the communities affected by mining activities.	
3	. Preferential procurement of goods and services	The numbers of villages and people to be relocated at the mine site are large.	
	locally.	The resettlement programme and the land acquisition process need to be carefully integrated.	
4	. Investment in the improved well being of people.	Failure to commence the DUP process in good time will not allow sufficient time to purchase the land	
5	. Improvement of infrastructure and services.	required.	
6	. Addressing potential corruption in the use of government revenue.	In migration is likely to cause pressure on the scarce civic amenities and natural resources in the project area.	
7	. Population influx and changes in the demographics of the area.	Strong communication with local communities will be required to manage social issues and impacts.	

Issues	Relevant background
<ol> <li>Loss of biodiversity and/or ecological function at the mine site and the port site.</li> <li>Adverse impacts on fishing resources.</li> <li>Increase hunting and trade in bushmeat.</li> </ol>	The forest areas around the mine site are of high biodiversity value for both plants and animals. The presence of Critically Endangered, Endangered and other species of concern means the area is considered a Critical Habitat based on IFC Performance Standard 6 criteria. Under these criteria, a reduction in these populations, or measurable adverse impacts on the ability of the habitat to support these species, is not acceptable.
	A significant area of forest will be destroyed by mine and infrastructure development. The transport corridor is likely that some sections will also be of high biodiversity value. Road and rail development could disrupt animal movement and also lead to severance and fragmentation of some habitats of value.
	The high biodiversity value will ensure a high degree of interest and scrutiny of the project by local and international wildlife groups. A failure to act responsibly to safeguard wildlife resources will lead to significant adverse publicity and a serious loss in reputation.
	Habitat destruction, fragmentation and severance of linked habitats will be avoided where possible in the design of the project.
	A programme to offset the reduction in biodiversity at the mine site, and possibly some sections of the transport corridor, will be implemented. As yet no specific plans have been considered because the full extent of impacts has not yet been assessed.
	The port site appears to be important for nesting by Endangered turtles (Olive Ridley Turtles). Turtles are high profile marine animals and interference in their nesting or breeding behaviour could lead to adverse publicity and a loss in reputation. Investigations are required to check whether impacts on the turtles can be avoided and, if so, identify appropriate management measures.
	The extent to which jetty and port development will affect commercial fishing needs to be determined.
	The mine site lies on the watershed between the basins of the Ogooué and Niari rivers. The Ogooué River and basin is part of an ecoregion with about 25% endemism of freshwater fishes, whilst the Kouilou-Niari region, which is relatively unstudied, is also suspected to be rich in freshwater fish species and endemics.
	Construction and development of the mine and its associated infrastructure, particularly along the transport corridor, could lead to loss of aquatic habitat and loss of endemic species and those used for food. This could lead to objections or adverse publicity from local stakeholders as well as international wildlife NGOs with a serious loss in reputation. A variety of strategies will be required to adequately assess sensitivities for a wide range of stream types.
	The development of the mine and transport corridor could increase hunting and trade in bushmeat, which is already a serious threat to wildlife in the area. A study of bushmeat take and use is being undertaken to identify measures to address this impact. The mine access road and connection between Kingani and Bambama will be located on the western side of the mine site, to increase the distance to the areas of high big/diversity value on the Chaillu Massif to the east.

Table7.15Bio-diversity issues: general

## Table 7.16 Bio-diversity issues: water

Issues	Relevant background		
1. Need to have a sure supply of water to the mine and to relocated villages	Rainfall is high in the project area but highly seasonal.		
2. Reduced availability of water to others due to	There is a need to develop water holding facilities to accommodate for temporal variations in rainfall and river flow.		
dewatering of the mine workings	Construction of a water storage reservoir in the headwaters of the Longue River is being considered.		
3. Seepage from mine and mineral-processing residue disposal facilities	commissioning and operations has been estimated. An ESIA would be required for the dam development.		
<ol> <li>Seepage from dirty water holding facilities at the mine site</li> </ol>	A reliable and long-term water supply also needs to be identified and tested for relocated villages. This supply is likely to be from a borehole field close to the relocated area.		
5. Discharges from the project site	Infrastructure on the mine site needs to be located so that the risk of seepage to groundwater is		
6. Possible transboundary impacts	minimised.		
7. Seepage from sand that has been dredged at the port site and disposed of on land	Water infrastructure on the mine (storm-water management infrastructure and water holding facilities) will need to be designed to ensure that there are no uncontrolled discharges from the mine site.		
8. Mobilisation of sediments by dredging	The mine will probably have to make controlled discharges of water from the mine workings,		
9. Oil spills and effluent discharges at the port	tailings disposal facility and/or various storm-water setting facilities on the site to the environment. Careful management will be required to ensure that the discharges are controlled and that the water quality will be acceptable for discharge to the environment.		
	Rigorous monitoring is required to define the pre-discharge environment and negotiate discharge criteria with regulatory authorities.		
	The mine is on the divide between the Ogooué River and Niari River catchments. The Ogooué River flows into Gabon. Discharges to the Ogooué River and/or placement of mine residue disposal facilities in the catchment of the river could necessitate involvement of the Government of Gabon in the environmental authorisation of the project if there are potential transboundary impacts. This could delay the environmental authorisation process.		
	A full physical and chemical assessment of the sediment, water and benthic fauna is required to determine the suitability of dredged material for ocean or land disposal.		

The groundwater at the mine site is generally of good quality but is slightly acidic and with slightly elevated levels of silver, aluminium, selenium and zinc. Groundwater quality is variable along the transport corridor but the overall quality is good, although groundwater from the Chaillu Mountains is slightly acidic. Elevated levels of cadmium, zinc and lead have been detected in groundwater from the Mayombé Mountains, these are considered to be naturally occurring. Work on the acid rock drainage and metal leaching potential of ore, tailings and waste rock from the Zanaga resource to date indicates that this is low.

## 7.9 Human Resources

No detailed work has to date been completed in respect of the total employees costed for establishing the ZIOP. Notwithstanding this current analysis indicates that the TEC is likely to be of the order of 4,000 to 4,500 with the majority of these engaged at the mine site. The Zanaga PFS will include a detailed human resources schedule both for the construction and the operating phase with individual estimates provided for each of the key reporting areas including: mine site; transport corridor; and deep water port facilities.

### 7.10 Capital Expenditure

The capital expenditure estimates for the Zanaga PFS are currently of a preliminary nature and accordingly are subject to change. Furthermore it should be noted that the uncertainties associated with substantive infrastructure related projects for which both topographic relief and site specific geotechnical considerations are remain the subject of further work, are inevitably significant. Accordingly it is likely that only on completion of the Zanaga FS where due consideration for such investigations are complete will the resulting capital expenditure estimates attain the level of accuracy approaching  $\pm 10$  to  $\pm 15\%$ .

The current project development capital expenditure (Table 7.13) for the ZIOP indicates a total requirement for investment of some US\$7.45bn comprising: base costs of US\$5.83bn; contingencies of US\$0.99bn (17% of base costs); and engineering procurement and construction management ("EPCM") of US\$0.63bn (11% of base costs). This total is subdivided into the following reporting areas: mine site at US\$3.46bn (46%); transport corridor (33%); PNP (17%); and power (4%). Prior to finalisation of the Zanaga PFS the current capital estimates reflect similar levels of accuracy as included in the 2009 Scoping Study which was noted at  $\pm$ 40%. It is however expected that on completion of the Zanaga PFS the capital expenditure estimates will be further refined to  $\pm$ 25%, which on completion of the Zanaga FS will be further refined to reflect an overall accuracy of  $\pm$ 10% to  $\pm$ 15%.

Capital Expenditure Item	Base	Contingency	Y	EPCM	Tota
	(US\$m)	(%)	(US\$m)	(US\$m)	(US\$m
Mine Site	2,644	19%	514	306	3,46
Transport Corridor	2,074	14%	289	104	2,46
Pointe Noire Port	896	17%	152	203	1,25
Power	214	15%	32	21	26
Total	5 828	17%	986	634	7 44

 Table
 7.17
 ZIOP project capital expenditure

The total mine site capital expenditures comprise: exploration expenditures (US\$5.0m); site earthworks (US\$150.0m); mining equipment (US\$866.2m); run-off water management (US\$3.8m); Haematite (15Mtpa concentrate) and Itabirite (30Mtpa concentrator) Concentrators (US\$865.0m); product handling (US\$253.8m); tailings storage facility (US\$200.0m); logistics consumables (US\$10.5m); and support infrastructure (US\$289.1m).

In addition to the above further expenditures are required for the expansion of the Itabirite Concentrator to facilitate production of concentrate from the initial 30Mtpa to 45Mtpa on depletion of suitable material for processing in the Haematite Concentrator. The total capital expenditure required for this expansion is estimated at US\$236m which will be required to be expended during the tenth year following commencement of production over a two year period.

SRK notes that whilst allowances for first fill are included in the above estimates, no provision has been made for funding of working capital movement, specifically in respect of funding debtors and establishing the necessary stocks of consumables stores. Similarly no estimate has yet been undertaken for movement in creditors up to full production which to some

degree would offset the additional funding required for debtors and stores.

Preliminary estimates of sustaining capital expenditure largely reflect replacement costs for the mobile mining equipment fleet, certain fixed plant and conveyors which over the current assumed LoM production totals US\$3.36bn. These expenditures are assumed to commence in the 5<sup>th</sup> year following the first year of production through to depletion of the assumed tonnages included in the optimised shell corresponding to the LTP of USc85/dmtu.

No details in respect of sustaining capital requirements for concentrator rebuilds, the transport corridor or the PNP are currently available. Notwithstanding this limitation general maintenance costs have been included for all aspects and accordingly these should cater in part for some of the sustaining capital requirements.

The scheduling of capital expenditures for construction assumes a total period of some 3 to 3.5 years with some 40% of annual production capacity achieved during the first year of processing operations. Within this period some US\$1.0bn is expended in year 1 with US\$2.1bn expended in each of the following three calendar periods and the balance thereafter for a maximum of a further two calendar periods.

### 7.11 Operating Expenditure

The current assessment of operating expenditures are of a preliminary nature with a number of aspects reliant assumptions incorporated in the 2009 Scoping Study as well as preliminary analysis completed in respect of the Zanaga PFS. Furthermore certain key assumptions have not yet been established from a detailed first principal basis and accordingly also rely on either proxy benchmarks and or factorised estimates based on typical norms, specifically in respect of the transport corridor and the deep water port. The current operating expenditure assumptions include:

- Mining operating expenditure estimated for ore subdivided into free dig and drill and blast material as well as waste. These have been established based on individual elements including: fuel consumption assuming a base cost of US\$0.85/l; labour costs assuming US\$0.25c/t of material mined; mobile fleet equipment costs assuming number of units required, assumed utilisation, hourly rates and operating hours; ore conveyor operating, maintenance and power (USc8/kWhr) consumption costs; and contingencies assumed at some 10%. The above has resulted in the following total mining costs per specific tonne of material mined: ore (free dig) at US\$1.31/t; ore (drill and blast) US\$1.49/t; and waste at US\$1.38/t. The optimisation analysis incorporates the above for the initial surface reference costs and assumes an additional increment of US\$0.10/t per 10m vertical depth increase. Based on the assumed LTP of USc85/dmtu this has resulted in an assumed unit cost per tonne of total material moved of US\$1.71, which excluding contingencies is estimated at US\$1.54/t;
- Concentrator operating expenditure estimated separately for the Haematite Concentrator and the Itabirite Concentrator and based on specific element contributions for, power, labour, consumables, maintenance and contingencies:
  - Haematite Concentrator costs of US\$3.22/t: power based on consumption of 13kWhr/t and unit power cost of USc8/kWhr (US\$1.02/t); labour (US\$0.26/t); consumables (US\$1.38/t); maintenance (US\$0.26/t); and contingencies (10%),
  - Itabirite Concentrator costs of US\$3.68/t: power based on consumption of 17kWhrs/t and unit power cost of USc8/kWhr (US\$1.35/t); labour (US\$0.26/t); consumables (US\$1.39/t); maintenance (US\$0.34/t); and contingencies (10%).

The above estimates are largely based on the results of the 2009 Scoping Study and

excluding the contingencies result in unit operating expenditures of US\$2.93/t and US\$3.35/t for the Haematite Concentrator and the Itabirite Concentrator respectively. Preliminary indications from ProMet indicate higher unit processing costs which include higher unit power costs of USc10/kWhr, include a contingency of 10% and higher maintenance costs. These revised estimates are currently undergoing a review process and will invariably be revised as part of the ongoing process of completing the Zanaga PFS. Accordingly these should overall be considered as a range which will be refined in due course;

- Mine site overhead operating expenditure comprise specific estimates for labour, facilities management, aircraft flights, medical facilities, personnel transport, other support costs and contingencies of 10%. Based on an assumed RoM throughput of 100Mtpa this amounts to US\$0.69/t and excluding contingencies amount to US\$0.63/t;
- Rail transportation operating expenditure of US\$4.91/t of concentrate product (45Mtpa) which is based on unit estimates for: diesel consumption (US\$0.85/l); labour costs; other operating expenditures; locomotive and wagon maintenance; infrastructure costs; and a contingency of 5%. Removal of the contingencies results in an assumed unit operating expenditure of US\$4.46/t; and
- Pointe Noire Port facility operating expenditure of US\$1.31/t of concentrate product (45Mtpa) which is largely derived from factors applied to the assumed capital expenditure requirements. This also includes a contingency of 10% which if removed results in a unit operating expenditure of US\$1.19/t of concentrate.

Not included in the above operating expenditures are estimates for mineral royalties, currently assumed as 3% of the total sales revenue currently assumed at USc85/dmtu. Other aspects which should be considered for the establishment of post-tax pre-finance cash-flow models include VAT movement, working capital movements and the closure cost estimates comprising bio-physical and terminal benefits liabilities currently totalling US\$260m which will most likely be expended during the immediate period following cessation of operations.

### 7.12 Benchmarking

The following section includes the results of an operating expenditure (cash costs) and capital expenditure benchmarking analysis for the sea-borne export iron ore industry as derived from various internet sources. The purpose of this analysis for cash cost benchmarking is to ascertain where the ZIOP on a weighted average basis falls with respect to various reporting quartiles. As this does not extend for the total global iron ore market and relies on un-verified internet sources it is the relativity which is important and not the absolute position. Furthermore SRK has highlighted a number of global operations which are located on the African continent or have significant annual production of concentrates.

## 7.12.1 Cash Cost definitions

Cash costs as defined here are generally based on similar terminology used in other mining and metal markets which includes all operating expenditure costs required to be expended to receive the sales revenue as projected. Accordingly the numerator is the summation of the following operating expenditures: mining (waste and ore), processing, site overheads, transportation costs, realisation charges and mineral royalties but will exclude corporate income taxation, corporate overheads, environmental closure costs, terminal benefits liabilities, financing charges and all non-cash items such as depreciation and amortization charges. The denominator in the determination of the unit cash costs is then based on a dry metric tonne unit ("dmtu") to arrive at the common metric of USc/dmtu. This method accounts for different iron concentrations and free moisture contents in the ore produced from different operations and is commonplace for direct comparison to benchmark prices. Another common alternative is a similar measure where the denominator is the tonnage of iron ore concentrates produced.

For sea-borne iron ore concentrates it is also appropriate to distinguish between those cash costs which are directly related to mine site activities and the total costs including those additional costs incurred for transportation to a point of export, normally defined as free-on-board ("FoB") which typically include the following key reporting areas: mining, processing (milling and concentration), pelletizing (where relevant), royalties, transportation and port loading costs. Mine site costs are generally limited to mining and processing costs but exclude royalties, freight, pelletizing and port loading. Additional over and above the FoB costs which are normally incurred by the purchaser include the costs associated with trans ocean shipping costs. The addition of these to FoB costs results in the carriage insurance and freight costs ("CIF") which are significantly dependent upon the seaborne transportation to Europe (Rotterdam) and China would be of the order of USc23/dmtu and USc41/dmtu respectively.

## 7.12.2 ZIOP benchmarks

Utilising the principal results from the preliminary mine optimisation analysis and the capital expenditure estimates for the ZIOP, SRK has completed a high level benchmarking exercise.

In summary and based on the data included for the ZIOP in Table 7.14 are as follows:

- Cash costs (excluding royalties) inclusive of operating expenditure contingencies (approximately 9%) of US\$28.34/t<sub>Conc</sub> on a weighted average basis comprising US\$22.92/t<sub>Conc</sub> and US\$29.65/t<sub>Conc</sub> for the Haematite Concentrator and the Itabirite Concentrator respectively;
- Cash costs (excluding royalties) inclusive of operating expenditure contingencies (approximately 4%) of US\$27.06/t<sub>Conc</sub> on a weighted average basis comprising US\$21.88/t<sub>Conc</sub> and US\$28.31/t<sub>Conc</sub> for the Haematite Concentrator and the Itabirite Concentrator respectively;
- Cash Costs (excluding royalties) exclusive of all operating expenditure contingencies US\$25.98/t<sub>Conc</sub> on a weighted average basis comprising US\$21.05/t<sub>Conc</sub> and US\$27.17/t<sub>Conc</sub> for the Haematite Concentrator and the Itabirite Concentrator respectively
- Unit capital expenditures per tonne of installed operating capacity of US\$166/Mtpa.

Inputs	Units	Total	H	aematite Co	ncentrator			Itabirite Con	centrator	
			Subtotal	COL	ITG	ITF	Subtotal	ITC	ITT	BIF
Production	-	-	-	_				-		
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Ore Processed	(Mt)	3,227	500	93	90	316	2,727	360	107	2,260
	(%Fe <sub>⊤</sub> )	31.59%	39.92%	43.77%	43.51%	37.77%	30.07%	32.20%	30.48%	29.71%
	(MtFe⊤)	1,019	200	41	39	120	820	116	33	671
Yield	(%)	34.14%	42.89%	41.08%	49.71%	41.48%	32.54%	26.38%	29.99%	33.64%
Recovery	(%)	70.77%	68.19%	59.24%	72.42%	69.85%	71.40%	53.26%	65.12%	74.84%
Concentrate	(Mt)	1,102	214	38	45	131	887	95	32	760
	(%Fe)	65.50%	63.47%	63.11%	63.39%	63.60%	65.99%	65.00%	66.19%	66.10%
	(NIt⊢e⊤)	722	136	24	28	84	585	62	21	502
Sales Revenue	(LISo/dmtu)	95	95	95	95	95	95	95	95	95
Commodity Frice	(USC/umiu)	61 330	11 567	2 056	2 /13	7 008	49 763	5 248	1 808	42 707
	(00011)	01,000		2,000	2,410	1,000	40,700	0,240	1,000	42,101
Mining	(US\$/t <sub>Min-1</sub> )	1.71	1,71	1.71	1.71	1.71	1.71	1.71	1.71	1,71
Processing	(US\$/tpom)	3.61	3.22	3.22	3.22	3.22	3.68	3.68	3.68	3.68
Overheads	(US\$/t <sub>RoM</sub> )	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Rail	(US\$/t <sub>Conc</sub> )	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
Port	(US\$/t <sub>Conc</sub> )	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Closure	(US\$/t <sub>Conc</sub> )	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Royalty	(%)	3%	3%	3%	3%	3%	3%	3%	3%	3%
Mining	(US\$m)	10,500	1,627	304	293	1,030	8,873	1,172	349	7,353
Processing	(US\$m)	11,645	1,610	300	290	1,019	10,035	1,325	394	8,316
Overheads	(US\$m)	2,234	346	65	62	219	1,888	249	/4	1,564
Rall	(US\$m)	5,407	1,052	188	220	172	4,304	400	158	3,731
Port	(US\$III)	1,440	200	50	59	212	1,100	124	42	1 201
Closuro	(US\$III) (US\$m)	260	547	02	12	213	1,495	107	54	1,201
Total	(US\$m)	200	5 312	977	1 007	3 3 28	203	3 516	1 079	23 /18
Canital Expenditure	(00\$111)	33,323	5,512	511	1,007	5,520	20,012	3,310	1,075	23,410
Project <sup>(1)</sup>	(US\$m)	7 704	1 499	268	313	918	6 205	664	225	5 316
Sustaining <sup>(2)</sup>	(US\$m)	3,364	655	117	137	401	2,709	290	98	2,321
Total	(US\$m)	11,068	2,154	385	450	1,319	8,914	954	323	7,637
Expenditures						· · ·				
Cash Costs	(US\$m)	33,065	5,262	968	996	3,297	27,803	3,493	1,071	23,238
Cash Costs (ex. royalty)	(US\$m)	31,225	4,915	907	924	3,084	26,310	3,336	1,017	21,957
⊺otal Cash Costs	(US\$m)	33,325	5,312	977	1,007	3,328	28,012	3,516	1,079	23,418
Total Working Costs	(US\$m)	33,325	5,312	977	1,007	3,328	28,012	3,516	1,079	23,418
Unit Costs										
Cash Costs	(US\$/t <sub>Conc</sub> )	30.01	24.54	25.27	22.25	25.11	31.34	36.78	33.33	30.57
Cash Costs (ex. royalty)	(US\$/t <sub>Conc</sub> )	28.34	22.92	23.66	20.63	23.49	29.65	35.12	31.65	28.89
⊺otal Cash Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	25.50	22.48	25.35	31.57	37.01	33.57	30.81
⊺otal Working Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	25.50	22.48	25.35	31.57	37.01	33.57	30.81
(1)										

Table 7.18 ZIOP key performance statistics

Project capital expenditure comprising initial capital expenditure (US\$7,448m) and Itabirite Concentrator expansion costs (US\$236m).
 Sustaining capital expenditure comprising replacement capital expenditure for the mobile mining equipment and conveyors based on the average of the second sec

Sustaining capital expenditure comprising replacement capital expenditure for the mobile mining equipment and conveyors based on the assumed operating period indicated by the current optimisation analysis assuming a LTP of USc85/dmtu.

## 7.12.3 Operating Cost benchmarking

Figure 7.2 through Figure 7.4 present graphically the cash cost curves for the sea-borne export iron ore markets and benchmarks the ZIOP against certain existing operations in Africa, Brazil and Australia. Figure 7.2, 7.3 and 7.4 represents cash costs on a mine-site (US\$/t<sub>RoM</sub>), FoB (USc/dmtu) and FoB (US\$/t<sub>Conc</sub>) respectively.

In respect of mine site costs reported on a US\$/ $t_{RoM}$  basis the ZIOP reports to the third quartile at US\$9.24/ $t_{RoM}$ . In respect of FoB costs reported on USc/dmtu basis the ZIOP reports to the second quartile at USc44/dmtu. In respect of FoB costs reported on a US\$/tConc basis the ZIOP reports to the second quartile at US\$28.73/ $t_{Conc}$ ).



7.6 ZIOP: mine site cash costs (US\$/tRoM) for 2010



#### Figure 7.8 ZIOP: FoB cash costs (US\$/t<sub>Conc</sub>) for 2010

#### 7.12.4 Capital Cost benchmarking

All data utilised for the capital benchmarking data have been sourced from public domain sources and the preliminary results of the ZIOP as included herein. SRK notes however that such comparison is invariably difficult due to the varying degree of disclosure in respect of the contribution from mine site, transport system and ports and the exclusion/inclusion of contingencies. The generally limited number of current projects in conjunction with a number of other considerations: technical study status; and other site specific aspects including and not limited to: projected yield; mode of transportation (length, topography and terrain); geographical location; and port considerations (bathymetry and offshore structures): all contribute towards the general difficulties associated with such exercises.

The total number Table 7.15 of projects analysed including the ZIOP are 22 and are distributed as follows: Australia (6); Brazil (7); and Africa (9). The assumed concentrate production rates range from a minimum of 5Mtpa to a maximum of 160Mtpa with a corresponding average of 34Mtpa and median of 25Mtpa. The corresponding unit capital cost per installed capacity of annual concentrate production ranges from a minimum of US\$22/Mtpa to a maximum of US\$189/Mtpa with a corresponding average of US\$98/Mtpa and median of US\$166/Mtpa which is positioned at the upper end of the benchmark data. Whilst this may indicate potential for capital expenditure optimisation on a relative basis, SRK notes that both location and the significant distances incurred in the transport corridor are a contributing factor as are the associated terrain and topography.

For nine of the 22 projects separate data is available for the rail transport components which indicate a range from a minimum of 6Mtpa to a maximum of 160Mtpa with a corresponding average of 47Mtpa and median of 35Mtpa. The corresponding unit capital cost per installed capacity of annual concentrate production for rail transport ranges from a minimum of US\$7/Mtpa to a maximum of US\$55/Mtpa with a corresponding average of US\$23Mtpa and median of US\$15/Mtpa. The corresponding metric for the ZIOP is noted at US\$42/Mtpa which is position at the upper end of the benchmark data.

Similar production capacity statistics are noted for eleven of the 22 projects where separate data is available for the port facility component. The corresponding unit capital cost per installed capacity of annual concentrate production ranges from a minimum of US\$1/Mtpa to a maximum of US\$36/Mtpa with a corresponding average of US\$16Mtpa and median of US\$14/Mtpa. The corresponding metric for the ZIOP is noted at US\$14/Mtpa which is positioned close to the average of the available benchmark data.

Country	Units	Max	Min	Average	Median
Australia	(Mtpa)	160	5	46	24
Brazil	(Mtpa)	90	6	28	17
Africa	(Mtpa)	70	7	31	30
Total	(Mtpa)	160	5	34	25
Australia	(US\$/Mtpa)	154	38	98	99
Brazil	(US\$/Mtpa)	140	22	93	110
Africa	(US\$/Mtpa)	189	37	100	89
Total	(US\$/Mtpa)	189	22	98	93

Table 7.19 Iron Ore Project capital expenditure benchmarking

#### 8 WORK PROGRAMMES

# 8.1 Introduction

Should Xstrata not exercise its option, the Company will require access to additional funds for completion of the next developmental milestone, specifically the Zanaga FS which inter alia includes ongoing exploration, completion of the Zanaga ESIA and other ongoing commitments relating to the 2010 Addendum. This section provides details in support of the FS Work programme (scope, schedule of activities and expenditures) as envisaged by the Company prior to completion of the Zanaga PFS.

The basis of the FS Work Programme and any associated supporting technical information has been provided by the Company solely and explicitly does not purport to reflect the current or future views and/or commitments of Xstrata. Accordingly should Xstrata execute any or all of its options the details relating to the FS Work Programme, both with respect to activity and expenditure schedules may be fundamentally different to that presented herein.

Furthermore the current scope of the Zanaga PFS includes the preparation of a detailed work programme for completion of the Zanaga FS. As the FS Work Programme detailed herein predates the completion of the Zanaga PFS, SRK notes that the FS Work Programme is preliminary in nature and subject to change. Specifically the expenditure component relating to the exploration drill programme is not supported by a designed exploration programme which includes layouts of drill fences and holes.

Accordingly the reader is cautioned that completion of the Zanaga PFS and/or a decision by Xstrata to execute or not execute its option may well result in fundamental changes to the FS Work Programme as presented herein.

The FS Work Programme which is considered a reasonable reflection of the work-streams required in order to complete the Zanaga FS and the Zanaga ESIA and also assumes that appropriate funding is available.

In addition to the FS Work Programme and, in order to fast-track certain aspects of the infrastructure components the Company has identified an "Early Works Programme". The associated expenditures is however a sub-set of the capital expenditure currently associated with the construction and commissioning of the ZIOP. Details relating to the Early Works Programme are included in Section 8.3 of this CPR.

Should Xstrata not exercise its option the Company has developed an alternative scenario which in essence reflects the minimum expenditures required in ensure compliance with its commitments in respect of the Mineral Assets. The Company would then expect to raise

further funding, following completion of a positive outcome of the Zanaga PFS, to fund the FS Work Programme and/or the Early Works Programme defined herein. In any interim stage where immediate funding is required following a decision by Xstrata not to exercise its options, the proposed continuation expenditure (the "Continuation Work Programme") applies, as reported in Section 8.4 of this CPR.

## 8.2 Feasibility Study Work Programme Summary

The FS Work Programme is largely focused on the completion of the Zanaga FS with activities and associated expenditures scheduled over a 24 month period. The development milestone achieved at this stage is a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable. Furthermore this will also be supported by the Zanaga ESIA study which is to be prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the International Council of Mining and Metals ("ICMM") sustainable development framework.

The forecasted expenditures (Table 8.1) totals US\$255.3m of which US\$226.6m is classified as operating expenditures and US\$28.7m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$167.5m and US\$87.8m respectively and include contingencies of US\$32.5m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

All expenditures are stated in US\$ real terms as at 30 September 2010. Accordingly conversion to nominal terms requires consideration of both US and Congo Brazzavile CPI as well as forward exchange rates. This however would most likely impact the Labour component as noted below which reflects some 16% of the total expenditures included in the FS Work Programme. The individual contribution of elements of the FS Work Programme are: Exploration Drilling (11%); Labour (13%); Zanaga Camp (10%); Engineering Studies (25%); Environment/Community (4%); Health and Safety (2%); Commercial (3%); Offices/Travel (9%); Contingency (10%); Capital Expenditures (8%); and Admission Costs (2%).

Furthermore SRK notes that the timing of these expenditures and timing thereof are inter alia dependent on the outcome and timing of the Zanaga PFS, Xstrata's decision to execute its option, access to sufficient funding and the timely appointment of engineering companies to undertake the work following a tender process. Accordingly, SRK recognises that the anticipated timeline should be considered as a 24-month programme which commences subsequent to the attainment of some significant milestones which are in part the subject matter of this CPR.

Expenditure Item	Units	Total	2011	2012
Operating Expenditure				
Exploration Drilling	(US\$m)	27.9	27.9	0.0
Labour	(US\$m)	34.4	17.2	17.2
Zanaga Camp	(US\$m)	24.6	12.3	12.3
Engineering Studies	(US\$m)	64.4	43.2	21.2
Environment / Community	(US\$m)	10.0	5.0	5.0
Health and Safety	(US\$m)	4.4	2.2	2.2
Commercial	(US\$m)	8.5	4.2	4.2
Offices / Travel	(US\$m)	22.8	11.4	11.4
Subtotal	(US\$m)	197.1	123.5	73.6
Contingency		25.40	29.6	18.5
Subtotal – Operating Expenditure	(US\$m)	226.6	142.0	84.6
Other Expenditure				
Capital Expenditure	(US\$m)	19.4	16.6	2.7
Admission Costs	(US\$m)	6.4	6.4	0.0
Subtotal	(US\$m)	25.8	23.0	2.7
Contingency	(US\$m)	2.9	2.5	0.4
Subtotal – Other Expenditure	(US\$m)	28.7	25.5	3.2
Total Expenditure	(US\$m)	255.3	167.5	87.8

Table8.1FS Work Programme: expenditure schedule

### 8.2.1 Exploration Drilling

The exploration drilling programme is largely focused on resource definition drilling and comprises total drill metres of 68,400m of which 51,300m and 17,100m represents DD drilling and RC drilling respectively. These exploration drilling activities for some 310 holes are scheduled for completion during 2011 and are in essence an extension of the Q4 2010 exploration drilling (17,000m) underway. The Q4 exploration drilling is already funded as part of the Zanaga PFS, however this will not inform the Zanaga PFS Mineral Resource statement which is currently under preparation which assumes a data cut-off (62,000m) of 30 September 2010.

The drilling campaign largely assumes that the Mineral Resources as reported herein will be further drilled such that the proportion reporting to the Measured Mineral Resource category and Indicated Mineral resource category will be 40% and 60% respectively. This assumes a line spacing criteria of 200m for Measured Mineral Resources and 400m for Indicated Mineral Resources. SRK notes that the current line spacing which supports the Mineral Resources as reported herein is similar in certain areas, the current and largely Inferred category classification reflects other constraints relating to potential structural complexity which remains unresolved and holes which do not necessarily intersect the full width of the mineralisation at depth. Accordingly the current drill programme and associated line spacing assumes that any potential aspects relating to structure will be adequately resolved. Should this not be the case then it is likely that at depth the line spacing may need to be tightened and as such the drill metres assumed herein may increase.

The drilling programme assumes that that DD drill holes depth will range from 300m to 350m (North Zone only) and all RC drill holes will be limited to 120m depth. All holes will be placed off centre to the current fence lines and to achieve spacing of 100m at the upper sections and 200m for the deeper holes.

Assuming that the drilling campaign and subsequent assessment is successful in achieving the above objective this will result in the following:

- North Zone and the Central Zone: Mineral Resources to individually comprise 50% classified as Measured and the remainder classified as Indicated; and
- South Zone where all Mineral Resources are classified as Indicated.

The total expenditure provided for Exploration Drilling in the FS Work Programme is estimated at US\$27.9m (Table 8.2) and includes all drilling costs and associated activities including preparation and assay, other consumables and labour. The base unit rates assumed for DD

drilling and RC drilling is estimated at US\$371/m and US\$154/m respectively with the other costs incurring an additional US\$92/m which results in a weighted average unit cost of US\$408/m drilled. A contingency of 10% and 15% has been included in the base unit rates for DD drilling and RC drilling respectively.

Sampling estimates assume that for DD drill-holes and RC drill-holes there is 1 sample for every 3 drilled metres and 1 sample for every 2 drilled metres respectively. Assay costs and preparatory costs are based on an unit rate of US\$31.50 and US\$15.00 per sample. Sample weights are assumed at 3.5kg and other additional costs comprise boxing, shipping and customs clearance.

ltem	Units	Total	2011
Activity			
DD Drilling	(m)	51,300	51,300
RC Drilling	(m)	17,100	17,100
Total	(m)	68,400	68,400
Unit Costs			
DD Drilling	(US\$/m)	371	371
RC Drilling	(US\$/m)	154	154
Other	(US\$/m)	92	92
Total	(US\$/m)	408	408
Expenditure			
DD drilling	(US\$m)	19.0	19.0
RC drilling	(US\$m)	2.6	2.6
Prep & Assay	(US\$m)	1.5	1.5
Consumables	(US\$m)	3.8	3.8
Labour	(US\$m)	1.0	1.0
Total cost	(US\$m)	27.9	27.9

Table 8.2 FS Work Programme: exploration drilling

#### 8.2.2 Labour

Labour expenditures are largely related to the costs associated with the Company's in country subsidiary and are largely based on the current monthly costs of US\$1.2m inclusive of an additional 20% to allow for inter alia inflationary increases. This translates to an annual cost of US\$17.2m.

### 8.2.3 Zanaga Camp

The operating expenditures for the Zanaga Camp amount to annual costs of US\$12.3m which includes appropriate allowances for: transportation; subsistence; accommodation; internet access; office costs; fuel; vehicle fleet including spare parts and tyres; and customs and freight costs.

### 8.2.4 Engineering Studies

The engineering studies as incorporated into the FS Work Programme are scheduled to commence in January 2011 and be complete during Q4 2012. SRK notes that these are estimates and to date no specific engineering companies have been mandated to undertake such works. It is anticipated that prior to commencement that such studies will be the subject of a tender process and that their award is contingent on a number of factors inter alia the specific assumptions regarding Xstrata's decision to execute its option.

The total expenditures identified to date amount to some US\$64.4m (Tale 8.3) of which US\$43.2m and US\$21.2m are planned to be expended in 2011 and 2012 respectively which are subdivided as follows: Project Management and Controls (10%); Mine Site (20%); Transport Corridor (62%); and MPD support costs (8%).

The Mine Site and Transport Corridor costs include: site specific geotechnical and hydrogeological investigations; detailed topographic surveys; as well as addition metallurgical test work to further refine the process flow sheet designs and to support the currently assumed metallurgical performance criteria. The latter aspect specifically addresses the BIF where to date only one metallurgical sample has been obtained and tested to inform the current technical assumptions.

The project management and control costs are based on an assumed factor of 13% of all Mine Site (excluding power) and Transport Corridor costs. MPD Support Costs are based on current expenditures and are assumed at some US\$2.5m per annum.

 Table
 8.3
 FS Work Programme: engineering studies

Item	Units	Total	2011	2012
Project Management and Controls	(US\$m)	6.6	4.6	2.0
Mine Site	(US\$m)	12.8	8.6	4.1
Mining and Infrastructu	re (US\$m)	6.8	5.1	1.7
Beneficiation Pla	nt (US\$m)	3.5	2.5	1.0
Product loadin	ng (US\$m)	0.4	0.0	0.4
Pow	er (US\$m)	2.0	1.0	1.0
Transport Corridor	(US\$m)	40.1	27.5	12.6
R	ail (US\$m)	25.8	15.2	10.5
Pa	ort (US\$m)	14.3	12.3	2.0
MPD Support Costs	(US\$m)	5.0	2.5	2.5
Total	(US\$m)	64.4	43.2	21.2

# 8.2.5 Other Operating Expenditure

The other operating expenditures included in the FS Work Programme amount to US\$45.7m (Table 8.4) comprising: Environment/Community (US\$10.0m); Health and Safety (US\$4.4m); Commercial (US\$8.5m); and Offices/Travel (US\$22.8m). These expenditures have been established on a relatively high level basis, specifically in respect of the Environment/Community component where no specific tenders have been sourced to substantiate these to date.

 Table
 8.4
 FS Work Programme: other operating expenditures

Item	Units	Total	2011	2012
Environment/Community		-	_	
Fauna Studies	(US\$m)	0.3	0.2	0.2
Flora studies	(US\$m)	0.3	0.2	0.2
Air noise soil	(US\$m)	0.1	0.1	0.1
Other inc land & resettlement	(US\$m)	3.8	1.9	1.9
ESIA Management	(US\$m)	0.4	0.2	0.2
Environment and Community	(US\$m)	5.0	2.5	2.5
Subtotal	(US\$m)	10.0	5.0	5.0
Health and Safety				
PPE	(US\$m)	1.2	0.6	0.6
HIV programme	(US\$m)	1.2	0.6	0.6
Malaria	(US\$m)	0.6	0.3	0.3
Medical centre	(US\$m)	1.1	0.5	0.5
H&S training	(US\$m)	0.3	0.2	0.2
Subtotal	(US\$m)	4.4	2.2	2.2
Commercial				
accounting Congo Brazzaville	(US\$m)	0.4	0.2	0.2
accounting UK	(US\$m)	0.5	0.2	0.2
bank charges	(US\$m)	0.1	0.1	0.1
conferences	(US\$m)	0.5	0.2	0.2
entertainment	(US\$m)	0.4	0.2	0.2
regulatory administration	(US\$m)	0.6	0.3	0.3
Insurance	(US\$m)	1.2	0.6	0.6
legal support	(US\$m)	3.6	1.8	1.8
permitting	(US\$m)	0.6	0.3	0.3
public relations	(US\$m)	0.2	0.1	0.1
UK and Congo Brazzaville Audit Fees	(US\$m)	0.4	0.2	0.2
Subtotal	(US\$m)	8.5	4.2	4.2
Offices/Travel				
travel	(US\$m)	8.8	4.4	4.4
security	(US\$m)	2.3	1.2	1.2
H&S equipment	(US\$m)	1.3	0.7	0.7
accommodation	(US\$m)	0.6	0.3	0.3
social investment	(US\$m)	0.0	0.0	0.0
training for employees	(US\$m)	0.3	0.2	0.2
training strategy pre recruitment	(US\$m)	0.0	0.0	0.0
transport of goods	(US\$m)	0.2	0.1	0.1
Brazzaville office	(US\$m)	0.5	0.3	0.3
Bristol office	(US\$m)	0.5	0.2	0.2
mobile camp	(US\$m)	2.3	1.2	1.2
Pointe-Noire office	(US\$m)	5.9	2.9	2.9
Subtotal	(US\$m)	22.8	11.4	11.4
Total	(US\$m)	45.7	22.8	22.8

### 8.2.6 Capital Expenditure

The capital expenditure components of the FS Work Programme amount to US\$19.4m and of which US\$16.6m and US\$2.8m are planned to be expended in 2011 and 2012 respectively. These expenditures largely comprise allowances for: camp construction; mobile bases for transport corridor construction; Information Technology facilities; security; maintenance; purchase of vehicles and road construction.

## 8.2.7 Admission Costs

The expenditures relating to the Admission amount to US\$6.4m and the contributing details for this are included in the Admission Document.

## 8.2.8 Contingency

The current contingency applied amounts to some 15% of certain expenditure items. This is considered appropriate at this stage for the following reasons:

- Exploration Drilling: whilst certain contingencies are included for additional drill metres and unit costs of drilling, the current estimate is limited to high level factoring and has not been specifically designed, despite the availability of suitable topographic data and geological wireframes which support the current Mineral Resource estimated reported herein; and
- Vendor/Supplier Quotes: Broadly the estimates are not supported by specific vendor/supplier quotes which have been sourced via a detailed tendering process. Accordingly and in recognition of the high level nature of certain of the estimates, the inclusion of the 15% contingency is considered appropriate.

## 8.3 Early Works Programme

In addition to the FS Work Programme and, in order to fast-track certain aspects of the infrastructure components the Company has developed the Early Works Programme. The associated expenditures range from US\$70m to US\$90m and are not in addition to the capital expenditure currently associated with the development of the ZIOP. This capital expenditure comprises the following key areas:

- Mine Site Access Works: Clearing (bush clearing/deforestation/stripping overburden) and developing access in preparation for the construction. This would involve construction of roads to access main crossing points (bridges) and possibly upgrade of existing bridges to enable construction traffic to access the mine site. These costs are likely to be US\$10m to US\$20m range;
- Off-Mine Infrastructure: Comprising the Service Wharf this has a 12 month construction and a six month contract lead time. The rationale for the Service wharf is that the Port of Pointe Noire is unable to handle both the volume and type/scale of materials and equipment the mine will require for construction and operations.

Specifically the Service Wharf will be required for large items during construction specifically:

- large equipment (locomotives, wagons, trucks, stacker/reclaimer), and
- bulk items for construction (rail, sleepers, cement, steelwork, piping) and ultimately for consumables etc for mine operation.

The current bottleneck at Pointe Noire Port is its capacity: space for storage (it is surrounded by the city with little/no space to expand) and has limited customs clearance capacity to service throughput volume required for the ZIOP.

The detailed plan for operation of the Service Wharf is not finalised, however it is anticipated that the Service Wharf will be able to receive:

- ships with their own unloading particular when heavy lift and specialist equipment is required,
- container ships with c. 6m draft which will be unloaded with dockside cranes, and
- barges from the port of Pointe Noire which trans-ship containers/other items from larger cargo vessels docked there.

Construction costs are currently estimated at US\$40m based on similar experience for small ports with comparable specifications: 300m quay wall, 700m breakwater, 3ha reclamation but without access road. Other additional costs could include:

- land side equipment/hard standing/ground preparation etc. (US\$15m),
- cranes/tugs/pilot boats etc. needed to operate the port (US\$5m),
- shore protection/dredging say (US\$10m).

#### 8.4 Continuation Work Programme

The Continuation Work Programme is focused on ensuring the minimum required to comply with the current terms of the Decrees, the 2007 Mining Convention and the 2010 Addendum and includes associated expenditures scheduled over an 18 month period. Accordingly the development milestone achieved at this stage is substantially limited compared to that included in the FS Work Programme and will not result in:

- A multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable; or
- An ESIA study prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the ICMM Sustainable Development Framework.

The forecasted expenditures (Table 8.5) totals US\$57.3m of which US\$50.2m is classified as operating expenditures and US\$7.0m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$45.7m and US\$11.6m respectively and include contingencies of US\$6.6m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

All expenditures are stated in US\$ real terms as at 30 September 2010. Accordingly conversion to nominal terms requires consideration of both US and Congo Brazzavile CPI as well as forward exchange rates. This however would most likely impact the Labour component as noted below which reflects some 16% of the total expenditures included in the FS Work Programme. The individual contribution of elements of the FS Work Programme are: Exploration Drilling (14%); Labour (29%); Zanaga Camp (11%); Engineering Studies (4%); Environment/Community (2%); Health and Safety (3%); Commercial (4%); Offices/Travel (9%); Contingency (11%); Capital Expenditures (1%); and Admission Costs (11%).

The Exploration Drilling Proposes is limited to 3,900m for DD drilling and 15,444 for RC and 9,360m for the deep drilling programme to yield total drilled metres of 19,344m. The unit drilling cost rates are not significantly dissimilar to that noted for the FS Work Programme to yield a total unit cost per drilled metre of US\$409.

Expen Operating Expenditure Exploration Drilling 0.0 (US\$m) 7.9 7.9 16.9 6.4 2.2 11.6 4.8 2.0 5.3 1.6 Labour (US\$m (US\$m) (US\$m) Zanaga Camp Engineering Studies Environment / Community 0.2 (US\$m 1.4 0.9 0.5 (US\$m) (US\$m) 1.0 1.7 0.5 0.6 Health and Safety 1.5 Commercial 2.4 Offices / Travel (US\$m) 3.6 10.1 Subtotal (US\$m) 43.7 33.6 Contingency (US\$m 6.6 1.5 Subtotal – Operating Expenditure (US\$m) 50.3 38.7 11.6 Other Expenditure 0.0 Capital Expenditure (US\$m) 0.6 0.6 0.0 **0.0** Admission Costs US\$m 64 64 7.0 Subtotal 7.0 (US\$m) (US\$m) 11.6 Total Expenditure 57.3 45.7

 Table
 8.5
 Continuation Work Programme: expenditure schedule

## Table 8.6 Continuation Work Programme: expenditure schedule

Item	Units	Total	2011
Activity			
DD Drilling	(m)	3,900	3,900
RC Drilling	(m)	15,444	15,444
OSD Drilling	(m)	9,360	9,360
Total	(m)	19,344	19,344
Unit Costs			
DD Drilling	(US\$/m)	371	371
RC Drilling	(US\$/m)	154	154
OSD Drilling	(US\$/m)	191	191
Other	(US\$/m)	119	119
Total	(US\$/m)	409	409
Expenditure			
DD Drilling	(US\$m)	1.4	1.4
RC Drilling	(US\$m)	2.4	2.4
OSD Drilling	(US\$m)	1.8	1.8
Prep & Assay	(US\$m)	0.5	0.5
Consumables	(US\$m)	1.5	1.5
Labour	(US\$m)	0.3	0.3
Total cost	(US\$m)	7.9	7.9

### 9 RISKS AND OPPORTUNITIES

### 9.1 Introduction

The following section presents a risk and opportunity assessment for the ZIOP and seeks to identify the quantitative impact should such risk or opportunity materialise. In certain instances the analysis is limited to qualitative assessment only and accordingly no direct financial impact can be determined.

### 9.2 General Risks and Opportunities

The ZIOP is subject to certain risks and opportunities, which apply to some degree to all participants in the global mining and metals sector as well as specifically the sea-borne iron ore export market. These include:

Commodity Price Fluctuations: These may be influenced, inter alia, by commodity demand-supply balances for iron ore and steel production and the cost of transportation all of which are influenced by global economic growth and industrial production. In the three-year period from 1 October 2007 through to 30 September 2010 concentrate fines prices ranging between USc79/dmtu and USc200/dmtu with a resulting three-year average of USc127/dmtu which can be compared with the LTP assumed for the current optimisation analysis of USc85/dmtu and spot prices of USc200/dmtu on 30 September 2010.

The above commodity prices for iron ore are quoted as FoB Australia and accordingly do not include any assessment of additional freight costs for transportation to Europe or Asia (China, Japan);

• Exchange Rate Fluctuations: Specifically related to the strength of the US\$, the currency in which commodity prices are generally quoted. In addition, the capital expenditure estimate for the ZIOP is also likely to be exposed to fluctuations of the US\$ against the AU\$, the €, the XAF and the ZAR. In the period from 1 June 2009 to 30 September 2010 the following applies:

Base Currency	Low	High	Average	Spot
XAF	425.1	539.2	488.6	491.6
€	0.6603	0.8408	0.7309	0.7348
AU\$	1.0279	1.2945	1.1382	1.0311
ZAR	6.9190	8.3187	7.5918	6.9750

 Inflation Rate Fluctuations: Specifically related to the macro-economic policies of Congo Brazzaville and the United States. In the three year period from 1 October 2007 through 30 September 2010 the following applies:

Country	Low	High	Average	Spot
Congo Brazzaville	-3.93%	16.94%	5.62%	7.83%
United States	-2.53%	5.60%	1.795	1.22%

- Country Risk: Specifically country risk including political, economic, legal, tax, operational risks.
- Legislative Risk: Specifically changes to future legislation (tenure, mining activity, labour, occupational health, safety and environmental) within Congo Brazzaville;
- Exploration Risk: Resulting from the elapsed time between the discovery of deposits, completion of feasibility studies, which on a multi-disciplinary basis demonstrate that the development is both technically feasible and economically viable and the collective and associated uncertainty of outcome; and
- Development Project Risks: Specifically technical risks associated with green-field projects for which feasibility studies have not been completed and are limited to prefeasibility studies or less and for which development and production has not commenced.

## 9.3 Project Specific Risks and Opportunities

In addition to those identified above, the ZIOP is subject to specific risks and opportunities, which independently may not be classified to have a material impact (that is likely to affect more than 10% of the ZIOP's annual post-tax pre-finance annual operating cash-flows) but in combination may do so.

## 9.3.1 Geology and Mineral Resources

The 2010 Statements represent the first Mineral Resource estimate derived for the ZIOP and reported in accordance with the terms and definitions of the JORC Code. Of the total 3.34Bnt reported at a grade of 32.75%Fe<sub>T</sub> only 18% of the tonnage is classified as Indicated Mineral Resources with the remaining 82% classified as Inferred Mineral Resources.

The current FS Work Programme is largely focused on resource definition drilling to upgrade the overall classification of the total Mineral Resources. On completion of this programme it is assumed that 60% will be classified as Indicated Mineral Resources and the remaining 40% classified as Measured Mineral Resources.

Accordingly given the definition drilling focus of the FS Work Programme no explicit Exploration Targets reportable in compliance with Clause 18.1 of the JORC Code have been defined.

The principal geological and Mineral Resource opportunities comprise the potential to expand the current Mineral Resource base through completion of further exploration at depth and also on strike. Specifically SRK notes that:

- 97% of mineralised material included in the block model reports within the optimised shell determined using an assumed LTP of USc115/dmtu. This indicates that should further drilling targeting depth extensions be successful, the potential for increasing Mineral Resources which are economic by open-pit methods is likely;
- Additional mineralised material has also been identified within the current block model which to date remains unclassified given the current classification constraints applied. Should this material be classified as Inferred Mineral Resources, following appropriate exploration and subsequent reclassification, this may increase the current 2010 Statement by some 8%. It is however likely that this material is at depth and largely comprises itabirite lithologies; and
- Only 25km of the overall 47km of target identified by airborne magnetic survey has been tested through further exploration, accordingly potential exists for increasing Mineral Resources through drill testing of both haematite and itabirite lithologies as potential strike extensions to the currently delineated Mineral Resources.

The principal geological and Mineral Resource risks are directly related to the current classification of 82% of the 2010 Statements as Inferred Mineral Resources. Accordingly whilst also presenting an opportunity for upgrading through planned exploration activity there remains a risk that this programme may not be as successful as planned: specifically that the process results in revised interpretations for wire-framing of haematite and itabirite lithologies. In certain instances the extent of the itabirite lithologies are in part informed by the width of the haematite mineralisation which in part may be exaggerated through a combination of weathering and topographic relief.

Furthermore, the current structural interpretation indicates enhanced complexity in certain areas, specifically at depth where this aspect also informs the current classification as Inferred Mineral Resources. The infill exploration drilling may result in delineation of further structural features which may also inform future interpolations between drill sections and subsequent wireframing.

### 9.3.2 Technical Studies: Zanaga PFS and Zanaga ESIA

The current technical studies as completed for the Zanaga PFS are preliminary in nature and accordingly are subject to change. The Zanaga PFS is scheduled for completion during Q1 2011 at which point the study will target an overall accuracy level of  $\pm 25\%$ . Prior to completion of the Zanaga PFS various components of the technical studies as reported herein range from conceptual through scoping levels accordingly there can be no guarantees that the Zanaga PFS will conclude on a multi-disciplinary basis that the ZIOP is both technically feasible and economically viable.

The principal risks which inform the overall accuracy of the technical assumptions included herein relate to

Estimation of capital expenditure for off-mine infrastructure: The ZIOP is a large scale infrastructure intensive green-field project requiring the construction of significant mine-site infrastructure in addition to a 350km rail transport corridor to access a new port facility located on the Atlantic Ocean. The accuracy of capital expenditures associated with construction of off-mine infrastructure is dependent upon acquisition of both topographic relief and significant intrusive site-specific geotechnical data. In certain instances, for example, off-shore/near-shore port infrastructure these involved significant

outlays for offshore drilling which in part informs the substantial cost of the FS Work Programme.

Accordingly it is unlikely that the accuracy of the current capital estimates will improve substantially on completion of the current Zanaga PFS and that achieving accuracy's approaching  $\pm 10$  to  $\pm 15\%$  will only be possible on completion of the Zanaga FS planned for Q4 2012;

Metallurgical performance: A key discriminating factor assumed for the establishment of the ZIOP is the production of concentrates which are either suitable for marketing as sinter feed concentrates, sinter feed blend or pellet feed concentrates. The initial strategy focused on production of sinter feed concentrates from haematite lithologies. Preliminary testwork indicated that typical sinter feed concentrate qualities could be achieved specifically in respect of qualities of iron and deleterious elements and size distribution. This would however require the blending of concentrates from individual haematite lithologies. No specific sintering testwork has been completed to verify this assumption and additionally only limited testwork has been completed in respect of the itabirite lithologies, specifically BIF, which by far represents the largest portion of the currently defined Mineral Resources.

Furthermore the initial testwork was relied on composite samples, the Fe<sub>T</sub> grade of which was higher than that currently defined for the various lithologies in the 2010 Statements. This resulted in initially higher metallurgical performance parameters (yield and Fe recovery) than currently assumed for the Zanaga PFS which incorporates adjustments for the: impact of reduced head grade; plant scale up factors; and recent changes to the flowsheet for the Haematite Concentrator and the Itabirite Concentrator. Planned future metallurgical testwork is currently targeting: the optimisation of the assumed flowsheet; potential improvements in metallurgical performance parameters; and establishing relationships between head grade, metallurgical performance parameters and concentrate qualities.

Accordingly given the dominance of the ITT/BIF contributions to the currently delineated Mineral Resource, refining the metallurgical performance characteristics of these lithologies is key, specifically: the determination of the proportion of coarse concentrate which may either be blended with other ZIOP concentrates and attain sinter feed qualities. Accordingly the principal risk is that all concentrates sourced from the dominant BIF lithologies is not suitable as direct sinter feed product, is saleable as concentrate fines and in the worst case scenario must be further ground at additional costs to produce pellet feed fines;

- Environmental issues: Current technical studies are focused on the mine-site and are largely only completed at a preliminary level for the off-mine transport corridor and port facility. To date these have highlighted environmental issues associated with:
  - the requirement for implementation of large scale relocation at the mine-site,
  - the presence of forest areas in the immediate vicinity of the mine-site which are of high biodiversity value for both plants and animals and in addition: specifically the presence of critically endangered, endangered and other species,
  - the presence of nesting sites for Endangered turtles (Olive Ridley Turtles) at the port site, and

 the location of the mine site on the watershed between the basins of the Ogooué and Niari rivers indicating potential for inter alia trans-boundary impacts (as the Ogooué River flows into Gabon).

Accordingly the focus of the current ESIA process is to: adequately refine and complete the various mine-site and off-mine base line studies; and in conjunction with further definition of the environmental impacts associated with the development of the ZIOP to develop solutions which mitigate against these.

Initial closure cost estimates are limited to the mine site only on the assumption that any infrastructural aspects of the transport corridor and the port facility will continue to provide post closure benefits. Accordingly the current estimate for the mine-site provides for some US\$230m which includes approximately US\$6m of TBL and is considered overall to project an estimation accuracy of  $\pm 40\%$ ; and

 Other technical risks are generally related to specific discipline related issues at the mine-site specifically in respect of the relatively early stage investigations for the following: geotechnical engineering (pit slope angles); hydrology and hydrogeology including potential requirements for de-watering and general water management; and tailings storage facilities.

The principal opportunities associated with the various technical disciplines which are the subject of further investigations as part of the Zanaga PFS are:

- Metallurgical opportunities: The potential for further optimisation of the flowsheet and assumed metallurgical performance parameters which may mitigate against the recent reductions resulting from adjustments associated with assumed reduced Fe<sub>T</sub> head grades;
- Transport corridor opportunities: The potential following further investigations to
  optimise the transport corridor options, specifically in respect of the number of associated
  structures required. Notwithstanding this aspect, SRK notes that recent adjustment to the
  rail route configuration and proposed operating parameters have potentially increased
  certain operational maintenance risks. Whilst this is the subject of further work, SRK
  notes that consideration of pipeline transportation may well result in reduced outlay of
  initial capital expenditure as well as reduced operating costs. This would however
  preclude transportation of sinter feed concentrate and accordingly incur further grinding to
  produce concentrate fines suitable for pipeline transportation and marketing as pellet feed
  fines;
- Capital expenditure reduction opportunities: The current capital expenditure estimates include various contingencies which in part reflect prudent adjustments which reflect the extent of reliance on comparative analogues as well as a generally high degree of factored assumptions. Following completion of additional detailed engineering studies, the reliance on such inputs will most likely reduce which in turn may result in reduced contingencies; and
- Operating expenditure reduction opportunities: The potential for reduced operating expenditure through: establishing reduced or eliminating contingencies currently included in the operating costs (currently 9%); consideration of reduced unit power costs from the currently assumed USc8/kWhr to say USc6/kWhr to USc4/kWhr following completion of various power generation options currently under consideration in Congo Brazzaville.

#### 9.3.3 Work Programmes

The principal risks associated with the work programmes are directly related to unforeseen issues relating to execution, scheduling and costing of specific activities. SRK notes that elements of both the Continuation Work Programme and specifically the FS Work Programme are based on preliminary assessments and that specifically for the latter these pre-date completion of the Zanaga PFS, the scope of which assumed development of a detailed schedule of activities and costs for the Zanaga FS.

Specifically in respect of the exploration drilling programmes, SRK notes that a detailed drill plan has not yet been completed. Historical exploration was in part informed by difficulties associated with the establishment of drill pads as 3m to 4m of annual rainfall combined with the clayey surface resulting from the weathering of the basic rocks result in limited trafficability. Historically this resulted in the hanging wall contact zones being less well defined for both resource definition and collation of geotechnical information. Accordingly drilling in such areas is best achieved during the June to September dry season thereby enabling construction of drill pads along the eastern flanks of the deposit to facilitate targeting of eastern hanging wall contacts.

The FS Work Programme assumes significant expenditures over a two year programme, whereby the completion of a: Feasibility Study to bankable standards; as well as an ESIA in accordance various international benchmarks (IFC Performance Standards, World Bank guidelines, and ICMM sustainable development framework) is targeted. The forecasted expenditures totals US\$255.3m of which US\$226.6m is classified as operating expenditures and US\$28.7m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$167.5m and US\$87.8m respectively and include contingencies of US\$32.5m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

The expenditures and timing thereof are inter alia dependent on the outcome and timing of the Zanaga PFS, Xstrata's decision to execute its option, access to sufficient funding and the timely appointment of engineering companies to undertake the work following a tender process. Accordingly, SRK recognises that the anticipated timeline should be considered as a 24-month programme which commences subsequent to the attainment of some significant milestones which are in part the subject matter of this CPR.

The principal opportunities associated with the FS Work Programme essentially relate to: a decision for execution of the Early Works Programme, which would facilitate targeting earlier construction and mechanical completion; and a reduction in the assumed contingency levels currently included.

The principal risks associated with the FS Work Programme relate to access to funding which is largely informed by Xstrata's decision to execute its option for continued participation. In the event that Xstrata decides not to continue with its investment, the Company may in the absence of alternative funding commence with the Continuation Programme until at such time sufficient funds are secured for completion of the activities highlighted in the FS Work Programme. This may result in a partial delay in completion of the Zanaga FS which would inevitable have a knock on effect on the current timing assumed for mechanical completion and build up to full production.

### 10 CONCLUDING REMARKS

### 10.1 Introduction

The following section includes a summary of SRK's opinion on the ZIOP and the accompanying 2010 Statements and the merits of the Work Programmes as proposed by the Company.

### 10.2 Basis of Opinion

SRK has conducted a comprehensive review and assessment of all material issues likely to influence the technical studies underway (the Zanaga PFS) and the proposed Zanaga FS, specifically those issues which may influence the technical feasibility and economic viability of the ZIOP. The base data upon which the 2010 Statements and the Work Programmes as stated herein, have been provided to and taken in good faith by SRK has unless where explicitly authored by SRK as part of the Zanaga PFS, not been independently verified by it by means of re-calculation. SRK has, however, conducted a review and assessment of all material technical issues likely to influence the future performance of the Mineral Assets, which included the following:

- Inspection visits to the Mineral Assets, transport corridor and port facility site during 2009 and 2010 inclusive;
- Enquiry of key project and head office personnel during Q3 2010 in respect of the FS Work Programme and other related matters;
- An examination and review of technical studies completed in respect of the Mineral Assets and all conclusions and recommendations drawn there from, specifically in respect of technical disciplines for which SRK are not directly responsible for authoring; and
- An assessment of the Work Programmes as proposed by the Company in the event that Xstrata does not execute any of its options as described herein.

In respect of the Zanaga PFS, SRK is directly responsible for the authoring of the following technical disciplines for on-mine areas: geology and Mineral Resources; mining engineering; geotechnical engineering; hydrology and hydrogeology; tailings storage facility; soil and noise aspects of the ESIA; and mineral economics.

### 10.3 Mineral Resources

As at 30 September 2010 the total Mineral Resources (Table 10.1) reported in accordance with the terms and definitions of the JORC Code amount to 3.34Bnt grading 32.75%Fe<sub>T</sub>, 43.43%SiO<sub>2</sub>, 0.046%P, 3.33%Al<sub>2</sub>O<sub>3</sub>, 0.14%MnO and 1.22%LOI. These include material classified as Indicated and Inferred Mineral Resources where the former comprises 0.60Bnt grading 39.31%Fe<sub>T</sub>, 36.05%SiO<sub>2</sub>, 0.0446%P, 3.35%Al<sub>2</sub>O<sub>3</sub>, 0.11%MnO and 2.19%LOI.

In considering the 2010 Statements as reported below, SRK notes the following:

- All references to Mineral Resources are stated in accordance with the JORC Code;
- No Ore Reserves have been declared for the Mineral Assets due to the lack of multidisciplinary studies in which all aspects have been completed to a minimum of PFS level to adequately demonstrate the technical feasibility and economic viability of the Mineral Assets. Furthermore the technical studies in progress for the Mineral Assets are reliant upon significant portions of Inferred Mineral Resources without which a positive return on the initial capital outlay for development of the ZIOP cannot yet be demonstrated. The Company in conjunctions with its consultants is currently advancing the various technical studies to PFS level. Assuming successful outcome of the Zanaga PFS and subsequent

FS Work Programme and Zanaga FS and that all technical aspects have been adequately addressed, it is reasonable to assume that Ore Reserves will be declared as part of the then completed Feasibility Study; and

 All Mineral Resources are derived by application of a 0%FeT COG to all classified material falling within a optimised shell based on a LTP assumption of USc115/dmtu.

Table 10.1 presents the Indicated and Inferred Mineral Resources subdivided by lithologies for each process route. Table 10.2 presents the total Mineral Resource LTP sensitivity for each process route.

	Table	10.1	Mineral Resources	Summary by	y lithology)	30 September 2010
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Classification	Lithologies	Tonnage			Qualitie	es		
		(Mt)	(% Fe <sub>т</sub> )	(% SiO <sub>2</sub> )	(% P)	(% AL <sub>2</sub> O <sub>3</sub> )	(% MnO)	(% LOI)
Indicated Mineral Resource	es							
Haematite Concentrator		333	43.52%	29.19%	0.046%	3.63%	0.10%	2.77%
	COL	59	48.97%	15.11%	0.050%	7.23%	0.10%	5.29%
	ITG	58	47.80%	21.67%	0.048%	4.29%	0.13%	3.16%
	ITF	215	40.87%	35.08%	0.045%	2.47%	0.10%	1.98%
Itabirite Concentrator		269	34.10%	44.53%	0.039%	3.01%	0.11%	1.48%
	ITC	207	34.39%	44.13%	0.038%	3.03%	0.11%	1.66%
	ITT	62	33.12%	45.87%	0.044%	2.96%	0.11%	0.88%
Total Indicated		602	39.31%	36.05%	0.043%	3.35%	0.11%	2.19%
Inferred								
Haematite Concentrator		156	38.50%	32.17%	0.042%	7.06%	0.10%	4.15%
	COL	32	40.43%	21.89%	0.044%	10.75%	0.08%	6.89%
	ITG	30	41.52%	26.69%	0.041%	7.66%	0.09%	4.49%
	ITF	94	36.89%	37.43%	0.041%	5.61%	0.12%	3.11%
Itabirite Concentrator		2,580	30.87%	45.83%	0.047%	3.09%	0.15%	0.82%
	ITC	147	32.64%	45.62%	0.034%	3.95%	0.11%	2.23%
	ITT	43	30.26%	47.22%	0.038%	4.27%	0.11%	1.67%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Inferred		2,735	31.31%	45.05%	0.047%	3.32%	0.14%	1.01%
Mineral Resources								
Haematite Concentrator		488	41.92%	30.14%	0.045%	4.73%	0.10%	3.21%
	COL	91	45.96%	17.51%	0.048%	8.47%	0.09%	5.86%
	ITG	88	45.69%	23.36%	0.045%	5.42%	0.11%	3.61%
	ITF	309	39.66%	35.79%	0.044%	3.42%	0.10%	2.32%
Itabirite Concentrator		2,849	31.18%	45.71%	0.046%	3.09%	0.14%	0.88%
	ITC	355	33.66%	44.75%	0.036%	3.41%	0.11%	1.90%
	ITT	105	31.94%	46.42%	0.041%	3.50%	0.11%	1.21%
	BIF	2,389	30.77%	45.82%	0.048%	3.02%	0.15%	0.71%
Total Mineral Resources		3,337	32.75%	43.43%	0.046%	3.33%	0.14%	1.22%

 Table
 10.2
 Total Mineral Resources Sensitivity (Summary by process route) 30
 30

 September 2010
 September 2010

Ore Lithologies	Units	nits Commodity Price (USc/dmtu)								
		50	75	85	100	115	125	150	175	200
Tonnage	(Mt)	2,115	3,042	3,152	3,270	3,337	3,355	3,381	3,396	3,405
- Haematite Conc.	(Mt)	471	488	488	488	488	488	488	488	488
<ul> <li>Itabirite Conc.</li> </ul>	(Mt)	1,644	2,554	2,664	2,782	2,849	2,866	2,893	2,908	2,917
Grade	(% Fe <sub>т</sub> )	35.22%	33.38%	33.17%	32.92%	32.75%	32.74%	32.70%	32.67%	32.66%
- Haematite Conc.	(%Fe <sub>T</sub> )	42.25%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%	41.92%
<ul> <li>Itabirite Conc.</li> </ul>	(%Fe <sub>⊤</sub> )	33.21%	31.75%	31.57%	31.34%	31.18%	31.18%	31.14%	31.12%	31.11%
Grade	(% P)	0.048%	0.048%	0.048%	0.049%	0.046%	0.049%	0.049%	0.049%	0.049%
- Haematite Conc.	(%P)	0.040%	0.040%	0.040%	0.040%	0.045%	0.040%	0.040%	0.040%	0.040%
<ul> <li>Itabirite Conc.</li> </ul>	(%P)	0.050%	0.050%	0.050%	0.050%	0.046%	0.050%	0.050%	0.050%	0.050%
Grade	(% AL <sub>2</sub> O <sub>3</sub> )	3.03%	3.21%	3.23%	3.29%	3.33%	3.33%	3.34%	3.34%	3.35%
- Haematite Conc.	(%AL <sub>2</sub> O <sub>3</sub> )	4.60%	4.72%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%	4.73%
<ul> <li>Itabirite Conc.</li> </ul>	(%AL <sub>2</sub> O <sub>3</sub> )	2.58%	2.92%	2.96%	3.04%	3.09%	3.09%	3.11%	3.11%	3.12%
Waste	(Mt)	798	2,554	2,994	3,571	3,962	4,148	4,432	4,628	4,760
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.4	0.8	0.9	1.1	1.2	1.2	1.3	1.4	1.4

### 10.4 Technical Studies: Zanaga PFS and Zanaga ESIA

The technical studies completed to date in respect of the ZIOP comprise the 2009 Conceptual Study and the 2009 Scoping Study. The Zanaga PFS is currently underway and scheduled for completion during Q1 2011 and the total expenditures to 30 September 2010 amount to US\$64.37m of which 59% (US\$38.17m) comprised expenditures for exploration, salaries and consultants. Funding for the Zanaga PFS amounts to some US\$106m sourced from two separate tranches comprising US\$50m and US\$56m.

The Zanaga PFS has been subdivided into two key phases with Zanaga PFS Phase I

complete to August 2010 and Zanaga PFS Phase II completed in Q1 2011.

SRK has the responsibility for compilation of the Zanaga PFS and in addition has authoring roles for the following: geology; mineral resources; mine site geotechnical engineering and hydrogeology; tailings storage facilities; waste rock dumps; and financial modelling. The remaining technical disciplines are managed by either the Company directly or other engineering/consultancy companies mandated by the Company: mine site infrastructure (WSP); metallurgical processing (ProMet); rail transport corridor and port infrastructure (Egis); and environmental and social aspects (the Company; Hydrobiology; Synergy; Kew Gardens; and Independent Expert).

The strategic objective of the Zanaga PFS is to assess the technical feasibility and economic viability of developing an integrated mine-rail-port operation to produce a total of 45Mtpa of marketable iron ore concentrates: a coarser concentrate suitable for sintering (15Mtpa); and a finer concentrate for pellet feed or as blended feed for sintering (30Mtpa; expanding to 45Mtpa). Preliminary results of the Zanaga PFS indicate:

- Mining operations relying on conventional open-pit mining methods with combined production from both higher grade (>40%Fe<sub>T</sub>) haematitic ore thereafter replaced by the lower grade (>30%Fe<sub>T</sub>) BIF ore with the build up to full production largely comprising processing of haematite ores. Thereafter production will most likely continue in proportion to the individual concentrator capacity with a 15Mtpa:30Mtpa split. Following depletion of haematite ores, concentrate production will be entirely sourced from the Itabirite Plant. The latest mining optimisation analysis indicates total RoM of 3.23Bnt grading 31.59%Fe<sub>T</sub> with an accompanying stripping ratio of 0.90t<sub>waste</sub>:t<sub>ore</sub>.
- Metallurgical processing through a two separate concentrators:
  - Haematite Concentrator: 15Mtpa of concentrate production which at currently assumed yields 43% indicate a required RoM feed capacity of 35Mtpa to process COL/ITC/ITF,
  - Itabirite Concentrator: 30Mtpa of concentrate production which at currently assumed yields 33% indicate a required RoM feed capacity of 92Mtpa to process ITG/ITT/BIF.
     Further expansion to 45Mtpa of concentrate production is planned which results increased RoM feed capacity of 138Mtpa, assuming similar weighted average yields.

Metallurgical performance parameters resulting from the recently completed mining optimisation study which indicates total production from COL/ITG/ITF and ITC. It is however important to note that the recent Fe grade of the ITF concentrate is substantially reduced from the preliminary results and in order to achieve a minimum sinter produce Fe grade of 64.82%, concentrates from the COL/ITG/ITF/ITC would need to be blended with ITT/BIF material to address the current shortfall (±1%Fe). SRK notes that significant further testwork is planned to optimise the production of both sinter feed concentrate and concentrate fines for blending to produce sinter feed and/or pellet feed.

Lithology	Optir	nisation RoM		Metall	urgical Performanc	e	Optimisa	tion Concentrate	
	Tonnage	Grade	Content	Yield	Concentrate	Recovery	Tonnage	Grade	Content
	(Mt)	(%Fe <sub>t</sub> )	(MtFe)	(%)	(%Fe)	(%)	(Mt)	(%Fe <sub>t</sub> )	(MtFe)
COL	93	43.77%	41	41.08%	63.11%	59.24%	38	63.11%	24
ITG	90	43.51%	39	49.71%	63.39%	72.42%	45	63.39%	28
ITF	316	37.77%	120	41.48%	63.60%	69.85%	131	63.60%	84
ITC	360	32.20%	116	26.38%	65.00%	53.26%	95	65.00%	62
ITT	107	30.48%	33	29.99%	66.19%	65.12%	32	66.19%	21
BIF	2,260	29.71%	671	33.64%	66.10%	74.84%	760	66.10%	502
Total	3,227	31.59%	1,019	34.14%	65.50%	70.77%	1,102	65.50%	722

The initial flowsheet configuration included: comminution circuits comprising two stage mineral sizers for haematite ore and single staged crushers for Itabirite ores and

AG/pebble mills; coarse gravity (jigs) and fine gravity separation (spirals) and magnetic separation. The key process units as defined by ProMet are essentially the same as described above, except that WHIMS is listed as optional, and this option is not currently being considered as part of the Zanaga PFS;

- Mine site infrastructure including: materials handling, waste rock dump; water management facilities; tailings storage facilities; rail and road access; accommodation; workshops; airstrips; ore stockpiles; and product stockpiles;
- Power generation/supply, transmission and distribution options including grid power with diesel powered standby generation and locally generated hydro power. For the mine site the principal options comprise either: power generation by HFO or diesel oil; or electric grid power supply through purchase. For the deep water port facility the preferred option is grid supply via the SNE network to a dedicated substation at the port site.

The current installed power requirement the mine site is estimated at approximately 300MW comprising: On this basis annual energy usage is assumed at some 2.4TWhrs and initial indications for power purchase from CEC via 220kV lines is some USc8/kWhr with a lower limit of USc6/kWhr also under consideration. Installed power assumed for the port is 20MW with an annual energy usage of 93GWhr;

 Rail transportation via a 350km rail link to a port facility located 9km North of Pointe-Noire situated on the Atlantic Ocean. The current alignment traverses various terrain from Pointe Noire to the mine site and nominally delineated as follows: Pointe-Noire Coastal basin; Mayombé Mountains; Plateau of Great Niari Depression; Great Niari Depression; ascent of Chaillu Mountains; Chaillu Mountains and the mine site.

Preliminary estimates for construction quantities comprise: earthworks totalling 88Mm<sup>3</sup>; bridge structures comprising bridges for crossing identified rivers and to replace fills of more than 35m high (49 bridges in total are required for a total length of 7,900m); track foundation layers and pavement structures (1.9Mm<sup>3</sup>)' drainage and hydraulic structures numbering 1,050; and railway track comprises a total of 385km of rail with sleeper spacing at 1,800/km to cater for the high 40t load.

The principal operating specifications assumed for the Zanaga PFS are: transportation of 51Mt wet (45Mt dry at 13% moisture); fuel 150,000t; containers at 10,000 twenty foot equivalent units ("TEU"); and maximum gradients of 1.0% and 1.5% from Zanaga to Pointe Noire and Pointe Noire to Zanaga respectively;

- Port facilities and associated rail head site is to be located 9km north of Pointe Noire adjacent to the Atlantic Ocean and extending over some 2km<sup>2</sup>. This comprises a piled access trestle extending approximately 2.0km from the beachfront into the sea with a loading platform at the seaward end of the access trestle capable of berthing cape size vessels (170,000DWT to 230,000DWT). The current configuration comprising both on shore and off shore elements includes consideration for: loading platform and its trestle; shore protection; service labour; yard preliminary structures and associated maintenance port facilities. Key associated equipment include: support vessels; ship-loaders and conveyors; and other yard equipments;
- Environmental studies targeting completion of the ESIA process for environmental authorisation during Q4 2012. Key environmental issues identified to date include a number of both social and bio-physical considerations. The principal social issue highlighted is directly related to the requirement for a significant relocation programme in the immediate vicinity of the mine site. The principal bio-physical issues relate to: the

presence of forest areas around the mine site which are of high biodiversity value for both plants and animals and in addition the presence of critically endangered, endangered and other species; the identification of the port site as a location which is important for nesting by Endangered turtles (Olive Ridley Turtles); and the location of the mine site on the watershed between the basins of the Ogooué and Niari rivers indicating potential for inter alia trans-boundary impacts (as the Ogooué River flows into Gabon).

Initial closure cost estimates are limited to the mine site only on the assumption that any infrastructural aspects of the transport corridor and the PNP will continue to provide post closure benefits. Accordingly the current estimate for the mine-site provides for some US\$230m which includes approximately US\$6m of TBL and is considered overall to project an estimation accuracy of  $\pm 40\%$ ;

- Marketing strategy assuming production of concentrate products which are either marketable as sinter feed and/or concentrate fines. Accordingly concentrate production includes two types of concentrates: a coarser concentrate suitable for sintering; concentrate fines for pellet feed or in part blended feed for sintering. Preliminary metallurgical testwork indicates that concentrates sourced from the COL/ITC/ITF and ITG material can be blended to produce concentrate which is marketable as a sinter product: by weight of concentrates sourced from COL (25%), ITG (30%), ITF (25%) and ITC (20%). To date however there has been no sintering tests undertaken for any of the concentrates produced from the various composite samples tested. Accordingly it is not possible at this stage to confirm whether a substantive portion of the concentrates sourced from the ZIOP is marketable as a sinter feed concentrate;
- Capital expenditure totalling US\$7.45Bn comprising: base costs of US\$5.83bn; contingencies of US\$0.99bn (17% of base costs); and engineering procurement and EPCM of US\$0.63bn. This total is subdivided into the following reporting areas: mine site at US\$3.46bn (46%); transport corridor (33%); PNP (17%); and power (4%).

Capital Expenditure Item	Base	Continger	ncy	EPCM	Total
	(US\$m)	(%)	(US\$m)	(US\$m)	(US\$m)
Mine Site	2,644	19%	514	306	3,463
Transport Corridor	2,074	14%	289	104	2,467
Pointe Noire Port	896	17%	152	203	1,250
Power	214	15%	32	21	268
Total	5,828	17%	986	634	7,448

Prior to finalisation of the Zanaga PFS the current capital estimates reflect similar levels of accuracy as included in the 2009 Scoping Study which was noted at  $\pm 40\%$ . It is however expected that on completion of the Zanaga PFS the capital expenditure estimates will be further refined to  $\pm 25\%$ . These estimates for the Zanaga PFS are currently of a preliminary nature and accordingly are subject to change. Furthermore it should be noted that the uncertainties associated with substantive infrastructure related projects for which both topographic relief and site specific geotechnical considerations are remain the subject of further work, are inevitably significant. Accordingly it is likely that only on completion of the Zanaga FS where due consideration for such investigations are complete will the resulting capital expenditure estimates attain the level of accuracy's approaching  $\pm 10$  to  $\pm 15\%$ .

Additional capital expenditures are required for the expansion of the Itabirite Concentrator to facilitate production of concentrate from the initial 30Mtpa to 45Mtpa. The total capital expenditure required for this expansion is estimated at US\$236m. Preliminary estimates of sustaining capital expenditure largely reflect replacement costs for the mobile mining equipment fleet, certain fixed plant and conveyors which over the current assumed LoM

production totals US\$3.36bn. These expenditures are assumed to commence in the 5<sup>th</sup> year following the first year of production through to depletion of the assumed tonnages included in the optimised shell corresponding to the LTP of USc85/dmtu.

The scheduling of capital expenditures for construction assumes a total period of some 3 years to 3.5 years with some 40% of annual production capacity achieved during the first year of processing operations. Within this period some US\$1.0bn is expended in year 1 with US\$2.1bn expended in each of the following three calendar periods and the balance thereafter for a maximum of a further two calendar periods; and

Cash costs excluding 3% royalty ranging from a weighted average low of US\$25.98/t<sub>Conc</sub> to US\$28.34/t<sub>Conc</sub> for total concentrate production with Scenario 2 indicating unit costs of US\$21.88/t<sub>Conc</sub> and US\$28.31/t<sub>Conc</sub> for production from the Haematite Concentrator and the Itabiritie Concentrator respectively.

Scenario	Units	Haematite	Itabirite	Total
1 (9% Contingency)	(US\$/t <sub>Conc</sub> )	22.92	29.65	28.34
2 (4% Contingency)	(US\$/t <sub>Conc</sub> )	21.88	28.31	27.06
3 (0% Contingency)	(US\$/t <sub>Conc</sub> )	21.05	27.17	25.98

Table 10.3 presents a summary of the key performance statistics for the ZIOP based on the preliminary results of Phase I of the Zanaga PFS.

## Table 10.3 ZIOP key performance statistics

Inputs	Units	Total	Haematite	ltabirite
Production	-	-	-	
Stripping Ratio	(t <sub>waste</sub> :t <sub>ore</sub> )	0.90	0.90	0.90
Ore Processed	(Mt)	3,227	500	2,727
	(%Fe <sub>T</sub> )	31.59%	39.92%	30.07%
	(MtFe <sub>T</sub> )	1,019	200	820
Yield	(%)	34.14%	42.89%	32.54%
Recovery	(%)	70.77%	68.19%	71.40%
Concentrate	(Mt)	1,102	214	887
	(%Fe)	65.50%	63.47%	65.99%
	(MtFe <sub>T</sub> )	722	136	585
Sales Revenue	-		-	
Commodity Price	(USc/dmtu)	85	85	85
	(US\$m)	61,330	11,567	49,763
Operating Expenditure (Units)				
Mining	(US\$/t <sub>Mined</sub> )	1.71	1.71	1.71
Processing	(US\$/t <sub>RoM</sub> )	3.61	3.22	3.68
Overheads	(US\$/t <sub>RoM</sub> )	0.69	0.69	0.69
Rail	(US\$/t <sub>Conc</sub> )	4.91	4.91	4.91
Port	(US\$/t <sub>Conc</sub> )	1.31	1.31	1.31
Closure	(US\$/t <sub>Conc</sub> )	0.24	0.24	0.24
Royalty	(%)	3%	3%	3%
Operating Expenditure (Total)				
Mining	(US\$m)	10,500	1,627	8,873
Processing	(US\$m)	11,645	1,610	10,035
Overheads	(US\$m)	2,234	346	1,888
Rail	(US\$m)	5,407	1,052	4,354
Port	(US\$m)	1,440	280	1,160
Royalty	(US\$m)	1,840	347	1,493
Closure	(US\$m)	260	51	209
Total	(US\$m)	33,325	5,312	28,012
Capital Expenditure				
Project	(US\$m)	7,704	1,499	6,205
Sustaining <sup>(2)</sup>	(US\$m)	3,364	655	2,709
Total	(US\$m)	11,068	2,154	8,914
Expenditures				
Cash Costs	(US\$m)	33,065	5,262	27,803
Cash Costs (ex. royalty)	(US\$m)	31,225	4,915	26,310
Total Cash Costs	(US\$m)	33,325	5,312	28,012
Total Working Costs	(US\$m)	33,325	5,312	28,012
Unit Costs				
Cash Costs	(US\$/t <sub>Conc</sub> )	30.01	24.54	31.34
Cash Costs (ex. royalty)	(US\$/t <sub>Conc</sub> )	28.34	22.92	29.65
Total Cash Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	31.57
Total Working Costs	(US\$/t <sub>Conc</sub> )	30.25	24.78	31.57

Project capital expenditure comprising initial capital expenditure (US\$7,448) and Itabirite Concentrator expansion costs (US\$236m).

Sustaining capital expenditure comprising replacement capital expenditure for the mobile mining equipment and conveyors based on the assumed operating period indicated by the current optimisation analysis assuming a LTP of USc85/dmtu.

## 10.5 Work Programmes

Should Xstrata not exercise its option, the Company will require access to additional funds (see the FS Work Programme and/or the Early Work Programme) for completion of the next

developmental milestone, specifically the Zanaga FS which inter alia includes ongoing exploration, completion of the Zanaga ESIA and other ongoing commitments relating to the 2010 Addendum.

Accordingly and in the event where immediate funding is required following a decision by Xstrata not to exercise its option, the Company has developed an alternative scenario as defined by the proposed continuation expenditure. The "Continuation Work Programme") applies, as reported in Section 8.4 of this CPR. This in essence reflects the minimum expenditures required in ensure compliance with its commitments in respect of the Zanaga ELs. The Company would then expect to raise further funding, following completion of a positive outcome of the Zanaga PFS, to fund the FS Work Programme and/or the Early Works Programme defined herein. The Company however considers that such funding is however likely to occur in two stages.

The basis of the FS Work Programme (and the Early Works Programme) and any associated supporting technical information has been provided by the Company solely and explicitly does not purport to reflect the current or future views and/or commitments of Xstrata. Accordingly should Xstrata execute any or all of its options the details relating to the FS Work Programme (and the Early Works Programme), both with respect to activity and expenditure schedules may be fundamentally different to that presented herein.

Furthermore the current scope of the Zanaga PFS includes the preparation of a detailed work programme for completion of the Zanaga FS. As the FS Work Programme detailed herein predates the completion of the Zanaga PFS, SRK notes that the FS Work Programme is preliminary in nature and subject to change. Specifically the expenditure component relating to the exploration drill programme is not supported by a designed exploration programme which includes layouts of drill fences and holes.

Accordingly the reader is cautioned that completion of the Zanaga PFS and/or a decision by Xstrata to execute or not execute its option may well result in fundamental changes to the FS Work Programme as presented herein.

# 10.5.1 FS Work Programme and Early Works Programme

The FS Work Programme is largely focused on the completion of the Zanaga FS with activities and associated expenditures scheduled over a 24 month period. The development milestone achieved at this stage is a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable. Furthermore this will also be supported by the Zanaga ESIA study which is to be prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the International Council of Mining and Metals ("ICMM") sustainable development framework.

The forecasted expenditures totals US\$255.3m of which US\$226.6m is classified as operating expenditures and US\$28.7m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$167.5m and US\$87.8m respectively and include contingencies of US\$32.5m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

In addition to the FS Work Programme and, in order to fast-track certain aspects of the infrastructure components the Company has identified an "Early Works Programme". The associated expenditures is however a sub-set of the capital expenditure currently associated with the construction and commissioning of the ZIOP and ranges between US\$70m and

US\$90m. Details relating to the Early Works Programme are included in Section 8.3 of this CPR.

### 10.5.2 Continuation Work Programme

The Continuation Work Programme is focused on ensuring the minimum required to comply with the current terms of the Decrees, the 2007 Mining Convention and the 2010 Addendum and includes associated expenditures scheduled over an 18 month period. Accordingly the development milestone achieved at this stage is substantially limited compared to that included in the FS Work Programme and will not result in: a multi-disciplinary Feasibility Study completed to bankable standards which demonstrates that the ZIOP is both technically feasible and economically viable; or an ESIA study prepared in accordance various international benchmarks including the IFC Performance Standards as embodied within the Equator Principles, the World Bank guidelines and the ICMM Sustainable Development Framework.

The forecasted expenditures for the Continuation Work Programme totals US\$57.3m of which US\$50.2m is classified as operating expenditures and US\$7.0m provides for capital expenditures and costs related to the Admission. Expenditures for 2011 and 2012 are US\$45.7m and US\$11.6m respectively and include contingencies of US\$6.6m. The contingencies are related to all expenditures excluding Admission Costs and are based on an assumed 15% rate.

# 10.6 Conclusions

Based on a review of all technical information completed to date as part of the Zanaga PFS and in addition the Work Programmes as developed by the Company, SRK concludes that:

- the character: the Mineral Resources delineated and the results of the technical studies: of the Mineral Assets is of sufficient merit to justify the Work Programmes; and
- the Work Programmes are appropriately defined with respect to scope, schedule of activities and expenditures.

## APPENDIX :GLOSSARY, ABBREVIATIONS AND UNITS

GLOSSARY

AG Mill A mill in which the secondary grinding of ore by tumbling crushed ore in a revolving cylinder with only the ore taking part in the operation (autogenous arindina). 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. Bench The horizontal step or floor along which coal, ore, stone, or overburden is mined BIF Banded Iron Formation is the fresh, hard, un-oxidised, banded, magnetite itabirite and consists of magnetite, silica and occasional amphibolite, at Zanaga the BIF has a total iron grade range of 10%Fe<sub>T</sub> to 47%Fe<sub>T</sub> averaging 30%Fe<sub>T</sub>. **Bio-physical** That portion of an environmental liability which is related to the physical aspects of a mining operation and specifically excludes any social liabilities. Block model A three dimensional electronic model in which geological characteristics and qualities are housed. Canga ("CAN") A hard, hematite goethite rich cemented unit of limited extend found capping the weathered units in Lebayi and Mboungou areas Capital expenditure Expenditures incurred during the process of commencing, expanding or sustaining production. 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. Colluvium ("COL") A zone of weakly consolidated and poorly sorted haematite clasts (+60% FeT) in a goethite/clay matrix. Typically COL has a brown ochre colouration, with an average thickness of between 2 and 5m and has average total iron grade of approximately 46%FeT (low of 20%FeT and high of 62%FeT);A zone of weakly consolidate Comminution The breaking, crushing, or grinding by mechanical means of stone, coal, or ore, for direct use or further processing. Company Zanaga Iron Ore Company. **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' 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. Composite A single sample generated by the aggregation of many other samples. Concentrate The clean product recovered through the beneficiation processes. Congo (Brazzaville) Republic of Congo

Core	A solid, cylindrical sample of rock produced by an annular drill bit, generally rotatively driven but sometimes cut by percussive methods.
Consensus Market Fored	casts
	Commodity prices determined by analysis of the median/range of forecasts by various financial institutions.
Creditors	A party (e.g. person, organization, company, or government) that claims that a second party owes the first party some properties or services.
Crushing	Size reduction into relatively coarse particles by stamps, crushers, or rolls.
Cut-off grade	The lowest grade of mineralised material that qualifies as ore in a given deposit; rock of the lowest assay included in an ore estimate.
Debtors	The opposite of a Creditor who is someone you owe money to.
Depreciation	Term used to describe any method of attributing the cost of an asset across the useful life of the asset.
Diamond drillhole ("DD")	A drill hole 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.
Dilution	The contamination of ore with barren or grade bearing wall rock in stoping. The assay of the ore after mining is frequently lower than when sampled in place. Dilution(1) relates to the proportion of waste that is contained in the Run-of-Mine ore delivered to the metallurgical processing plant. Dilution (2) relates to diluting tonnage expressed as a percentage of in-situ ore mined.
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.
dmtu	Dry Metric Tonne Unit of iron units.
Domain	A domain in which the properties display similar characteristics.
Dozer	A tractor on the front end of which is mounted a vertically curved steel blade held at a fixed distance by arms secured on a pivot or shaft near the horizontal centre of the tractor. The blade can be lowered or tilted vertically by cables or hydraulic rams. It is a highly versatile piece of earth excavating and moving equipment esp. useful in land clearing and levelling work, in stripping topsoil, in road and ramp building, and in floor or bench cleanup and gathering operations.
Drillhole	Technically, a circular hole drilled by forces applied percussively; loosely and commonly, the name applies to a circular hole drilled in any manner.
Drillhole collar	The formation of the front end of a drill hole, or the collar, which is the preliminary step in drilling to cause the drill bit to engage in the rock.
DWT	Deadweight tonnage is a measure of how much weight a ship is carrying or can safely carry
Dyke	Tabular igneous intrusion that cuts across the bedding or foliation of the country rock.
EPCM	Engineering, Procurement, Construction Management
ESIA	Environmental Social Impact Assessment. An assessment which is prepared for a regulatory agency with regard to a permit, and is required

under the majority of mining codes. The ESIA may include but is not limited to the environmental consequences which may arise from the proposed development.

Environmental Liabilities The sum of the biophysical liabilities and the terminal benefits liabilities associated with an exploration/mining property.

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 model Generally the block model for any deposit which grades are largely based on exploration assay data.

FaultA fracture or a fracture zone in crustal rocks along which there has been<br/>displacement of the two sides relative to one another parallel to the fracture.<br/>The displacement may be a few inches or many miles long.

Feasibility Study ("FS") 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.

Ferruginous Pertaining to or containing iron; e.g., a sandstone that is cemented with iron oxide.

Filtering To subject to the action of a filter; to pass a liquid or a gas through a filter for the purpose of purifying, or separating, or both. To act as a filter; to remove from a fluid by means of a filter; to percolate

FoldA curve or bend of a planar structure such as rock strata, bedding planes,<br/>foliation, or cleavage. A fold is usually a product of deformation, although its<br/>definition is descriptive and not genetic and may include primary structures.

Footwall The part of the country rock that lies below the ore deposit.

Free-digging Ore or waste which may be mechanically excavated without recourse to the use of explosives.

Geochemical survey 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.

Geophysics Branch of physics dealing with the Earth, including its atmosphere and hydrosphere. It includes the use of seismic, gravitational, electrical, thermal, radiometric, and magnetic phenomena to elucidate processes of dynamical geology and physical geography, and makes use of geodesy, geology, seismology, meteorology, oceanography, magnetism, and other Earth sciences in collecting and interpreting Earth data. Geophysical methods have been applied successfully to the identification of underground structures in the Earth and to the search for structures of a particular type, as, for example, those associated with oil-bearing sands.

GoCB	Government of Congo (Brazzaville)
Grade	The relative quantity or the percentage of ore-mineral or metal content in an orebody.
Grade control	The process of monitoring the estimation of grade in the mining operation by comparison of estimates based on exploration drilling, infill drilling, blast-hole sampling and mining/milling reconciliation exercises.
Grader	A self-propelled or towed machine provided with a row of removing or digging teeth and (behind) a blade to spread and level the material.
Grinding	The process of erosion by which rock fragments are worn down, crushed, sharpened, or polished through the frictional effect of continued contact and pressure by larger fragments.
Hangingwall	The overlying side of an orebody, fault, or mine working, esp. the wall rock above an inclined vein or fault.
Haematite	an oxidised mineral of iron (Fe2O3)
Haematite Concentrator	Plant used to treat COL, ITG and ITF
Hydrogeology	The part of hydrology that deals with the distribution and movement of groundwater in the soil and rocks of the Earth's crust.
Hydrology	The science that deals with global water (both liquid and solid), its properties, circulation, and distribution, on and under the Earth's surface and in the atmosphere, from the moment of its precipitation until it is returned to the atmosphere through evapotranspiration or is discharged into the ocean. In recent years, the scope of hydrology has been expanded to include environmental and economic aspects.
Indicated Mineral Resour	rces
	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 Resourc	es
	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.
Interpolation	Estimation of a statistical value from its mathematical or graphical position intermediate in a series of determined points.
Intrusion	In geology, a mass of igneous rock that, while molten, was forced into or between other rocks.

Itabirite	Metamorphosed banded iron formation
Itabirite Concentrator	Plant used to treat ITC, ITT and BIF
ITC	A competent, moderately oxidised, banded brown and grey itabirite. The layers, as with ITF, typically comprise haematite, martite and silica, and tend to have irregular thicknesses. The ITC has an average thickness of approximately 25m, reaching 40m in places, with a total iron ore grade range of between 33%FeT and 35%FeT.
ITF	A friable enriched itabirite, with a banded, dark grey and grey-white, highly leached, soft, friable, occasionally sandy, appearance. The layers are typically irregular, and consist of haematite, martite and silica. The ITF has an average thickness of approximately 25m, with a total iron ore grade range of between 14%FeT to 56%FeT. (average of 39%FeT)
ITG:	A friable "biscuity" unit of leached weathered itabirite containing haematite/martite, goethite and minor clay. This is interpreted to represent the largely degraded uppermost portion of the oxidised itabirite. The ITG is commonly 4m to 8m thick (typically 5m), and of relatively high grade (average 45%FeT; low of 17%FeT; high of 62%FeT), and is associated with high Al2O3 values (typically approximately 4%Al2O3 to 8% Al2O3).
ΙΤΤ	A hard, partially oxidised itabirite, and is transitional between the ITC unit and fresh magnetite itabirite below. The ITT is marked by the presence of minor magnetite associated with the haematite layers and is commonly 2m to 3m thick, with total iron ore grade range of between 13%FeT and 44%FeT (average of 31%FeT);and
Jaw crusher	A crushing machine consisting of a moving jaw, hinged at one end, which swings toward and away from a stationary jaw in a regular oscillatory cycle.
Joint	A divisional plane or surface that divides a rock and along which there has been no visible movement parallel to the plane or surface.
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.
Jumelles Limited	A wholly owned subsidiary of the Zanaga Iron Ore Company.
Kriging	In the estimation of mineral resources by geostatistical methods, the use of a weighted, moving-average approach both to account for the estimated values of spatially distributed variables, and also to assess the probable error associated with the estimates.
Lithology	The character of a rock described in terms of its structure, colour, mineral composition, grain size, and arrangement of its component parts.
Magnetite	A magnetic greyish black iron mineral (Fe2O4)
Measured Mineral Resou	irces
	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.

Metallurgical testwork Laboratory testwork undertaken to determine the most appropriate process route for the economic recovery of valuable minerals/metals.

- 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.
- Mill 1. A mineral treatment plant in which crushing, wet grinding, and further treatment of ore is conducted. Also, separate components, such as ball mill, hammer mill, and rod mill. 2. A preparation facility within which metal ore is cleaned, concentrated, or otherwise processed before it is shipped to the customer, refiner, smelter, or manufacturer. A mill includes all ancillary operations and structures necessary to clean, concentrate, or otherwise process metal ore, such as ore and gangue storage areas and loading facilities.
- Milling The grinding or crushing of ore. The term may include the operation of removing valueless or harmful constituents.
- 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.
- Modifying factors ("MF") The term 'modifying factors' is defined to include mining, metallurgical, economic, marketing, legal, environmental, social and governmental considerations.
- 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.

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.

Optimised shell An undersigned pit shell obtained from the process of open-pit optimisation.

- Ordinary kriging A regression technique used in geostatistics to approximate or interpolate data.
- 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.
- 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<br>studies have been carried out, and include consideration of and modification<br>by realistically assumed mining, metallurgical, economic, marketing, legal,<br>environmental, social and governmental factors. These assessments<br>demonstrate at the time of reporting that extraction could reasonably be<br>justified. Ore Reserves are sub-divided in order of increasing confidence<br>into Probable Ore Reserves and Proved Ore Reserves.   |  |  |  |
|----------------------------|---|--|--|--|
| Pellet Feed                | Iron ore fines used to produce pellets  |  |  |  |
| Pit design                 | A design for an open-pit which comprises all benches, berms, batter angles and haul roads.  |  |  |  |
| Pit optimisation           | A process whereby a series of optimised shells for open-pits are generated each corresponding to a specific commodity price assumption.   |  |  |  |
| PNP                        | Pointe-Noire Port that is expected to be built to export iron ore from the Zanaga Project   |  |  |  |
| Potentially economically   | mineable  |  |  |  |
|                            | A portion of the mineral inventory which can be demonstrated to be mined<br>at a profit and normally determined by application of an appropriate in-situ<br>cut-off grade.  |  |  |  |
| Pre-feasibility study (PFS | 8)  |  |  |  |
|                            | 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.  |  |  |  |
| Primary crushing           | In ore dressing, the first stage in which crushers take run-of-mine ore and reduce it to a size small enough to be taken by the next crusher in the series. Ordinarily, the Blake jaw crusher or a gyratory crusher is used.  |  |  |  |
| Probable Ore Reserves      | The economically mineable part of an Indicated, and in some circumstances, a Measured 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 factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. A Probable Ore Reserve has a lower level of confidence than a Proved Ore Reserve but is of sufficient quality to serve as the basis for a decision on the development of the deposit. |  |  |  |
| Project capital            | The capital expenditure required as the initial development capital and/or for increasing production capacity.  |  |  |  |
| Proved Ore Reserves        | A 'Proved Ore Reserve' is the economically mineable part of a Measured<br>Mineral Resource. It includes diluting materials and allowances for losses<br>which may occur when the material is mined. Appropriate assessments and<br>studies have been carried out, and include consideration of and modification<br>by realistically assumed mining, metallurgical, economic, marketing, legal,  |  |  |  |

	environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. A Proved Ore Reserve represents the highest confidence category of reserve estimate. The style of mineralisation or other factors could mean that Proved Ore Reserves are not achievable in some deposits.			
QAQC	Quality Assurance and Quality Control programme to assess the quality and reliability of data collected and stored.			
Reverse circulation ("RC"	")			
	The circulation of bit-coolant and cuttings-removal liquids, drilling fluid, mud, air, or gas down the borehole outside the drill rods and upward inside the drill rods.			
Real	Expenditures/revenues stated in constant money terms i.e. all items irrespective of historic or forecasts are stated in money terms at a given date.			
SAG Mill	A mill in which the secondary grinding of ore by tumbling in a revolving cylinder with limited balls or bars taking part in the operation (semi- autogenous grinding).			
Sampling	The gathering of specimens of ore or wall rock for appraisal of an orebody. Since the average of many samples may be used, representative sampling is crucial. The term is usually modified to indicate the mode or locality; e.g., hand sampling, mine sampling, and channel sampling.			
Schist	A strongly foliated crystalline rock.			
Scoping Study	means a study that includes an economic analysis of the potential viability of Mineral Resources taken at an early stage of the project prior to completion of a PFS			
Secondary Crushing	In ore dressing, the second stage of grinding in which the discharge from the primary crusher is broken down to a size suitable for feed to fine grinding machines			
Semi-autogenous grindin	g			
	see SAG mill.			
Sinter	an aggregate which is normally produced from relatively coarser iron ore fines which is used as an input/raw material in blast furnaces;			
Sintering	The process of creating sinter from iron ore fines			
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.			
SRK	SRK Consulting (UK) Limited.			
SRK Group	SRK Global Limited.			
Stores	The value of stores at the end of a financial reporting period.			
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.			

SRK Consulting	Zanaga Iron Ore Company Limited – Appendix A			
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.			
Sustaining capital	Capital expenditure required to sustain operations at current level of production, generally to replace aging equipment.			
Tailings	Portion of tailings containing some mineral that cannot be economically removed.			
Tailings Storage Facility				
	An impoundment used to deposit tailings arising as waste from a metallurgical processing facility.			
Terminal Benefits	Statutory expenditures to be incurred by a business on termination of employment.			
Thickening	Reducing the proportion of water in a pulp by means of sedimentation.			
Total employees costed				
	The total number of employees whose operating expenses are included in Cash Costs.			
Trench	In geological exploration, a narrow, shallow ditch cut across a mineral deposit to obtain samples or to observe character.			
Trenching	In geological exploration, a narrow, shallow ditch cut across a mineral deposit to obtain samples or to observe character.			
Ultimate pit shell	The optimised shell: generally corresponding to the commodity price used to define the Ore Reserves: chosen as the basis for generation of the final pit design.			
Validation	Assessing the quality of block model estimates by comparison with raw assay data.			
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.			
Waste Rock Dump (WRD)				
	The area where mine waste or spoil materials are disposed of, or piled.			
Wireframe	Three dimensional solids representing geological/mineralogical domains.			
Working capital	The amount of day-by-day operating liquidity available to a business.			
Zanaga ELs	Zanaga Exploration Licenses			

## ABBREVIATIONS

ADA	Area Directly Affected (Environmental)
AIM	Alternative Investment Market
$AL_2O_3$	Alumina (Aluminium Oxide)
ARD	Acid Rock Drainage
ARDML	Acid Rock Drainage Metal Leaching
Bn	Billion
Bnt	Billion tonnes
CEC	Compagnie Electrique du Congo
CEMAC	Central African Monetary and Economic Community

C.Eng	Chartered Engineer
C.Geol	Chartered Geologist
CMF	consensus market forecast
Conc	concentrate
COL	Colluvium
CPI	consumer price inflation index
CPR	Competent Persons' Report
CRU	Commodities Research Unit
CS	Composite sample
DDP	Delivered Duty Paid
DCF	Discounted Cash flow.
DD	Due Diligence.
DD	Diamond Drilling
dmtu	Dry metric tonne unit
DR	Direct Reduction
DWT	Deadweight (tonnes)
E	East
EBITDA	Earnings before Income Tax, Depreciation and Amortisation
ECM	Engineering, Construction and Management
EFD	Equipment Fleet Dimensioning
EIA	Environmental Impact Assessment
EI&C	Electrical, Instrumentation and Control
EL	Exploration Licence
EPC	Engineering, Procurement and Construction
EPCm	Engineering, Procurement and Construction, Management
EPPC	Engineering, Partial-Procurement and Construction
ERS	Electric Rope Shovel
Excl	Excluding
Fe	Iron
FeO	Iron oxide (ferrous)
Fe <sub>2</sub> O <sub>3</sub>	Iron oxide (ferric)
Fe <sub>3</sub> O <sub>4</sub>	Iron – magnetite
FIMMM	Fellow of the Institute of Materials, Minerals and Mining.
FoB	Free on board
FoS	Factor of Safety
FS	Feasibility study
f/w	Footwall
GPS	Geographical Positioning System
н	Horizontal
H <sub>2</sub> O	Water
HC	Haematite – compact
HF	Haematite – friable
HFO	Heavy Fuel Oil
HGMS	High Gradient Magnetic Separation
HPGR	High Pressure Grinding Rolls
HQ	63.5mm core diameter
HMS	Hydraulic mining shovel
HP	horse power

HS	Haematite - semi-compact
HSC	Haematite – semi-compact
h/w	Hanging wall
Ind	Indicated Mineral Resources (JORC)
Inf	Inferred Mineral Resources (JORC)
IDW <sup>2</sup>	Inverse Distance Weighting Squared
IFC	International Finance Corporation
IMMM	Institute of Materials, Minerals and Mining
Incl	Including
IOP	Iron Ore Price
I-PFS	Interim Pre-feasibility study
IPO	Initial Public Offering
IRR	Internal Rate of Return
ISA	Indicative slope angle
ISO	International Standards Organisation
ISRM	International Society for Rock Mechanics
ITC	Itabirite – Compact
ITF	Itabirite – Friable
ITG	Itabirite – Goethite
ITT	Itabirite – Transitional
JORC	Joint Ore Reserves Committee
JTS	Jumelles Technical Services
К	Potassium
LCC	Life Cycle Cost
LD	Large diameter
LIDAR	Light Detection and Ranging used to measure topography
LIMS	Low Intensity Magnetic Seperation
LO	Operational Licence
LOI	Loss on Ignition
LoM	Life of Mine
LoMP	Life-of-Mine Plan
LP	Preliminary Licence
LSE	London Stock Exchange plc
LTP	Long Term Price
MARC	Maintenance and Repair Contract
mASL	metres above sea level
М	Measured Mineral Resources
Meas	Measured (Resource)
MIMS	Medium Intensity Magnetic Seperation
MnO	Manganese Oxide
MoE	Ministry of Environment
MMG	Ministry of Mines and Geology
MPD	Mining Project Development Congo SAU
MA%	Mechanical availability %
MCAF	Mining cost adjustment factor
MS	Magnetic Separation
MI	Median Indicator (semi-variogram)

Micron	One millionth of a metre		
MIK	Multiple Indicator Kriging		
MIMMM	Member of the Institute of Materials, Minerals and Mining		
MAusIMM	Member of the Australian Institute of Mining and Metallurgy.		
MIMS	Medium Intensity magnetic separation		
Mn	Manganese		
MnO <sub>2</sub>	Manganese dioxide		
mRL	Metres relative level (elevation)		
MRMR	Mining Rock Mass Rating		
MVA	Million volt-amps		
MY	Mass yield percentage		
Ν	North		
NAV	Net Asset Value.		
No	number		
NPV	Net Present Value		
NW	North west		
0	Oxygen		
o/p	open-pit		
OPEX	operating expenditure		
OTS	Ore type sample		
P	Phosphorus		
PD	Positive Displacement		
PF	Pellet Feed		
PFD	Process flow diagram		
PES	Pre-feasibility study		
рН	Measure of Acidity / alkalinity		
PPF	Personal protection equipment		
PSD	Particle size distribution		
095	% Rate equalled or exceeded for 90% of the time		
	Quality Assurance and Quality Control		
OCM	Quality Control Management		
R.	Coefficient of correlation		
RD	Relative density		
RE	Revenue factor		
RED	Request for Proposal		
REO	Request for quotation		
	Point load test		
	Pork Mass Bating		
RoM			
S	South		
5	Slope angle		
SA SC	Stopring Committee		
	Steering Committee		
SCADA	Supervisory Control & Data Acquisition		
SUAPEA	Sustaining Capital experiolitie		
SEC	South east		
SED			
SEP	Stakeholder Engagement Plan		
SIO <sub>2</sub>	Silica		

SRK Consulting

SF	Safety Factor
SG	Specific gravity
SITC	Supervision, Inspection and Training Contract
SNE	Société National d'Electricité
S <sub>ratio</sub>	Strip ratio
SRK	SRK Consulting
SW	South west
TBL	Terminal benefits liabilities
TEM	Technical Economic Model
TEP	Technical Economic Parameters
TSF	Tailings Storage Facility
UK	United Kingdom
USA	United States of America
USS	Updated Scoping study
UTM	Universal Transverse Mercator.
V	Vetical
VAT	Value Added Tax
W	Watt
W	West
WACC	Weight Adjusted Cost of Capital
WHIMS	Wet High Intensity Magnetic Seperation
WI	Work index (grinding)
WRD	Waste Rock Dump
WSP	WSP Group plc
XAF	Franc de la Communauté Financière Africaine, the "Congo Brazzaville Franc"
ZIOC	Zanaga Iron Ore Company
ZIOP	Zanaga Iron Ore Project
w/w	weight to weight
ytd	year-to-date
Y1	Year 1 etc
2D	Two dimensional
3D	Three dimensional
1Q	First quarter (of a year)
2Q	Second quarter (of a year)
3Q	Third quarter (of a year)
4Q	Fourth quarter (of a year)
4X	Whittle 4X software

#### UNITS

cm	centimetre
cm <sup>2</sup>	square centimetres
cm²/g	square centimetres per gramme (grindability)
ft	foot (imperial)
g	gramme
g/l	grammes per litre
GWhr	Gigawatt-hour
h	hour

ha	hectares
HP	Horse power
h/d	hours per day
h/s	hours per second
h/y	hours per year
h/y	hours per year
ĸ	hvdraulic conductivity / permeability (metres/day)
ka	kilogramme (1.000 grammes)
ka/t	kilogrammes per tonne
km	kilometre.
km <sup>2</sup>	square kilometre
kt	thousand metric tonnes
ktna	thousand metric tonnes per annum
kV/	Kilovolt / thousand volts
K\M/hr	Kilowatt hours
	kilowatte
	kilowatt houro
κννιι k\Λ/b/t	kilowatt hours par tanna
l L/maine	litree new minute
ID Ib <i>f/</i> im <sup>2</sup>	pound (imperial)
ID1/IN	pounds per square inch
m	metre.
m <sup>-</sup>	square metre.
mĭ 3	cubic metre.
m°/h	cubic metre per hour.
m³/s	cubic metre per second.
Ma	million years ago.
mg/l	milligram per litre
min	minute
mm	millimetre
Mm°	million cubic metres
Mt	million metric tonnes.
Mtpa	million metric tonnes per annum.
MUSD	million United States dollars
MVA	million volf-amps
MW	Megawatt / million Watts
MWh	million watt-hours
N/m <sup>2</sup>	newtons per square metre
pa	Per annum / per year
Pa	pascal
pН	acidity / alkalinity
ppm	parts per million
psi	pounds per square inch
P80	passing 80 microns
t	metric tonne (1,000 kilogrammes)
t <sub>conc</sub>	metric tonne of concentrate
tonne	metric tonne (1,000 kilogrammes)

3	
t/m°	metric tonne per cubic metre
tpa	metric tonnes per annum (year)
tpd	metric tonne per day
tph	metric tonnes per hour
tpm	metric tonnes per minute
t/t	Tonnes per tonne
TWhr	Terrawatt-hour
t <sub>waste</sub> : t <sub>ore</sub>	ratio of the metric tonnes of waste to metric tonne of ore.
USD	United States dollar
US\$m	million United States dollars
W	watt
%	percentage.
0	degree
°C	degree centigrade.
6	minute
"	inch
<	less than
>	greater than
Ø	diameter
μ	micron (one millionth of a metre)
#	mesh (screen size)

# PART VIII

# FINANCIAL INFORMATION ON ZANAGA IRON ORE COMPANY LIMITED

# Section A – Accountant's Report on Zanaga Iron Ore Company Limited

The following is the full text of a report on the IFRS Financial Information of Zanaga Iron Ore Company Limited for the year ended 31 December 2009 from KPMG Audit Plc, the Reporting Accountant, to the Directors and Liberum Capital.



KPMG Audit Plc 15 Canada Square London E14 5GL

The Directors Zanaga Iron Ore Company Limited Coastal Building 2nd Floor Wickham's Cay II P.O. Box 2221 Road Town Tortola British Virgin Islands

Liberum Capital Limited Ropemaker Place 25 Ropemaker Street London EC2Y 9LY

17 November 2010

Dear Sirs,

# Zanaga Iron Ore Company Limited ("the Company")

## 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 17 November 2010 of Zanaga Iron Ore Company Limited (the "Admission Document") on the basis of the accounting policies set out in note 2 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 of Zanaga Iron Ore Company Limited 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 ("Adopted IFRSs").

It is our responsibility to form an opinion 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.

## **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 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.

## 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 the Company as at 31 December 2009 and of its consolidated losses, cash flows and changes in equity for the period 19 November 2009 to 31 December 2009 in accordance with the basis of preparation set out in note 1 to the financial information and has been prepared in accordance with Adopted IFRSs as described in note 2 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

KPMG Audit Plc

# Section B – Financial Information on Zanaga Iron Ore Company Limited for the period ended 31 December 2009

# Statement of comprehensive income

		19 November to 31 December
	Note	2009 \$000
Administrative expenses Share of loss of associate		(96) (1,476)
Loss from operations		(1,572)
Taxation Loss for the year Share of other comprehensive income of associate – foreign	4	(1,572)
exchange translation		(85)
Total comprehensive income	9	(1,657)

#### **Balance sheet**

Assets	Note	As at 31 December 2009 \$000
Non-current assets		
Investment in associate	5	198,439
Current Assets		
Other receivables	6	11
Cash and cash equivalents	7	8,106
		8,117
Total Assets		206,556
Liabilities Current Liabilities Trade and other payables	8	(246)
Net assets		206,310
Capital and reserves attributable to equity holders of Zanaga Iron Ore Company Limited		
Share capital	9,10	207,967
Retained earnings	9	(1,657)
Total shareholders' equity	9	206,310

# Statement of cash flows

	Note	19 November to 31 December 2009
<b>Cash flows utilised in operating activities</b> Loss for the period Adjustments for:		\$000 (1,572)
Increase in other receivables Increase in trade and other payables Share of loss of associate		(11) 246 1,476
Net cash utilised in operating activities		139
Cash flows from financing activities Proceeds from issue of share capital Repurchase of own shares		23,967 (16,000)
Net cash from financing activities		7,967
Net increase in cash and cash equivalents Cash and cash equivalents at beginning of period		8,106
Cash and cash equivalents at end of period	7	8,106

# Statement of changes in equity

	State capital \$000	Retained earnings \$000	Total equity \$000
At 19 November 2009	_	_	_
Issue of shares	223,967	_	223,967
Repurchase of shares	(16,000)	_	(16,000)
Loss for the year	_	(1,572)	(1,572)
Other comprehensive income		(85)	(85)
At 31 December 2009	207,967	(1,657)	206,310

# 1 Business information and going concern basis of preparation

## Group Holding Structure

Zanaga Iron Ore Company Limited ("the Company") was incorporated on 19 November 2009. The Company is incorporated in and legally domiciled in the British Virgin Islands ("BVI") and the address of its registered office, is situated at Coastal Building, 2nd Floor, Wickham's Cay II, Road Town, Tortola, BVI. The Company's principal place of business is situated in Guernsey.

The Company currently holds 100 per cent. of the share capital of Jumelles Limited ("Jumelles BVI") subject to a Call Option (disclosed below). In 2007, Jumelles BVI became the holding company for the interests of its then ultimate 50/50 shareholders, Garbet Limited ("Garbet") and Guava Minerals Limited ("Guava"), in Mining Project Development Congo SAU ("MPD Congo") which, currently owns and operates 100 per cent. of the Zanaga Project in the Republic of Congo (subject to a minimum 10 per cent. free carried interest in MPD Congo in favour of the Government of the Republic of Congo).

In December 2009 Garbet and Guava contributed their then respective 50/50 joint shareholding in Jumelles BVI to the Company which currently owns 100 per cent. of the issued share capital of the Jumelles BVI, subject to the Call Option (defined below) in favour of Xstrata.

Garbet is majority owned by Strata Limited ("Strata"), a private investment company based in Guernsey, which specialises in the investment and development of early stage natural resource projects in emerging markets, predominately Africa. Garbet owns approximately 49 per cent. of the share capital of the Company.

Guava is majority owned by African Resource Holdings Limited ("ARH"), a BVI company that specialises in the investment and development of early stage natural resource projects in emerging markets. Guava owns approximately 39 per cent. of the share capital of the Company.

The balance of the 12 per cent. shareholding in the Company is held by a select number of reputable institutional investors in the mining sector.

Under the terms of a shareholder agreement between Garbet and Guava, which regulates how their interests in Jumelles BVI are managed, it is documented that Garbet and Guava jointly control Jumelles Limited.

Jumelles BVI has three subsidiary companies, Jumelles M Limited, Jumelles Technical Services Limited and MPD Congo.

## Xstrata Transaction

On 16 October 2009, Garbet, Guava and Jumelles BVI entered into a transaction (the "Xstrata Transaction") with Xstrata (Schweiz) AG ("Xstrata (Schweiz)"), a 100 per cent. held Swiss subsidiary of the listed mining major Xstrata Plc. The Xstrata Transaction comprises two principal transaction documents namely (i) a Call Option Deed ("Call Option Deed") and a Joint Venture Agreement ("JVA"). These two documents set out certain rights and obligations relating to Jumelles BVI and its shareholders.

On 26 November 2009, the Company executed the Deeds of Adherence in respect of both of the Call Option Deed and the JVA following the transfer by Garbet and Guava of their interests in Jumelles BVI to the Company. On 3 December 2009, the parties to the Call Option Deed and Xstrata Projects entered into the Deed of Novation and the Xstrata Transaction was novated such that Xstrata (Schweiz) was substituted by Xstrata Projects, a 100 per cent. held Australian Xstrata group company. Also on 3 December 2009, Xstrata Projects, Garbet, Guava and Jumelles BVI entered into an amended and restated Call Option Deed and an amended and restated JVA. Save for some minor drafting changes, the substantive terms of the Call Option Deed and JVA were unchanged.

References to "Xstrata" below are to either Xstrata (Schweiz) or Xstrata Projects, as appropriate.

## Call Option & Funding of Phase I of the PFS

Under the Call Option Deed Xstrata agreed to fund a minimum of \$50 million ("Call Option Premium") towards ongoing exploration of the Zanaga exploration licence area and a pre-feasibility study ("PFS") of the Zanaga Project in consideration for an option to acquire a 50 per cent. plus one share interest in Jumelles BVI ("Call Option") on a fully diluted basis.

The Call Option may be exercised by Xstrata by giving written notice to Jumelles BVI at any time from the date of execution of the Call Option Deed until the date falling 45 business days after the date on which the PFS is completed, unless Xstrata notifies Jumelles BVI of its intention not to exercise the Call Option at an earlier date. In the event that the Call Option is exercised by Xstrata in accordance with the terms of the Call Option Deed, the relationship between the parties and Jumelles BVI will be governed by the JVA.

The \$50 million Call Option Premium is to be used by Jumelles BVI only to fund Phase I of the PFS in accordance with the work program and budget agreed between the parties ("Work Program and Budget") and to fund certain other pre-agreed costs. Subsequent to 31 December 2009, the \$50 million minimum commitment was exhausted and in accordance with the terms of the Call Option Deed Xstrata agreed to continue to fund the PFS although it now has the right to decide at any time that it does not wish to exercise the Call Option in which case it would not be required to contribute any further funding in respect of the PFS.

## Option Price

Under the terms of the Call Option, the consideration payable by Xstrata for the option shares that would be issued by Jumelles BVI would comprise:

- A commitment to fund all costs to be incurred by Jumelles BVI in completing a feasibility study ("FS") on the Zanaga Project (provided that such amount shall be greater than \$100 million) or to carry out such a FS at its own cost (if all shareholders in Jumelles BVI other than Xstrata Projects consent and neither they nor Jumelles BVI nor any of its subsidiaries are prejudiced (financially or legally) as a result); and
- Payment of an amount (up to a maximum of \$25 million) equal to the amount that Jumelles BVI owes to Garbet and Guava as loans which would be used to repay the latter.

## Relationship between Jumelles BVI and Xstrata pending exercise of the Call Option

The Call Option Deed sets out a number of decisions and actions, including setting the scope of the PFS and appointing contractors, that may not be taken by Jumelles BVI without receiving Xstrata's prior consent. There are also a number of actions that Jumelles BVI and its subsidiaries are required to take under the Call Option Deed, (including keeping Xstrata informed of all material matters). These restrictions and obligations are customary in the context of a joint venture and are intended to ensure that Xstrata is not prejudiced, legally or economically, by the actions of Garbet, Guava, Jumelles BVI or Zanaga Iron Ore.

## Relationship between Jumelles BVI and its shareholders after exercise of the Call Option

Jumelles BVI, Zanaga Iron Ore and Xstrata have agreed to regulate their respective rights in relation to Jumelles BVI following exercise of the Call Option under the terms of a joint venture agreement or JVA. Under the terms of the JVA, all significant decisions regarding the conduct of Jumelles BVI's business (other than certain protective rights which require the agreement of shareholders holding at least 95 per cent. of the voting rights in Jumelles BVI) shall be made by the Board of Directors.

Each shareholder holding 15 per cent. or more of the votes in Jumelles BVI has the right to appoint a director to the Board of Jumelles BVI. At any Board meeting, each such director will have such number of votes as represents the appointing shareholders voting rights in the general meetings of Jumelles BVI.

As a consequence, following exercise of the Call Option Xstrata would control Jumelles BVI.

In addition, under the terms of the JVA, following exercise of the Call Option Xstrata will have the right to require all the other shareholders in Jumelles BVI to sell their shares to Xstrata for a period of

90 days following completion of the feasibility study. The Joint Venture Agreement has provisions governing how any dispute as to the price to be paid would be resolved.

## Future funding requirements and going concern basis of preparation

In common with many exploration and development companies in the mining sector, the Company raises funding in phases as its project develops.

The Company intends to seek admission of its ordinary shares to trade on AIM to increase its international profile and to raise contingency funding through a placing of new ordinary shares to raise approximately \$50 million to provide contingency funding in the event Xstrata does not exercise the Call Option. This will ensure the Group can satisfy the expenditure requirements of the Zanaga Exploration Licences for the near to medium term.

The Group's long term strategy is to manage, develop and construct a world class iron ore project capable of mining, processing, transporting and exporting a targeted annualised 45 Mtpa of iron ore from the Republic of Congo by the end of 2016. The Group's next developmental milestone is the completion of the PFS, which it expects to accomplish in Q1 2011. Whilst the Company currently expects Xstrata to fund completion of the PFS, Xstrata is not committed to doing so. If Xstrata does not do so, the net proceeds of the placing together with its existing cash resources will be used by the Company to complete the PFS.

Following completion of the PFS, subject to funding, the Company plans to proceed with a FS to further define the technical and economic viability of the Zanaga Project to international bankable standards.

If Xstrata exercises its Call Option, it shall be required to fund and implement a FS as per the provisions of the Xstrata Transaction and the Company will oversee the FS process as a significant investor in the Zanaga Project. In these circumstances, the net proceeds of the placing together with its existing cash resources will be used by the Company for its ongoing working capital requirements and in overseeing the development of the Zanaga Project.

If Xstrata does not exercise its Call Option, the Company plans to fund and implement a FS itself. In preparation for such circumstances the Company has prepared a detailed indicative work programme for completion of a FS. It is estimated this will cost approximately \$255 million. To implement the FS work programme without Xstrata Projects, it is envisaged that the Company will require further funding or a partnership with a strategic investor. In such circumstances, the Company intends to use the placing proceeds and its existing cash resources to continue development of the Zanaga Project in order to fulfil its agreed expenditure commitments under the Zanaga Exploration Licences and the Zanaga Mining Convention together with associated expenditures scheduled over an 18 month period. The Company has prepared a potential work programme to fulfil such requirements which is estimated to cost approximately \$51 million. Accordingly the development milestones achieved on completion of the Continuation Work Programme will be substantially limited when compared to those included in the FS work programme.

In the event that a decision is taken to develop a mine the Company will need to raise further funds.

Accordingly the financial statements have been prepared on a going concern basis.

## 2 Accounting policies

## Basis of preparation

The financial statements have been prepared by the directors in accordance with International Financial Reporting Standards as adopted by the EU ("Adopted IFRSs").

The Company is preparing its financial statements in accordance with Adopted IFRS for the first time and consequently has applied IFRS 1.

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these group financial statements.

## New standards, amendments and interpretations

A number of new standards, amendments to standards and interpretations are not yet effective for the period ended 31 December 2009, and have not been applied in preparing these financial statements. The new standards which management believes will not have a significant effect on the financial statements of the Company when applied and which are mandatory for years commencing on or after 1 January 2010 are:

- IFRS 3 (Revised 2008) Business Combinations (Issued January 2008)
- IAS 27 (Amended 2008) Consolidated and Separate Financial Statements
- IFRS 8 Operating Segments Disclosure about information about segment assets
- IAS 7 Statement of Cash Flows Classification of expenditures on unrecognised assets
- IAS 17 Leases Classification of leases of land and buildings
- IAS 36 Impairment of Assets Unit of accounting for goodwill impairment test
- IAS 38 Intangible Assets Additional consequential amendments arising from revised IFRS 3
- IAS 39 Financial Instruments: Recognition and Measurement Scope exemption for business combination contracts

## Measurement convention

The financial statements are prepared on the historical cost basis.

The preparation of financial statements in conformity with Adopted IFRS requires the use of certain critical accounting estimates. It also requires management to exercise judgment in the process of applying the Company's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in note 3.

#### Associates

Investments in associates are recorded using the equity method of accounting whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition changes in the Company's share of the net assets of the associate. The Company's profit or loss and other comprehensive income includes the Company's share of the associate's profit or loss and other comprehensive income. The investment is considered for impairment annually.

#### Foreign currency

Transactions in foreign currencies are translated at the foreign exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are retranslated to the functional currency at the foreign exchange rate ruling at that date. Foreign exchange differences arising on translation are recognised in the income statement.

## Non-derivative financial instruments

Non-derivative financial instruments in the balance sheet comprise other receivables, cash and cash equivalents, and trade and other payables.

#### Other receivables

Other receivables are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method, less any impairment losses.

#### Trade and other payables

Trade and other payables are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method.

## Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits.

## Stated capital

When share capital recognised as equity is repurchased, the amount of consideration paid, including directly attributable costs, is recognised as a change in equity. Repurchased shares are classified as treasury shares and presented as a deduction from total equity.

## Impairment

The carrying amounts of the Company's assets, are reviewed at each balance sheet date to determine whether there is any indication of impairment; a financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset. If any such indication exists, the asset's recoverable amount is estimated.

An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement.

## Calculation of recoverable amount

The recoverable amount of the Company's investments and receivables carried at amortised cost is calculated as the present value of estimated future cash flows, discounted at the original effective interest rate (i.e., the effective interest rate computed at initial recognition of these financial assets). Receivables with a short duration are not discounted.

The recoverable amount of other assets is the greater of their fair values less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

## Reversals of impairment

An impairment loss in respect of a receivable carried at amortised cost is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised.

In respect of other assets, an impairment loss is reversed when there is an indication that the impairment loss may no longer exist and there has been a change in the estimates used to determine the recoverable amount.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

# Taxation

Tax on the profit or loss for the year comprises current and deferred tax. Tax is recognised in the income statement except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for: the initial recognition of goodwill: the initial recognition of assets or liabilities that affect neither accounting nor taxable profit other than in a business combination, and differences relating to investments in subsidiaries to the extent that they will

probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the temporary difference can be utilised.

## Subsequent events

Post year-end events that provide additional information about the Company's position at the balance sheet date (adjusting events) are reflected in the financial statements. Post year-end events that are not adjusting events are disclosed in the notes to financial statements when material.

## 3 Critical accounting estimates, assumptions and judgements

The Company makes estimates and assumption concerning the future that are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities within the next financial year are discussed below.

## Impairment of investment in associate

The value of the Company's investment in Jumelles BVI depends very largely on the value of Jumelles BVI's interest in the Zanaga Project. Jumelles BVI assesses at least annually whether or not its exploration projects may be impaired. This assessment can involve significant judgement as to the likelihood that a project will continue to show sufficient commercial promise to warrant the continuation of exploration and evaluation activities.

## 4 Taxation

The Company reported a loss before tax for the period and consequently there is no current tax charge for the year.

## 5 Investment in associate

	2009 \$000
At 19 November 2009 Acquisition	_ 200,000
Share of post acquisition comprehensive income	(1,561)
At 31 December 2009	198,439

The investment represents a 100 per cent. holding in Jumelles BVI for the entire share capital of 2,000,000 shares. The shares were acquired in exchange for shares in the Company and have been recorded at fair value of the interest acquired.

The investment in Jumelles BVI does not represent an investment in a subsidiary due to the Call Option held by Xstrata explained in note 1.

As at 31 December 2009, Jumelles BVI had aggregated assets of \$62 million and aggregated liabilities of \$25 million. For the year ended 31 December 2009, it incurred administrative expenses of \$9 million and had no income or other expenses.

## 6 Other receivables

	2009 \$000
Prepayments	11
7 Cash and cash equivalents	2009 \$000
Cash and cash equivalents per balance sheet and cash flow statement	8,106
8 Trade and other payables	2009 \$000
Accounts payable	246

~ ~ ~ ~

## 9 Stated capital and reserves

	Stated capital \$000	Retained earnings \$000	Total equity \$000
At 19 November 2009	_	_	_
Issue of shares	223,967	_	223,967
Repurchase of shares	(16,000)	_	(16,000)
Total recognised income and expense		(1,657)	(1,657)
At 31 December 2009	207,967	(1,657)	206,310

## 10 Share Capital

In thousands of shares	Ordinary shares 2009
At incorporation – 19 November 2009 Issued in exchange for shares in Jumelles BVI Issue of additional shares Repurchase of shares	_ 100,000 12,500 (10,526)
On issue at 31 December – fully paid	101,974

The company is able to issue an unlimited number of no par value shares.

The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the Company.

On 26 November 2009, the Company issued 99,999,999 shares (50,000,000 to Guava Limited and 49,999,999 to Garbet Limited) in return for the entire share capital of Jumelles BVI. This exchange was part of a reorganisation plan so that Guava and Garbet would be sole owners of the Company, which would in turn be the 100 per cent. owner of Jumelles BVI.

Subsequently Guava reduced its holdings by 10,526,315 to 39,473,685 through a share repurchase.

12,250,000 shares have been issued to institutional investors and further 250,000 to Garbet. These shares were issued for cash of \$25,000,000 and are disclosed net of issue costs of \$1,033,000.

## **11** Earnings per share

	2009
Earnings (\$000) Weighted average number of shares (thousands)	(1,572) 52 635
Earnings per share (cent)	(3.0)

There are no dilutive shares.

## 12 Financial instruments

# (a) Fair values of financial instruments

## Other receivables

The fair value of other receivables is estimated as the present value of future cash flows, discounted at the market rate of interest at the balance sheet date if the effect is material. The fair values approximate book values.

## Trade and other payables

The fair value of trade and other payables is estimated as the present value of future cash flows, discounted at the market rate of interest at the balance sheet date if the effect is material. The fair values approximate book values.

## Cash and cash equivalents

The fair value of cash and cash equivalents is estimated as its carrying amount where the cash is repayable on demand. Where it is not repayable on demand then the fair value is estimated at the present value of future cash flows, discounted at the market rate of interest at the balance sheet date. The fair values approximate book values.

## (b) Credit risk

## Financial risk management

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's receivables related parties. The Company has a credit policy in place and exposure to credit risk is monitored on an ongoing basis. At 31 December 2009, the financial assets exposed to credit risk were as follows:

	2009 \$000
Cash and cash equivalents	8,106

## (c) Liquidity risk

## Financial risk management

Liquidity risk is the risk that the Company will not be able to meet its obligations as they fall due. The Company evaluates and follows continuously the amount of liquid funds needed for business operations, in order to secure the funding needed for business activities and loan repayments. The availability and flexibility of the financing is needed to assure the Company's financial position.

## (d) Foreign currency risk

#### Financial risk management

The foreign currency denominated financial assets and liabilities are not hedged, thus the changes in fair value are charged or credited to profit and loss.

At 31 December 2009, the Company did not have significant foreign currency denominated financial assets or liabilities.

## 13 Commitments

The Company had no capital commitments or off-business sheet arrangements at 31 December 2009.

## 14 Employee benefits

The Company had no employees during the period other than the Company directors. The directors received £Nil remuneration for their services as directors of the Company.

## 15 Related parties

Other than the acquisition of Jumelles BVI and issue of shares, the Company did not enter into any related party transactions during the period.

## 16 Ultimate parent company and parent company of larger group

The ultimate controlling parties are Garbet Limited and Guava Minerals Limited (jointly).

# Section C – Condensed Financial information On Zanaga Iron Ore Company Limited for the six months ended 30 June 2010 (Unaudited)

# Income statement

	Period ended 30 June	19 November to 31 December
	2010 \$000	2009 \$000
Administrative expenses Share of loss of associate	(556) (6,947)	(96) (1,476)
Loss from operations Taxation	(7,503)	(1,572)
Loss for the year Share of other comprehensive income of associate –	(7,503)	(1,572)
foreign exchange translation	602	(85)
Total comprehensive income	(6,901)	(1,657)

## **Balance sheet**

Assets	As at 30 June 2010 \$000	As at 31 December 2009 \$000
Investment in associate	192,094	198,439
<b>Current Assets</b> Other receivables Cash and cash equivalents	6 7,353 7 350	11 8,106 
Total Assets	199,453	206,556
Liabilities Current Liabilities Trade and other payables	(44)	(246)
Net assets	199,409	206,310
Capital and reserves attributable to equity holders of Zanaga Iron Ore Company Limited Share capital Retained earnings	207,967 (8.558)	207,967 (1,657)
Total shareholders' equity	199,409	206,310

# Statement of cash flows

Pen	iod ended 30 June 2010 \$000	19 November to 31 December 2009 \$000
Cash flows utilised in operating activities Loss for the period Adjustments for:	(7,503)	(1,572)
Increase in other receivables Increase in trade and other payables Share of loss of associate	5 (202) 6,947	(11) 246 1,476
Net cash utilised in operating activities	(753)	139
Cash flows from financing activities Proceeds from issue of share capital Repurchase of own shares	-	23,967 (16,000)
Net cash from financing activities	_	7,967
Net (decrease)/increase in cash and cash equivalents Cash and cash equivalents at beginning of period	(753) 8,106	8,106
Cash and cash equivalents at end of period	7,353	8,106

## Statement of changes in equity

	State	Retained	Total
	capital	earnings	equity
	\$000	\$000	\$000
At 31 December 2009	207,967	(1,657)	206,310
Loss for the year	-	(7,503)	(7,503)
Other comprehensive loss		602	602
At 30 June 2010	207,967	(8,558)	199,409
At 19 November 2009	_	_	_
Issue of shares	223,967	_	223,967
Repurchase of shares	(16,000)	_	(16,000)
Loss for the year	_	(1,572)	(1,572)
Other comprehensive loss		(85)	(85)
At 31 December 2009	207,967	(1,657)	206,310

# **Basis of preparation**

This condensed set of financial statements has been prepared in accordance with the recognition and measurement principles of IAS 34 Interim Financial Reporting as adopted by the EU. The condensed set of financial statements has been prepared applying the accounting policies and presentation that were applied in the preparation of the company's financial statements for the year ended 31 December 2009.

# PART IX

# FINANCIAL INFORMATION ON JUMELLES LIMITED

# Section A – Accountant's Report on Jumelles Limited

The following is the full text of a report on the IFRS Financial Information of Jumelles Limited and its subsidiary undertakings for the three years ended 31 December 2009 from KPMG Audit Plc, the Reporting Accountant, to the Directors and Liberum Capital.



KPMG Audit Plc 15 Canada Square London E14 5GL

The Directors Zanaga Iron Ore Company Limited Coastal Building 2nd Floor Wickham's Cay II P.O. Box 2221 Road Town Tortola British Virgin Islands

Liberum Capital Limited Ropemaker Place 25 Ropemaker Street London EC2Y 9LY

17 November 2010

Dear Sirs,

## Jumelles Limited and its subsidiary undertakings (together, "the Group")

## Introduction

We report on the financial information set out in Section B of Part IX. This financial information has been prepared for inclusion in the Admission Document dated 17 November 2010 of Zanaga Iron Ore Company Limited (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 of Zanaga Iron Ore Company Limited are responsible for preparing the financial information on the basis of preparation set out in note 2 to the financial information and in accordance with International Financial Reporting Standards as adopted by the European Union ("Adopted IFRSs").

It is our responsibility to form an opinion 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.

## **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 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.

## 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 Group as at the dates stated and of its consolidated losses, cash flows and changes in equity for the years then ended in accordance with the basis of preparation set out in note 2 to the financial information and has been prepared in accordance with Adopted 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

**KPMG Audit Plc** 

# Section B – Financial Information on Jumelles Limited for the three years ended 31 December 2009

## **Consolidated income statements**

		Year ended 31 December			
		2007	2008	2009	
	Note	\$000	\$000	\$000	
Administrative expenses		(1,508)	(1,921)	(8,332)	
Loss from operations		(1,508)	(1,921)	(8,332)	
Taxation	4	_		(426)	
Loss for the year attributable to					
owners of the parent	11	(1,508)	(1,921)	(8,758)	

Included in administration expenses are foreign exchange gains on intercompany balances of 2007: \$nil, 2008: \$395,000, 2009: \$535,000 and for the year ended 31 December 2009 legal costs of \$4,084,000 relating to financing activities, including the Xstrata transaction.

# Consolidated statements of comprehensive income

		Year ( 2007	ended 31 Dec 2008	cember 2009	
	Note	\$000	\$000	\$000	
Loss for the year Other comprehensive income		(1,508)	(1,921)	(8,758)	
Foreign exchange translation differences			47	(720)	
Total comprehensive income		(1,508)	(1,874)	(9,478)	

# **Consolidated balance sheets**

		s at 31 Decen	31 December	
	Note	2007 \$000	2008 \$000	2009 \$000
Assets				
Non-current assets	~	540	1 000	0.054
Property, plant and equipment	5	510	1,363	6,654
Exploration and evaluation assets	0	2,603	8,801	22,904
		3,113	10,164	29,558
Current Assets				
Trade and other receivables	7	16	33	29,026
Cash and cash equivalents	8	120	104	3,838
		136	137	32,864
Total Assets		3,249	10,301	62,422
Liabilities				
Trade and other payables	9	(4,238)	(13,164)	(24,763)
Net assets/(liabilities)		(989)	(2,863)	37,659
Capital and reserves attributable to				
equity holders of Jumelles Limited				
Share capital	11,12	20	20	519
Share premium	11	499	499	-
Share option reserve	11	_	-	50,000
Iranslation reserve	77		4/	(673)
netaineu earnings	11	(1,508)	(3,429)	(12,187)
Total shareholders' equity	11	(989)	(2,863)	37,659

# Consolidated statements of cash flows

		cember		
	Note	2007 \$000	2008 \$000	2009 \$000
Cash flows utilised in operating activities				
Loss for the year		(1,508)	(1,921)	(8,758)
Depreciation of property, plant and equipment Foreign exchange		95 -	220 (3)	512 4
Increase in trade and other receivables		- 5	(17)	426 (1.901)
Increase in trade and other payables		259	889	2,170
Income taxes paid		(1,149)	(832)	(7,547) (15)
Net cash utilised in operating activities		(1,149)	(832)	(7,562)
Cash flows utilised in investing activities				
Acquisition of property, plant and equipment Capitalised exploration and evaluation assets		(589) (2,499)	(1,070) (6,151)	(5,807) (14,823)
Net cash utilised in investing activities		(3,088)	(7,221)	(20,630)
Cash flows from financing activities				
Proceeds from share options Loans from shareholders		4,353	8,037	22,908 9,018
Net cash from financing activities		4,353	8,037	31,926
Net increase/(decrease) in cash and cash equivalents Cash and cash equivalents at beginning of year		116 4	(16) 120	3,734 104
Cash and cash equivalents at end of year	8	120	104	3,838

# Consolidated statements of changes in equity

	Share capital \$000	Share premium \$000	Share options \$000	Translation reserve \$000	Retained earnings \$000	Total equity \$000
At 1 January 2007 Shares issued in exchange for loan Loss for the year Foreign exchange translation differences	10 10 -	9 490 			(1,508)	19 500 (1,508) 
<b>At 31 December 2007</b> Loss for the year Foreign exchange translation differences	20 _	499 _ _		- - 47	(1,508) (1,921) –	(989) (1,921) 47
At 31 December 2008 Capitalisation of share premium Loss for the year Foreign exchange translation differences Issue of share options (see note 1)	20 499 – –	499 (499) –	- - - 50,000	47  (720)	(3,429) (8,758) 	(2,863) - (8,758) (720) 50,000
At 31 December 2009	519		50,000	(673)	(12,187)	37,659

## 1 Business information and going concern basis of preparation

## Group Holding Structure

Jumelles Limited ("Jumelles BVI") was incorporated on 28 April 2006. Jumelles BVI is incorporated in and legally domiciled in the British Virgin Islands ("BVI") and the address of its registered office, is situated at Coastal Building, 2nd Floor, Wickham's Cay II, Road Town, Tortola, BVI. Jumelles BVI's principal place of business is situated in Guernsey.

In 2007, Jumelles BVI became the holding company for the interests of its then ultimate 50/50 shareholders, Garbet Limited ("Garbet") and Guava Minerals Limited ("Guava"), in Mining Project Development Congo SAU ("MPD Congo") which, currently owns and operates 100 per cent. of the Zanaga Project in the Republic of Congo (subject to a minimum 10 per cent. free carried interest in MPD Congo in favour of the Government of the Republic of Congo).

On 24 September 2009, Jumelles BVI amended its articles of incorporation enabling Jumelles BVI to issue an unlimited number of no par value shares from the previous 50,000 authorised number of shares at \$1 par value each. Out of the additional shares authorised, Jumelles BVI issued an additional 1,980,000 shares as a stock split to its shareholders thereby increasing the total issued share capital to 2,000,000 shares.

In December 2009 Garbet and Guava contributed their then respective 50/50 joint shareholding in Jumelles BVI to Zanaga Iron Ore Company Limited ("Zanaga Iron Ore") a BVI holding company which currently owns 100 per cent. of the issued share capital of Jumelles BVI, subject to the Call Option (defined above and below) in favour of Xstrata.

Garbet is majority owned by Strata Limited ("Strata"), a private investment company based in Guernsey, which specialises in the investment and development of early stage natural resource projects in emerging markets, predominately Africa. Garbet owns approximately 49 per cent. of the share capital of Zanaga Iron Ore.

Guava is majority owned by African Resource Holdings Limited ("ARH"), a BVI company that specialises in the investment and development of early stage natural resource projects in emerging markets. Guava owns approximately 39 per cent. of the share capital of Zanaga Iron Ore.

The balance of the 12 per cent. shareholding in Zanaga Iron Ore is held by a select number of reputable institutional investors in the mining sector.

Under the terms of a shareholder agreement between Garbet and Guava, which regulates how their interests in Zanaga Iron Ore are managed, it is documented that Garbet and Guava jointly control Zanaga Iron Ore.

Jumelles BVI has three subsidiary companies, Jumelles M Limited, Jumelles Technical Services Limited and MPD Congo (together "the Group").

# Xstrata Transaction

On 16 October 2009, Garbet, Guava and Jumelles BVI entered into a transaction (the "Xstrata Transaction") with Xstrata (Schweiz) AG ("Xstrata (Schweiz)"), a 100 per cent. held Swiss subsidiary of the listed mining major Xstrata Plc. The Xstrata Transaction comprises two principal transaction documents namely (i) a Call Option Deed ("Call Option Deed") and a Joint Venture Agreement ("JVA"). These two documents set out certain rights and obligations relating to Jumelles BVI and its shareholders.

On 26 November 2009, the Company executed the Deeds of Adherence in respect of both of the Call Option Deed and the JVA following the transfer by Garbet and Guava of their interests in Jumelles BVI to the Company. On 3 December 2009, the parties to the Call Option Deed and Xstrata Projects entered into the Deed of Novation and the Xstrata Transaction was novated such that Xstrata (Schweiz) was substituted by Xstrata Projects, a 100 per cent. held Australian Xstrata group company. Also on 3 December 2009, Xstrata Projects, Garbet, Guava and Jumelles BVI entered into an
amended and restated Call Option Deed and an amended and restated JVA. Save for some minor drafting changes, the substantive terms of the Call Option Deed and JVA were unchanged.

References to "Xstrata" below are to either Xstrata (Schweiz) or Xstrata Projects, as appropriate.

### Call Option & Funding of Phase I of the PFS

Under the Call Option Deed Xstrata agreed to fund a minimum of \$50 million ("Call Option Premium") towards ongoing exploration of the Zanaga exploration licence area and a pre-feasibility study ("PFS") of the Zanaga Project in consideration for an option to acquire a 50 per cent. plus one share interest in Jumelles BVI ("Call Option") on a fully diluted basis.

The Call Option may be exercised by Xstrata by giving written notice to Jumelles BVI at any time from the date of execution of the Call Option Deed until the date falling 45 business days after the date on which the PFS is completed, unless Xstrata notifies Jumelles BVI of its intention not to exercise the Call Option at an earlier date. In the event that the Call Option is exercised by Xstrata in accordance with the terms of the Call Option Deed, the relationship between the parties and Jumelles BVI will be governed by the JVA.

The \$50 million Call Option Premium is to be used by Jumelles BVI only to fund Phase I of the PFS in accordance with the work program and budget agreed between the parties ("Work Program and Budget") and to fund certain other pre-agreed costs. Subsequent to 31 December 2009, the \$50 million minimum commitment was exhausted and in accordance with the terms of the Call Option Deed Xstrata agreed to continue to fund the PFS although it now has the right to decide at any time that it does not wish to exercise the Call Option in which case it would not be required to contribute any further funding in respect of the PFS.

### Option Price

Under the terms of the Call Option, the consideration payable by Xstrata for the option shares that would be issued by Jumelles BVI would comprise:

- A commitment to fund all costs to be incurred by Jumelles BVI in completing a feasibility study ("FS") on the Zanaga Project (provided that such amount shall be greater than \$100 million) or to carry out such a FS at its own cost (if all shareholders in Jumelles BVI other than Xstrata Projects consent and neither they nor Jumelles BVI nor any of its subsidiaries are prejudiced (financially or legally) as a result.); and
- Payment of an amount (up to a maximum of \$25 million) equal to the amount that Jumelles BVI owes to Garbet and Guava as loans which would be used to repay the latter.

# Relationship between Jumelles BVI and Xstrata pending exercise of the Call Option

The Call Option Deed sets out a number of decisions and actions, including setting the scope of the PFS and appointing contractors, that may not be taken by Jumelles BVI without receiving Xstrata's prior consent. There are also a number of actions that Jumelles BVI and its subsidiaries are required to take under the Call Option Deed, (including keeping Xstrata informed of all material matters). These restrictions and obligations are customary in the context of a joint venture and are intended to ensure that Xstrata is not prejudiced, legally or economically, by the actions of Garbet, Guava, Jumelles BVI or Zanaga Iron Ore.

### Relationship between Jumelles BVI and its shareholders after exercise of the Call Option

Jumelles BVI, Zanaga Iron Ore and Xstrata have agreed to regulate their respective rights in relation to Jumelles BVI following exercise of the Call Option under the terms of a joint venture agreement or JVA. Under the terms of the JVA, all significant decisions regarding the conduct of Jumelles BVI's business (other than certain protective rights which require the agreement of shareholders holding at least 95 per cent. of the voting rights in Jumelles BVI) shall be made by the Board of Directors.

Each shareholder holding 15 per cent. or more of the votes in Jumelles BVI has the right to appoint a director to the Board of Jumelles BVI. At any Board meeting, each such director will have such

number of votes as represents the appointing shareholders voting rights in the general meetings of Jumelles BVI.

As a consequence, following exercise of the Call Option Xstrata would control Jumelles BVI. For accounting purposes, Xstrata is considered to have the power to control Jumelles BVI from the date the Call Option Deed was entered into as the Call Option became exercisable on that date.

In addition, under the terms of the Joint Venture Agreement, following exercise of the Call Option Xstrata will have the right to require all the other shareholders in Jumelles BVI to sell their shares to Xstrata for a period of 90 days following completion of the feasibility study. The Joint Venture Agreement has provisions governing how any dispute as to the price to be paid would be resolved.

### Future funding requirements and going concern basis of preparation

In common with many exploration and development companies in the mining sector, funding is raised in phases as its project develops.

Jumelles BVI is dependent on Xstrata and Zanaga Iron Ore for its funding requirements.

Zanaga Iron Ore intends to seek admission of its ordinary shares to trade on AIM to increase its international profile and to raise contingency funding through a placing of new ordinary shares to raise approximately \$50 million to ensure the Group has security of tenure over the Zanaga Exploration Licences for the near to medium term.

The Group's long term strategy is to manage, develop and construct a world class iron ore project capable of mining, processing, transporting and exporting a targeted annualised 45 Mtpa of iron ore from the Republic of Congo by the end of 2016. The Group's next developmental milestone is the completion of the PFS, which it expects to accomplish in Q1 2011. Whilst Zanaga Iron Ore currently expects Xstrata to fund completion of the PFS, Xstrata is not committed to doing so. If Xstrata does not do so, the net proceeds of the placing together with its existing cash resources will be used by Zanaga Iron Ore to complete the PFS.

Following completion of the PFS, subject to funding, Jumelles BVI plans to proceed with a FS to further define the technical and economic viability of the Zanaga Project to international bankable standards.

If Xstrata exercises its Call Option, it shall be required to fund and implement a FS as per the provisions of the Xstrata Transaction.

If Xstrata does not exercise its Call Option, Zanaga Iron Ore (which would then have the ability to control Jumelles BVI) plans to fund and implement a FS itself. In preparation for such circumstances Zanaga Iron Ore has prepared a detailed indicative work programme for completion of a FS. It is estimated this will cost approximately \$255 million. To implement the FS work programme without Xstrata Projects, it is envisaged that Zanaga Iron Ore will require further funding or a partnership with a strategic investor. In such circumstances, Zanaga Iron Ore intends to use the placing proceeds and its existing cash resources to continue development of the Zanaga Project in order to fulfil its agreed expenditure commitments under the Zanaga Exploration Licences and the Zanaga Iron Ore has prepared a potential work programme to fulfil such requirements which is estimated to cost approximately \$51 million. Accordingly the development milestones achieved on completion of the FS work programme will be substantially limited when compared to those included in the FS work programme.

In the event that a decision is taken to develop a mine further funds will be required.

Accordingly the financial statements have been prepared on a going concern basis.

# 2 Accounting policies

# Basis of preparation

The group financial statements consolidate those of Jumelles BVI and its subsidiaries. On 23 May 2007, Jumelles BVI became the holding company for the interests of its then ultimate shareholders, Garbet and Guava in MPD Congo. As this was a restructuring which did not involve independent parties and the shareholders interests were not changed by the restructuring, this transaction is not a business combination and the assets and liabilities of MPD Congo have been incorporated into the group accounts of Jumelles BVI using book values. In addition the group financial statements have been adjusted as if the restructuring had taken place prior to the beginning of the earliest period presented.

The group financial statements have been prepared by the directors in accordance with International Financial Reporting Standards as adopted by the EU ("Adopted IFRSs").

The Group is preparing its financial statements in accordance with Adopted IFRS for the first time and consequently has applied IFRS 1.

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these group financial statements.

### New standards, amendments and interpretations

A number of new standards, amendments to standards and interpretations are not yet effective for the year ended 31 December 2009, and have not been applied in preparing these consolidated financial statements. The new standards which management believes will not have a significant effect on the financial statements of the group when applied and which are mandatory for years commencing on or after 1 July 2009 are:

- IFRS 3 (Revised 2008) Business Combinations (Issued January 2008)
- IAS 27 (Amended 2008) Consolidated and Separate Financial Statements
- IFRS 8 Operating Segments Disclosure about information about segment assets
- IAS 7 Statement of Cash Flows Classification of expenditures on unrecognised assets
- IAS 17 Leases Classification of leases of land and buildings
- IAS 36 Impairment of Assets Unit of accounting for goodwill impairment test
- IAS 38 Intangible Assets Additional consequential amendments arising from revised IFRS 3
- IAS 39 Financial Instruments: Recognition and Measurement Scope exemption for business combination contracts

### Measurement convention

The financial statements are prepared on the historical cost basis.

The preparation of consolidated financial statements in conformity with Adopted IFRS requires the use of certain critical accounting estimates. It also requires management to exercise judgment in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 3.

# **Basis of consolidation**

### Subsidiaries

Subsidiaries are entities controlled by Jumelles BVI. Control exists when Jumelles BVI has the power, directly or indirectly, to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that are currently exercisable or convertible are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control

ceases, except where an acquisition is a transaction amongst parties under common control where the comparative period and the current period prior to the date of acquisition are adjusted as if the combination had taken place prior to the start of the earliest period presented.

### Foreign currency

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at the foreign exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are retranslated to the functional currency at the foreign exchange rate ruling at that date. Foreign exchange differences arising on translation are recognised in the income statement. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value are retranslated to the functional currency at foreign exchange rates ruling at the dates the fair value was determined. There are no non-monetary assets and liabilities denominated in foreign currencies that are stated at fair value as that are stated at fair value at 31 December 2009, 2008 or 2007.

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on consolidation, are translated to the Group's presentational currency, US Dollars, at foreign exchange rates ruling at the balance sheet date. The revenues and expenses of foreign operations are translated at an average rate for the year where this rate approximates to the foreign exchange rates ruling at the dates of the transactions.

Exchange differences arising from this translation of foreign operations are taken directly to the translation reserve. They are released into the income statement upon disposal.

Exchange differences arising from a monetary item receivable from or payable to a foreign operation, the settlement of which is neither planned nor likely in the foreseeable future, are considered to form part of a net investment in a foreign operation and are recognised directly in equity in the translation reserve.

### Share based payments

Where the Group receives goods or services from a third party in exchange for its own equity instruments and the amount of equity instruments is fixed, the equity instruments and related goods or services are measured at the fair value of the goods or services received and are recognised as the goods are obtained or the services are rendered. Equity instruments issued under such arrangements for the receipt of services are only considered to be vested once provision of the services is complete.

### Classification of financial instruments issued by the Group

Financial instruments issued by the Group are treated as equity only to the extent that they meet the following two conditions:

- 1 they include no contractual obligations upon the Group to deliver cash or other financial assets or to exchange financial assets or financial liabilities with another party under conditions that are potentially unfavourable to the Group; and
- 2 where the instrument will or may be settled in Jumelles BVI's own equity instruments, it is either a non-derivative that includes no obligation to deliver a variable number of Jumelles BVI's own equity instruments or is a derivative that will be settled by Jumelles BVI's exchanging a fixed amount of cash or other financial assets for a fixed number of its own equity instruments.

To the extent that this definition is not met, the proceeds of issue are classified as a financial liability. Where the instrument so classified takes the legal form of Jumelles BVI's own shares, the amounts presented in these financial statements for called up share capital and share premium account exclude amounts in relation to those shares.

### Non-derivative financial instruments

Non-derivative financial instruments in the balance sheet comprise trade and other receivables, cash and cash equivalents, and trade and other payables.

### Trade and other receivables

Trade and other receivables are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method, less any impairment losses.

### Trade and other payables

Trade and other payables are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest method.

### Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits. Bank overdrafts that are repayable ondemand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose only of the cash flow statement.

### Property, plant and equipment

### Development costs

Development costs relating to major programmes at a mine are capitalised. Development costs consist primarily of expenditure to construct or to expand the capacity of the mine. Day-to-day mine development costs to maintain production are expensed as incurred. Initial development and pre-production costs relating to a new ore body, including amortisation and depreciation of equipment used in construction activities and interest on borrowed funds used to develop the ore body, are capitalised until commissioning of production facilities.

The group reviews the carrying amount of mining assets and development costs when circumstances suggest the carrying amount may not be recoverable. Recoverability is assessed using estimates of future cash flows on a discounted basis, including revenues, operating costs and future capital expenditures. Where necessary a reduction in carrying amount is recorded.

### Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment losses.

Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate components of the item of property, plant and equipment and each component is depreciated over its estimated useful life.

Leases in which the Group assumes substantially all the risks and rewards of ownership of the leased asset are classified as finance leases. Where land and buildings are held under leases the accounting treatment of the land is considered separately from that of the buildings. Leased assets acquired by way of finance lease are stated at an amount equal to the lower of their fair value and the present value of the minimum lease payments at inception of the lease, less accumulated depreciation and less accumulated impairment losses. Lease payments are accounted for as described below.

Depreciation is charged to the income statement on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Land is not depreciated. The estimated useful lives are as follows:

buildings	20 years

- plant and machinery 3-10 years
- motor vehicles 4 years

Depreciation methods, useful lives and residual values are reviewed at each balance sheet date.

# Exploration and evaluation assets

Expenditure related to acquisition, exploration and development of exploration properties, net of any recoveries, and including an appropriate allocation of administration costs are capitalised. If an exploration property is abandoned, continued exploration is not planned in the foreseeable future or

when other events and circumstances indicate that the carrying amount may not be recovered, the accumulated costs and expenditures are written-off. Capitalised expenditure relating to exploration projects represents costs to be charged to operations in the future and do not necessarily reflect the present or future values of the particular projects.

### Impairment

The carrying amounts of the Group's assets, are reviewed at each balance sheet date to determine whether there is any indication of impairment; a financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset. If any such indication exists, the asset's recoverable amount is estimated.

An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement.

Impairment losses recognised in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to cash-generating units and then to reduce the carrying amount of the other assets in the unit on a *pro rata* basis. A cash generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets.

### Calculation of recoverable amount

The recoverable amount of the Group's investments in held-to-maturity securities and receivables carried at amortised cost is calculated as the present value of estimated future cash flows, discounted at the original effective interest rate (i.e., the effective interest rate computed at initial recognition of these financial assets). Receivables with a short duration are not discounted.

The recoverable amount of other assets is the greater of their fair values less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

### Reversals of impairment

An impairment loss in respect of a held-to-maturity security or receivable carried at amortised cost is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised.

An impairment loss in respect of an investment in an equity instrument classified as available for sale is not reversed through profit or loss. If the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss is reversed through profit or loss.

An impairment loss in respect of goodwill is not reversed.

In respect of other assets, an impairment loss is reversed when there is an indication that the impairment loss may no longer exist and there has been a change in the estimates used to determine the recoverable amount.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

### Employee benefits

### Pensions

The Group does not operate its own pension scheme but instead may contribute to its employees' personal pension schemes as part of their employee benefits. Obligations for contributions to these pension schemes are recognised as an expense in the income statement as incurred.

#### Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognised for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

### Provisions

A provision is recognised in the balance sheet when the Group has a present legal or constructive obligation as a result of a past event, that can be reliably measured and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects risks specific to the liability.

### Expenses

### Operating lease payments

Payments made under operating leases are recognised in the income statement on a straight-line basis over the term of the lease. Lease incentives received are recognised in the income statement as an integral part of the total lease expense.

#### Financing income and expenses

Financing expenses comprise interest payable, finance charges on shares classified as liabilities and finance leases, unwinding of the discount on provisions, and net foreign exchange losses that are recognised in the income statement (see foreign currency accounting policy). Financing income comprise interest receivable on funds invested, dividend income, and net foreign exchange gains.

Interest income and interest payable is recognised in profit or loss as it accrues, using the effective interest method. Dividend income is recognised in the income statement on the date the entity's right to receive payments is established. Foreign currency gains and losses are reported on a net basis.

### Taxation

Tax on the profit or loss for the year comprises current and deferred tax. Tax is recognised in the income statement except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for: the initial recognition of goodwill; the initial recognition of assets or liabilities that affect neither accounting nor taxable profit other than in a business combination, and differences relating to investments in subsidiaries to the extent that they will probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the temporary difference can be utilised.

### Subsequent events

Post year-end events that provide additional information about the Group's position at the consolidated balance sheet date (adjusting events) are reflected in the consolidated financial statements. Post year-end events that are not adjusting events are disclosed in the notes to consolidated financial statements when material.

### 3 Critical accounting estimates and judgements

Jumelles BVI makes estimates and assumptions concerning the future that are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities within the next financial year are discussed below.

### 3.1 Estimated useful lives

The useful life of each of Jumelles BVI's item of property, plant and equipment and intangibles (other than goodwill) is estimated based on the period over which the asset is expected to be available for use. Such estimation is based on a collective assessment of practices of similar businesses, internal technical evaluations and experiences with similar assets. The estimated useful life of each asset is reviewed periodically and updated if expectations differ from previous estimates due to physical wear and tear, technical or commercial obsolescence and legal or other limits on the use of the asset. It is possible, however, that future results of operations could be materially affected by changes in the amounts and timing of recorded expenses brought about by the changes in the factors mentioned above. An increase in the estimated useful life of any item of property, plant and equipment and intangibles would decrease the recorded operating expenses and increase non-current assets.

### 3.2 Impairment of exploration and evaluation expenditure

Jumelles BVI assesses at least annually whether or not its exploration projects may be impaired. This assessment can involve significant judgement as to the likelihood that a project will continue to show sufficient commercial promise to warrant the continuation of exploration and evaluation activities.

### 3.3 Accounting for the Xstrata Transaction

In drawing up the financial information, judgement has been applied in treating the Xstrata Transaction as an in-substance equity-settled share-based payment for the provision of services in relation to the Pre-Feasibility and Feasibility Studies. These services largely are provided through third party contractors and are measured at the cost of the services provided. The first \$50 million is a minimum committment and so this has been reflected as a cash injection which is being received as the Pre-Feasibility Study has progressed. Once this has been exhausted, the services will be recorded as non-cash transactions as they are delivered.

### 4 Taxation

	2007 \$000	2008 \$000	2009 \$000
Recognised in the income statement: Current year			426
Reconciliation of effective tax rate: Loss before tax	(1,508)	(1,921)	(8,332)
Income tax using the BVI corporation tax rate of 0% (2008: 0%, 2007: 0%) Effect of tax rate in foreign jurisdictions Tax losses not recognised Other Congolese tax on foreign transactions (see below)	 34 (34) 	(44) 54 (10) 	– 19 55 (74) 426
Recognised in other comprehensive income:			426

Foreign companies providing services to companies incorporated in the Republic of Congo are subject to a corporate tax of 7.7 per cent. on all taxable income. The charge for the year ended 31 December 2009 represents the Congolese tax due on services invoiced during the year.

As at 31 December 2009 there were cumulative tax losses of \$390,000 (2008: \$192,000, 2007: \$nil). No deferred tax asset has been recognised in relation to these losses on the grounds that it is uncertain that it will be recovered.

# 5 Property, plant and equipment

	Plant & machinery \$000	Motor vehicles \$000	Total \$000
Cost			
At 1 January 2007 Additions	16 456	_ 132	16 588
Disposals Effect of movements in foreign exchange	1		1
At 31 December 2007 Additions Effect of movements in foreign exchange	473 501 (18)	132 592 (5)	605 1,093 (23)
At 31 December 2008 Additions Effect of movements in foreign exchange	956 4,782 12	719 1,003 10	1,675 5,785 22
At 31 December 2009	5,750	1,732	7,482
Depreciation and impairment At 1 January 2007 Depreciation charge for the year Effects of movement in foreign exchange	_ 62 _	_ 33 _	_ 95 _
At 31 December 2007 Depreciation charge for the year Effects of movement in foreign exchange	62 40 (1)	33 180 (2)	95 220 (3)
At 31 December 2008 Depreciation charge for the year Effect of movements in foreign exchange	101 288 1	211 224 3	312 512 4
At 31 December 2009	390	438	828
<i>Net book value</i> At 31 December 2007	16	_	16
At 31 December 2007	411	99	510
At 31 December 2008	855	508	1,363
At 31 December 2009	5,360	1,294	6,654
6 Exploration and evaluation assets			
	2007 \$000	2008 \$000	2009 \$000
<i>Cost</i> At 1 January Additions Effect of movements in foreign exchange	104 2,488 11	2,603 6,298 (100)	8,801 13,989 114
At 31 December	2,603	8,801	22,904
<i>Amortisation and impairment</i> At 1 January Depreciation charge for the year	-	 	
At 31 December			
Net book value	2,603	8,801	22,904

### 7 Trade and other receivables

	2007 \$000	2008 \$000	2009 \$000
Amounts receivable from Garbet, Guava and Strata	_	_	748
Call Option Premium due from Xstrata	_	_	27,092
Prepayments	10	_	885
Other taxes receivable	_	_	37
Other receivables	6	33	264
	16	33	29,026

Included within trade and other receivables is \$nil (2008: \$nil, 2007: \$nil) expected to be recovered in more than 12 months.

The Call Option Premium due from Xstrata relates to unpaid minimum commitment in relation to the Call Option (see note 1).

#### 8 Cash and cash equivalents

	2007 \$000	2008 \$000	2009 \$000
Cash and cash equivalents per balance sheet and cash flow statement	120	104	3,838
9 Trade and other payables	2007 \$000	2008 \$000	2009 \$000
Loans and borrowings from Garbet and Guava Amount payable to Xstrata Other taxes and social security payable Non-trade payables and accrued expenses	3,972 	12,009 _ 	21,027 725 411 2,600
	4,238	13,164	24,763

During 2007, the Group was granted non-interest bearing loan facilities by Garbet and Guava which have accumulated to \$21,027,000 at 31 December 2009 (2008: \$12,009,000, 2007: \$3,972,000). The loans are unsecured and are repayable upon demand. On 15 October 2010 it was agreed that these loans would not be repayable until the earlier of (1) Xstrata exercising the Call Option (at which point Xstrata would provide sufficient funds for repayment) and (2) Jumelles BVI and/or its shareholder(s) having arranged sufficient alternative financing in order for Jumelles BVI to be able to continue as a going concern after repaying the loans.

# 10 Employee benefits

### Pension contribution

The Group does not operate its own pension scheme but instead may contribute to its employees' personal pension schemes as part of their employee benefits.

The total expense relating to these contributions in the current year was \$55,000 (2008: nil; 2007: nil).

### 11 Capital and reserves

	Share	Share	Share	Translation	Retained	Total
	capital	premium	options	reserve	earnings	equity
	\$000	\$000	\$000	\$000	\$000	\$000
At 1 January 2007	10	9	_	_	_	19
Shares issued in exchange for loan	10	490	_	_	-	500
Total recognised income and expense	) –				(1,508)	(1,508)
At 31 December 2007	20	499	_	_	(1,508)	(989)
Total recognised income and expense	) –			47	(1,921)	(1,874)
At 31 December 2008	20	499	_	47	(3,429)	(2,863)
Capitalisation of share premium	499	(499)	-	_	-	-
Total recognised income and expense	) –	_	-	(720)	(8,758)	(9,478)
Issue of share options (see note 1)			50,000			50,000
At 31 December 2009	519		50,000	(673)	(12,187)	37,659

### Capitalisation of premium

The capitalisation of premium resulted from the amendment of the articles of incorporation during the year whereby Jumelles BVI's authorised number of shares were changed from 50,000 shares at \$1 par value each to an unlimited number of shares at no par value. As a result, the share premium resulting in prior years was classified as part of the share capital.

### Translation reserve

The translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of foreign operations, as well as from the translation of liabilities that hedge Jumelles BVI's net investment in a foreign subsidiary.

### 12 Share Capital

	Ordinary shares			
In thousands of shares	2007	2008	2009	
On issue at 1 January	10	20	20	
Share issued in exchange for loans	10	_	_	
Issued arising from stock split		_	1,980	
On issue at 31 December – fully paid	20	20	2,000	

The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of Jumelles BVI.

On 23 May 2007, the Company issued 10,101 shares to Strata in exchange for debt of \$500,000 that was due by the Group to Strata.

During the year ended 31 December 2009, Jumelles BVI amended its articles of incorporation enabling Jumelles BVI to issue an unlimited number of no par value shares from the previous 50,000 authorised number of shares at \$1 par value each. Out of the additional shares authorised, Jumelles BVI issued an additional 1,980,000 shares as a stock split to its shareholders thereby increasing the total issued share capital to 2,000,000 shares. Further, all of Jumelles BVI's issued shares had been transferred to Zanaga Iron Ore Limited from Garbet and Guava.

### 13 Financial instruments

### (a) Fair values of financial instruments

#### Trade and other receivables

The fair value of trade and other receivables, is estimated as the present value of future cash flows, discounted at the market rate of interest at the balance sheet date if the effect is material. The fair values approximate book values.

### Trade and other payables

The fair value of trade and other payables is estimated as the present value of future cash flows, discounted at the market rate of interest at the balance sheet date if the effect is material. The fair values approximate book values.

#### Cash and cash equivalents

The fair value of cash and cash equivalents is estimated as its carrying amount where the cash is repayable on demand. Where it is not repayable on demand then the fair value is estimated at the present value of future cash flows, discounted at the market rate of interest at the balance sheet date. The fair values approximate book values.

### (b) Credit risk

### Financial risk management

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables related parties. The Group has a credit policy in place and exposure to credit risk is monitored on an ongoing basis. At 31 December 2009, 2008 and 2007 the financial assets exposed to credit risk were as follows:

	2007	2008	2009
	\$000	\$000	\$000
Trade and other receivables	6	33	1,049
Cash and cash equivalents	120	104	3,838
	126	137	4,887

Credit risk arising on operating and other receivables, loans due to group companies and cash and cash equivalents is mitigated by management involvement in the group companies.

### (c) Liquidity risk

### Financial risk management

Liquidity risk is the risk that the Group will not be able to meet its obligations as they fall due. The Group evaluates and follows continuously the amount of liquid funds needed for business operations, in order to secure the funding needed for business activities and loan repayments. The availability and flexibility of the financing is needed to assure the Group's financial position. The Group's funding comes from the funding agreement with its related parties for the exploration and study of the mining site in Congo (see note 1).

Details of the maturity of financial liabilities are provided in note 9.

### (d) Foreign currency risk

#### Financial risk management

The foreign currency denominated financial assets and liabilities (those denominated in a currency other than the functional currency of the entity holding the asset or liability) are not hedged, thus the changes in fair value are charged or credited to profit and loss.

At 31 December 2007, 2008 and 2009, the Group did not have significant foreign currency denominated financial assets or liabilities.

### 14 Operating leases

Non-cancellable operating lease rentals are payable as follows:

	2007	2008	2009
	\$000	\$000	\$000
Less than one year	-	13	185
Between one and five years		_	_
More than five years			
		13	185

The Group leases a number of offices under operating leases.

During the year ended 31 December 2009, \$224,000 was recognised as an expense in the income statement in respect of operating leases (2008:\$141,000, 2007:\$nil).

### 15 Commitments

There are no capital commitments or off-balance sheet arrangements at 31 December 2009 (2008: \$nil, 2007: \$nil).

### 16 Related parties

### Identity of related parties with which the Group has transacted

Jumelles BVI's relationships with Garbet, Guava, Strata and Xstrata are described in note 1.

As at 31 December 2009, 2008 and 2007 the Group has the following balances with its related parties:

	Transact	ions for th	ne year	Clo	osing balan	се
	2007	2008	2009	2007	2008	2009
	\$	\$	\$	\$	\$	\$
Sundry amounts receivable/(payable):						
Strata	_	_	24	_	_	24
Garbet	_	_	362	_	_	362
Guava	_	_	362	_	_	362
Xstrata	_	_	(725)	_	_	(725)
Xstrata – Call Option Premium	_	_	50,000	_	_	27,092
Xstrata – cash calls to fund Call						
Option Premium	_	_	(22,908)	N/a	N/a	N/a
Funding received – net of repayment:						
Garbet	3,972	5,389	3,154	3,972	9,351	12,514
Guava	_	2,658	5,854	-	2,658	8,513

On 23 May 2007, the Company issued 10,101 shares to Strata in exchange for debt of \$500,000 that was due by the Group to Strata.

### Transactions with key management personnel

There are no directors of the Group who control the voting shares of Jumelles BVI.

The compensation of key management personnel including the directors is as follows:

	2007 \$000	2008 \$000	2009 \$000
Key management emoluments including social security costs Company contributions to pension schemes	8	110	2,490 45
	8	110	2 535

# 17 Ultimate parent company and parent company of larger group

Jumelles BVI is a subsidiary undertaking of Zanaga Iron Ore Company Limited which is the ultimate parent company incorporated in the British Virgin Islands. The ultimate controlling parties are Garbet Limited and Guava Minerals Limited (jointly).

Xstrata has an option to acquire a controlling interest in Jumelles BVI (see note 1).

### Section C – Condensed Financial Information on Jumelles Limited for the six months ended 30 June 2010 (Unaudited)

### **Consolidated income statements**

	Year ended	Six mo	nths
	31 December	ended 30	) June
	2009	2009	2010
	\$000	\$000	\$000
Administrative expenses	(8,332)	(1,876)	(6,517)
Loss from operations Taxation	(8,332) (426)	(1,876) (90)	(6,517) (430)
Loss for the year attributable to owners of the parent	(8,758)	(1,966)	(6,947)

Included in administration expenses are foreign exchange gains/(losses) on intercompany balances of 31 December 2009: \$535,000, 30 June 2009: \$615,000, 30 June 2010: \$(5,491,000) and for the year ended 31 December 2009 legal costs of \$4,084,000 relating to financing activities, including the Xstrata transaction.

# Consolidated statements of comprehensive income

	Year ended	Six mo	nths
	31 December	ended 3	) June
	2009	2009	2010
	\$000	\$000	\$000
Loss for the year Other comprehensive income	(8,758)	(1,966)	(6,947)
Foreign exchange translation differences	(720)	(268)	602
Total comprehensive income	(9,478)	(2,234)	(6,345)

# **Consolidated balance sheets**

	31 December	At 30 June	
	2010 \$000	2009 \$000	2010 \$000
Assets			
Non-current assets	0.054		0 700
Property, plant and equipment	6,654	1,801	8,766
Exploration and other evaluation assets	22,904	14,893	40,608
	29,558	16,694	49,374
Current Assets			
Trade and other receivables	29,026	335	4,043
Cash and cash equivalents	3,838	1,268	8,393
	32,864	1,603	12,436
Total Assets	62,422	18,297	61,810
Liabilities			
Current Liabilities	(04,700)		(00, 400)
Irade and other payables	(24,763)	(23,394)	(30,496)
Net assets/(liabilities)	37,659	(5,097)	31,314
Capital and reserves attributable to equity holders			
of Jumelles Limited	5.10	0.0	- 10
Share capital	519	20	519
Share option reserve	- 50.000	499	50 000
Translation reserve	(67.3)	(221)	(71)
Retained earnings	(12,187)	(5,395)	(19,134)
Total shareholders' equity	37,659	(5,097)	31,314

# Consolidated statements of cash flows

	Year ended 31 December 2009 \$000	Six mc ended 3 2009 \$000	onths 0 June 2010 \$000
<b>Cash flows utilised in operating activities</b> Loss for the year Adjustments for:	(8,758)	(1,966)	(6,947)
Depreciation of property, plant and equipment Foreign exchange Tax expense (Increase)/decrease in trade and other receivables Increase/(decrease) in trade and other payables	512 4 426 (1,901) 2,170	127 (1) 90 (302) 801	358 (122) 430 27 4,985
Taxation paid	(7,547) (15)	(1,251)	(1,269) (410)
Net cash utilised in operating activities	(7,562)	(1,251)	(1,679)
Cash flows utilised in investing activities Acquisition of property, plant and equipment Capitalised exploration and evaluation assets	(5,807) (14,823)	(564) (6,360)	(1,620) (17,102)
Net cash utilised in investing activities	(20,630)	(6,924)	(18,722)
<b>Cash flows from financing activities</b> Proceeds from share options Loans from shareholders	22,908 9,018	9,339	24,956
Net cash from financing activities	31,926	9,339	24,956
Net increase/(decrease) in cash and cash equivalents Cash and cash equivalents at beginning of year	3,734 104	1,164 104	4,555 3,838
Cash and cash equivalents at end of period	3,838	1,268	8,393

### Consolidated statements of changes in equity

	Share capital \$000	Share premium \$000	Share options \$000	Translation reserve \$000	Retained earnings \$000	Total equity \$000
<b>At 1 January 2009</b> Loss for the year Foreign exchange	20 _	499 -	-	47	(3,429) (1,966)	(2,863) (1,966)
translation differences				(268)		(268)
At 30 June 2009	20	499		(221)	(5,395)	(5,097)
<b>At 1 January 2010</b> Loss for the year Foreign exchange	519 -	-	50,000 _	(673)	(12,187) (6,947)	37,659 (6,947)
translation differences				602		602
At 30 June 2010	519		50,000	(71)	(19,134)	31,314
<b>At 1 January 2009</b> Capitalisation of share	20	499	_	47	(3,429)	(2,863)
premium	499	(499)	-	-	-	-
Loss for the year Foreign exchange	_	_	_	_	(8,758)	(8,758)
translation differences Issue of share options			50,000	(720)		(720) 50,000
At 31 December 2009	519	_	50,000	(673)	(12,187)	37,659

### **Basis of preparation**

This condensed set of financial statements has been prepared in accordance with the recognition and measurement principles of IAS 34 Interim Financial Reporting as adopted by the EU. The condensed set of financial statements has been prepared applying the accounting policies and presentation that were applied in the preparation of the company's consolidated financial statements for the year ended 31 December 2009.

# PART X

### ADDITIONAL INFORMATION

### 1. **RESPONSIBILITY STATEMENTS**

- 1.1 The Company and the Directors accept responsibility for the information contained in this document, including individual and collective responsibility, for the Company's compliance with the AIM Rules. To the best of the knowledge and belief of the Company and the Directors (having taken all reasonable care to ensure that such is the case), the information contained in this document is in accordance with the facts and makes no omission likely to affect the import of such information.
- 1.2 SRK, whose address appears on page 9 of this document, accepts responsibility for the information contained in Part VII of this document. To the best of the knowledge and belief of SRK (having taken all reasonable care to ensure that such is the case), the information contained in Part VII of this document is in accordance with the facts and makes no omission likely to affect the import of such information.
- 1.3 CRU Strategies, whose address appears on page 11 of this document accepts responsibility for the information contained in Part IV of this document. To the best of the knowledge and belief of CRU Strategies (having taken all reasonable care to ensure that such is the case), the information contained in Part IV of this document is in accordance with the facts and makes no omission likely to affect the import of such information.

### 2. INCORPORATION AND STATUS OF THE COMPANY

- 2.1 The Company was incorporated on 19 November 2009 in the BVI and registered under the BVI Act as a BVIBC with limited liability with registered number 1557213 and the name Jumelles Holdings Limited.
- 2.2 On 1 October 2010, the Company changed its name to Zanaga Iron Ore Company Limited.
- 2.3 The liability of the members of the Company is limited.
- 2.4 The principal legislation under which the Company operates is the BVI Act and regulations made thereunder.
- 2.5 The registered office of the Company is at Coastal Building, 2nd Floor, Wickham's Cay II, P.O. Box 2221, Road Town, Tortola, British Virgin Islands, telephone number +1 284 494 8347.
- 2.6 The company secretary of the Company is Elysium Fund Management Limited of PO Box 650, 2nd Floor, No. 1 Le Truchot, St Peter Port, Guernsey GY1 3JX, telephone number +44 1481 810 100.

### 3. THE SUBSIDIARIES

- 3.1 The Company acts as the holding company of the Group.
- 3.2 Following Admission, the Company will directly or indirectly have four wholly-owned subsidiaries, namely Jumelles Limited, Jumelles M Limited, Jumelles Technical Services (UK) Limited and Mining Project Development Congo S. A.U. The details of these subsidiaries are as follows:

Name	Date and Place of Incorporation	Field of Activity	% of issued Ordinary Shares owned (directly or indirectly) by the Company <sup>1</sup>
Held directly by the Compan	$\mathcal{Y}^{1}$		
Jumelles Limited	28 April 2006, BVI	Holding company	100
Held by Jumelles Limited			
Jumelles M Limited	19 April 2007, Mauritius	Holding company	100
Jumelles Technical Services (UK) Limited	17 November 2008, United Kingdom	Services company	100
Held by Jumelles M Limited <sup>2</sup>			
Mining Project Development Congo S. A. U	2 June 2006, Republic of Congo	Operating company and registered holder of the Zanaga Exploration Licences	100 <sup>2</sup>

<sup>1</sup> Subject to the arrangements with Xstrata as described in Part II of this document.

<sup>2</sup> Subject to the minimum 10 per cent. Congolese government free carry participation as described in paragraph 5 of section B of Part V of this document.

### 4. ISSUED SHARES OF THE COMPANY

- 4.1 As at the date of this document the Company is authorised to issue an unlimited number of no par value shares and the number of Ordinary Shares in issue is 254,934,212.
- 4.2 At the date of incorporation, the Company had one ordinary share of US\$1 fully paid and issued to Garbet. On incorporation, the Company was authorised to issue 50,000 ordinary shares with a par value of US\$1 each. Since incorporation, there have been the following changes in the authorised and issued shares of the Company:
  - 4.2.1 pursuant to a resolution of the sole shareholder of the Company dated 26 November 2009, the Memorandum was amended in order that the Company be authorised to issue an unlimited number of shares of a single class of no par value;
  - 4.2.2 on 1 December 2009, pursuant to a resolution of the sole director of the Company dated 26 November 2009, the ordinary share of US\$1 issued to Garbet was converted to one Ordinary Share of no par value;
  - 4.2.3 on 4 December 2009, pursuant to an undated resolution of the directors, 49,999,999 Ordinary Shares were issued to Garbet and 50,000,000 Ordinary Shares were issued to Guava for non-cash consideration;
  - 4.2.4 on 11 December 2009, pursuant to a resolution of the directors dated the same day, a total of 12,500,000 Ordinary Shares were issued to certain subscribers pursuant to the Subscription Agreement, further details of which are set out in paragraph 13.13 of this Part X;
  - 4.2.5 on 16 December 2009, pursuant to a resolution of the Directors dated the same day, the Company purchased 10,526,315 shares from Guava and then cancelled such shares, pursuant to a deed of repurchase dated 26 November 2009, further details of which are set out in paragraph 13.14 of this Part X;
  - 4.2.6 on 15 November 2010, pursuant to a written resolution dated 15 November 2010, each Ordinary Share was divided into 2.5 Ordinary Shares.

- 4.3 On Admission, pursuant to a resolution of the Directors, the Company will issue 19,907,629 New Shares pursuant to the Placing and 5,574,135 new Ordinary Shares will be issued to Geneva Management Group (BVI) Limited as trustee of the ZIOC Trust 1 thereby increasing the number of Ordinary Shares in issue immediately following Admission to 280,415,976 Ordinary Shares. The new Ordinary Shares issued to Geneva Management Group (BVI) Limited will be held as nominee for selected management of the Company and the trustee, who are joint beneficial owners under the LTIP.
- 4.4 In addition, the Company has granted an option over 398,153 Ordinary Shares pursuant to a call option, further details of which are set out in paragraph 13.27 of this Part X.
- 4.5 Under the Memorandum and Articles following Admission:
  - 4.5.1 the Directors are generally and unconditionally authorised to exercise for the period ending on the earlier of the Company's next annual general meeting and 31 December 2011 (the "First Allotment Period") all the powers of the Company to issue relevant securities up to:
    - (a) an aggregate number equal to 66 per cent. of the Issued Ordinary Shares reduced by the number of relevant securities issued pursuant to the authorities referred to in paragraph 4.5.1(b) in connection with a Rights Issue; or
    - (b) otherwise, an aggregate number equal to 33 per cent. of the Issued Ordinary Shares as reduced by the number of relevant issued pursuant to the authority referred to in paragraph 4.5.1(a);
  - 4.5.2 during the First Allotment Period, the Directors are empowered to issue equity securities wholly for cash pursuant to and within the terms of the authority referred to in paragraph 4.5.1 above:
    - (a) in connection with a Rights Issue;
    - (b) pursuant to a Specific Authority; and
    - (c) otherwise than in connection with a Rights Issue or an issue pursuant to a Specific Authority up to an aggregate number equal to 10 per cent. of the Issued Ordinary Shares;
  - 4.5.3 by such authority and power referred to in paragraphs 4.5.1 and 4.5.2 above, the Directors may, during the First Allotment Period, make offers or agreements which would or might require securities to be issued after the expiry of the First Allotment Period; and
  - 4.5.4 for the purposes of this paragraph Employee Share Scheme, Rights Issue and Specific Authority shall have the meaning set out in paragraph 6.1.3 of this Part X.
- 4.6 The New Shares in issue following Admission will rank *pari passu* in all respects with the Existing Ordinary Shares, including the right to receive all dividends and other distributions declared, made or paid after Admission on the Ordinary Shares.
- 4.7 On Admission warrants in respect of 995,382 Ordinary Shares will be issued to Liberum. Further details are provided in paragraph 13.3 of this Part X.
- 4.8 No Ordinary Shares are currently in issue with a fixed date on which entitlement to a dividend arises and there are no arrangements in force whereby future dividends are waived or agreed to be waived.
- 4.9 Save as disclosed in paragraphs 4.3, 4.4 and 4.7 above:
  - 4.9.1 no shares 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;
  - 4.9.2 no shares or loan capital of the Company is under option or is the subject of an agreement, conditional or unconditional, to be put under option; and

4.9.3 no commission, discounts, brokerage or other special term has been granted by the Company or is now proposed in connection with the issue or sale of any part of the shares or loan capital of the Company, other than as set out in paragraph 13 of this Part X.

# 5. BVI LAW

The Company is registered in the BVI as a BVIBC and is subject to BVI law. English law and BVI law differ in a number of areas, and certain differences between English law and BVI law are summarised below, although this is not intended to provide a comprehensive review of the applicable law. The Company has included equivalent provisions in its Memorandum and Articles to address certain material elements of these differences (further details are provided in paragraph 6 "Memorandum and Articles of Association" below).

### 5.1 Shares

Subject to the BVI Act and to the memorandum and articles, the directors have the power to offer, issue, grant options over or otherwise dispose of such shares. A BVIBC may amend its memorandum to increase, subdivide, combine or decrease its shares authorised or issued.

#### 5.2 Financial Assistance

Financial assistance to purchase shares of a BVIBC or its holding company is not prohibited under BVI law. Normal practice is to treat such action as a distribution and require the directors to determine that, immediately following the grant of the assistance, the BVIBC will be able to meet its debts as they fall due and that the value of the company's assets will exceed its liabilities (the "Solvency Test").

#### 5.3 **Purchase of own shares**

Save for limited circumstances, and subject to satisfaction of the Solvency Test and the provisions of its memorandum and articles, a BVIBC may purchase, redeem or otherwise acquire its own shares.

### 5.4 **Dividends and distribution**

Subject to the provisions of its memorandum and articles, the directors may declare dividends in cash, shares or other property provided they determine the Company will be able to satisfy the Solvency Test immediately after the distribution.

### 5.5 **Protection of minorities**

The BVI Act provides for various remedies to be available to shareholders who allege that the company's actions are prejudicial to them, including the right to be able to apply for restraining and compliance orders, derivative actions, personal actions, and representative actions against the company.

#### 5.6 Management

Subject to the provisions of its memorandum and articles of association, a BVIBC is managed by its board of directors, each of whom has authority to bind the company. Directors are required under BVI law to act honestly and in good faith with a view to the best interests of the BVIBC, and to exercise the care, diligence and skill that a reasonable director would exercise, taking into account (i) the nature of the company, (ii) the nature of the business and (iii) the position of the directors and the nature of the responsibilities taken.

# 5.7 Accounting and audit

A BVIBC is obliged to keep financial records that (i) are sufficient to show and explain the company's transactions and (ii) will, at any time, enable the financial position of the company to be determined with reasonable accuracy. There is no statutory requirement on the Company (given its present business activities) to audit or file annual accounts in the BVI.

### 5.8 **Exchange control**

A BVIBC is not subject to any exchange control regulations in the BVI.

### 5.9 Stamp duty

No stamp duty is payable in the BVI in respect of instruments relating to transactions involving BVIBCs, as more fully described in paragraph 18.2 of this Part X.

### 5.10 **Transactions with directors**

Under BVI law, a transaction entered into by a BVIBC in which a director is interested is voidable unless (i) such interest was disclosed prior to the company entering into the transaction or (ii) it was not required to be disclosed as it is a transaction between the company and the director in the ordinary course of the company's business and on usual terms and conditions. Furthermore, a transaction entered into by a company in respect of which a director is interested is not voidable by the company if (i) the material facts of the interest of the director in the transaction are known by the shareholders entitled to vote at a meeting of shareholders and the transaction is approved or ratified by a resolution of shareholders or (ii) the company received fair value for the transaction.

### 5.11 **Redemption of minority shares**

The BVI Act provides that, if permitted by its memorandum and articles of association, members holding 90 per cent. or more of all the voting shares of a BVIBC may instruct the directors to redeem the shares of the remaining shareholders. The directors shall be required to redeem the shares of the minority shareholders, whether or not the shares are by their terms redeemable. The directors must notify the minority shareholders in writing of the redemption price to be paid for the shares and the manner in which the redemption is to be effected. In the event that a minority shareholder objects to the redemption price to be paid and the parties are unable to agree the redemption amount payable, the BVI Act sets out a mechanism whereby the shareholder and the BVIBC may each appoint an appraiser, who will together appoint a third appraiser and all three appraisers will have the power to determine the fair value of the shares to be compulsorily redeemed. Pursuant to the BVI Act, the determination of the three appraisers shall be binding on the BVIBC and the minority shareholder for all purposes.

### 5.12 Inspection of corporate records

Shareholders of a BVIBC may inspect on giving written notice to the company;

- (a) the memorandum and articles;
- (b) the register of members;
- (c) the register of directors; and
- (d) minutes of meetings and resolutions of members and of those classes of members of which he is a member.

However, the directors may refuse such request in relation to items (b) to (d) or limit the inspection of such documents (including limiting the ability to be able to make copies of or take of extracts from the documents) on the grounds that inspection would be contrary to the interests of the BVIBC.

A register of charges must be maintained in the office of the company's registered agent whilst either the original or a copy of the register of directors and members will suffice. These may be inspected with the BVIBC's consent, or in limited circumstances pursuant to a court order.

### 5.13 Insolvency

BVI law makes provision for both voluntary and insolvent winding-up of a BVIBC, and for appointment of a liquidator. The shareholders or the directors may resolve to wind up the BVIBC voluntarily. If it is the directors who resolve to commence the winding-up, they must prepare a plan of dissolution. Where the shareholders resolve to commence the winding-up, they will approve a plan of liquidation prepared by the directors.

The BVIBC and any creditor may petition the court, pursuant to the Insolvency Act 2003, for the winding-up of the BVIBC upon various grounds, *inter alia*, that the BVIBC is unable to pay its debts or that it is just and equitable that it be wound up.

### 5.14 **Pre-emption rights**

Statutory pre-emption rights under the BVI Act over further issues of shares in the Company have been disapplied. The Articles have, however, been amended to include pre-emption rights equivalent to rights offered to shareholders of companies incorporated in the UK. For further information on these pre-emption rights, including the extent to which they have been disapplied by the Company, please see paragraphs 4.5.2 and 6 of this Part X.

### 5.15 Takeovers

There are no provisions governing takeover offers analogous to the City Code applicable in the BVI. The Company's Articles of Association incorporate provisions similar to those contained in Rule 9 of the City Code. For further information please see paragraph 6.19 of this Part X.

### 5.16 Mergers

Under BVI law, following a domestic statutory merger or consolidation, one of the companies is subsumed into the other (the "Surviving Company") or both are subsumed into a third company (a "consolidation"). In either case, with effect from the effective date of the merger, the Surviving Company or the new consolidated company assumes all of the assets and liabilities of the other entity(ies) by operation of law and other entities cease to exist.

Generally, the merger or consolidation of a BVIBC requires shareholder approval. However, a BVIBC parent company may merge with one or more BVI subsidiaries without member approval, provided that the surviving company is also a BVIBC. Members dissenting from a merger are entitled to payment of the fair value of their shares unless the BVIBC is the surviving company and the shareholders continue to hold a similar interest in the surviving company. BVI law permits BVIBCs to merge with companies incorporated outside the BVI, provided the merger is lawful under the laws of the jurisdiction in which the non-BVI company is incorporated.

# 6. MEMORANDUM AND ARTICLES OF ASSOCIATION

Subject to the BVI Act and any other BVI law, the Company under its Memorandum has, irrespective of corporate benefit, full capacity to carry on or undertake any business or activity, do any act or enter into any transaction and has full rights, powers and privileges for those purposes. For the purposes of section 9(4) of the BVI Act, there are no limitations on the business that the Company may carry on.

The following is a description of the rights attaching to the Ordinary Shares based on the Company's Articles and BVI law. This description does not purport to be complete and is qualified in its entirety by the full terms of the Articles.

# 6.1 **Authority of Board to issue shares**

- 6.1.1 The Directors are generally and unconditionally authorised to exercise for each Allotment Period all the powers of the Company to issue relevant securities up to:
  - (a) an aggregate number equal to the Rights Issue Allotment Number in connection with a Rights Issue; and
  - (b) otherwise, an aggregate number equal to the Allotment Number.
- 6.1.2 During each Allotment Period, the Directors are empowered to issue securities wholly for cash pursuant to and within the terms of the authority referred to above:
  - (a) in connection with a Rights Issue;
  - (b) pursuant to a Specific Authority; and
  - (c) otherwise than in connection with a Rights Issue Specific Authority up to an aggregate number equal to the Non-Pre-emptive Number;

in each case, the Directors may, during the Allotment Period, make offers or agreements which would or might require relevant securities and/or equity securities to be issued after the expiry of the Allotment Period.

- 6.1.3 For the purposes of this paragraph:
  - (a) the "Allotment Period" means a period (not exceeding five years on any occasion) for which the authorities referred to in paragraph 6.1.1 is renewed or extended by resolution of the Company in general meeting stating the Allotment Number and the Rights Issue Allotment Number for such period and/or by special resolution of the Company in general meeting stating the Employee Share Allotment Number;
  - (b) the "Allotment Number" shall be that stated in the relevant resolution renewing or extending the authority referred to in paragraph 6.1.1(b) for such period or, in either case, any increased amount fixed by resolution of the Company;
  - (c) "Employee Share Scheme" means any scheme for providing incentives to employees and Directors involving share options, allocations of Ordinary Shares, share appreciation rights or other similar matters involving shares or debt obligations of any kind of the Company;
  - (d) "Non-Pre-emptive Number" shall be that stated in the relevant special resolution renewing or extending the power referred to in paragraph 6.1.2 for such period or, in either case, any increased amount fixed by special resolution;
  - (e) "Rights Issue" means an offer of equity securities open for acceptance for a period fixed by the Directors to: (i) holders on the register of members on a record date fixed by the Directors of Ordinary Shares in proportion to their respective holdings (for which purpose holdings in certificated and uncertificated form may be treated as separate holdings); and (ii) other persons so entitled by virtue of the rights attaching to any other equity securities held by them, but subject in both cases to such exclusions or other arrangements as the Directors may deem necessary or expedient in relation to 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;
  - (f) "Rights Issue Allotment Number" shall be that stated in the relevant resolution renewing or extending the authority referred to in paragraph 6.1.1(a) for such period or, in either case, any increased amount fixed by resolution of the Company; and
  - (g) "Specific Authority" means an approval for issuance of Shares in relation to a particular transaction approved by a special resolution of Shareholders.
- 6.1.4 Subject to paragraphs 6.1.1 to 6.1.3, the Company shall not issue equity securities to any person whether or not such person is already a Shareholder, unless such securities are first offered to the Shareholders in proportion to the number of the existing shares

held by them respectively, unless the Company shall by special resolution otherwise direct. The above provisions shall not apply to:

- (a) a particular issue of equity securities if these are to be paid for otherwise than in cash;
- (b) shares to be held under an Employee Share Scheme; or
- (c) an issue of bonus shares.
- 6.1.5 Shares in the Company shall be capable of being issued for cash or other property provided that an ordinary resolution of the Directors has been passed stating:
  - (a) the amount to be credited for the issue of the Ordinary Shares;
  - (b) their determination of the reasonable present cash value of the non-cash consideration for the issue; and
  - (c) in their opinion, the present cash value of the non-cash consideration for the issue is not less than the amount to be credited for the issue of the Shares.

### 6.2 **Voting**

Subject to any special terms as to voting or to which any shares may have been issued, at a meeting of Shareholders votes are to be taken on a poll and every Shareholder who, being an individual, is present in person or by proxy or, being a corporation present by a duly authorised representative, has one vote for every share of which he is the holder or, in the case of a proxy, duly appointed to vote.

#### 6.3 Dividends

- 6.3.1 Subject to the BVI Act and the Directors being satisfied, on reasonable grounds, that, immediately after the payment of the dividend, the value of the Company's assets will exceed its liabilities and the Company will be able to pay its debts as and when they fall due (the "Solvency Test"), the Company at a general meeting may declare dividends to be paid to Shareholders according to their rights and interests in the profits available for distribution, but no dividend shall be declared in excess of the amount recommended by the Board.
- 6.3.2 Subject to the BVI Act and the Directors being satisfied the Company satisfies the Solvency Test, the Directors may from time to time pay to the Shareholders such interim dividends as appear to the Directors to be justified by the position of the Company.
- 6.3.3 No unpaid dividend, bonus or interest shall bear interest as against the Company.
- 6.3.4 Any dividend unclaimed after a period of 12 years from the date it became due for payment shall be forfeited and shall revert to the Company.

### 6.4 **Return of capital**

The capital and assets of the Company on a winding-up or other return of capital shall be applied in repaying to the holders of shares the amounts paid up or credited as paid up on such shares and subject thereto shall belong to and be distributed accordingly to the number of such shares held by them respectively.

### 6.5 **Transferability of Ordinary Shares**

- 6.5.1 All transfers of Ordinary Shares which are in certificated form may be effected by transfer in writing signed by the transferor. The instrument of transfer shall be executed by or on behalf of the transferor and contain the name and address of the transferee. All transfers of Ordinary Shares which are in uncertificated form may be effected by means of a relevant system (as defined in the Articles).
- 6.5.2 The Directors may, in the case of shares in certificated form, in their absolute discretion refuse to register any transfer of shares (not being fully-paid shares), provided that any

such refusal does not prevent dealings in partly paid Ordinary Shares or disturb the market in the shares. In addition, the Directors may, subject to the CREST regulations, refuse to register a transfer of shares (whether fully-paid or not) in favour of more than four persons jointly or made to or by an infant or a person with a mental disorder.

### 6.6 Variation of rights

The rights attached to any class of shares for the time being issued may from time to time (whether or not the Company is being wound-up) be varied by a resolution passed at a meeting by the holders of seventy five per cent. of the issued shares of that class.

### 6.7 Changes in shares

The Company may by resolution of the Directors consolidate and divide any of its shares into shares of a larger amount and sub-divide its shares into shares of a smaller amount.

### 6.8 **Disclosure of Interests and Restrictions on Ordinary Shares**

- 6.8.1 Notwithstanding the provisions of the BVI Act, the provisions of Chapter 5 of the DTR shall apply to the Company as if it were an issuer whose home state is the UK and are deemed to be incorporated into the Articles.
- 6.8.2 The Company may by notice in writing require a person whom the Company knows or has reasonable cause to believe to be or, at any time during the three years immediately preceding the date on which the notice is issued, to have been interested in shares comprised in the Company's relevant authorised and issued shares:
  - (a) to confirm that fact or (as the case may be) to indicate whether or not it is the case; and
  - (b) where that person holds or has during that time held an interest in shares so comprised, to give such further information as may be required in accordance with the Articles.
- 6.8.3 A notice shall require any information given in response to the notice to be given in writing within such reasonable time as may be specified in the notice. If the requisite reply is not received with the timeframe specified in the notice, a further notice will be sent asking the person(s) or member(s) in question to show cause within a specified time why disenfranchisement action by the Company should not be taken in respect of their shares.
- 6.8.4 If the member is still unable to respond to the initial request or show such cause, then the Company may issue a notice of disenfranchisement, which shall take effect in the manner set out in sub-paragraphs (a) to (d) below:
  - (a) any agreement to transfer or transfer of shares or, in the case of unissued shares, any transfer of the right to be issued with such shares, and any issue of them, is void;
  - (b) no voting rights are exercisable with respect to the shares until further notice by the Company;
  - (c) no further shares shall be issued in right of them or in pursuance of any offer made to their holder; and
  - (d) except in a liquidation of the Company, no payment shall be made of any sums due from the Company on the shares.

### 6.9 **Purchase of own shares**

The Company may purchase, redeem or otherwise acquire any of its own shares with Shareholder consent, unless the BVI Act or the Memorandum and Articles permit such shares to be purchased or redeemed without such consent.

### 6.10 General Meetings

- 6.10.1 An annual general meeting shall be called by at least 21 clear days' notice. All other general meetings shall be called by at least 14 clear days' notice.
- 6.10.2 For the purposes of determining which persons are entitled to attend or vote at a meeting and how many votes such person may cast, the Directors may fix as the record date the date of the notice of the meeting or specify another date in the notice, being a date not earlier than the notice.
- 6.10.3 No business shall be transacted at any meeting of the shareholders unless a quorum is present when the meeting proceeds to business. A meeting of the Shareholders is duly constituted if there is present in person or by proxy not less than two Shareholders entitled to vote on matters to be considered at the meeting, including any adjourned meeting. A quorum may comprise a single Shareholder or proxy.

# 6.11 Untraced Shareholders

Subject to the BVI Act, the Company may sell any shares of a member or person entitled thereto who is untraceable, if during a period of 12 years at least three dividends in respect of the shares in question have become payable and the cheques or warrants for all amounts payable to such member or person in respect of his shares have remained uncashed or mandated dividend payments have failed and the Company has received no indication of the existence of such member or person. The net proceeds of sale shall belong to the Company but the member or person who had been entitled to the shares shall become a creditor of the Company in respect of those proceeds.

### 6.12 Directors Fees

- 6.12.1 The Directors (other than those holding executive office with the Company or any subsidiary of the Company) shall be paid by way of fees for their services, at such rate and in such proportion as the Board may resolve, a sum not exceeding an aggregate of £500,000 per annum or such larger amount as the Company may by resolution of Directors determine.
- 6.12.2 The Directors shall also be paid all such reasonable expenses as they may incur in attending or returning from meetings of the Company or of the Board or any committee or otherwise in connection with the business of the Company or the proper exercise of their duties.

### 6.13 Directors' Conflicts of Interest

- 6.13.1 A Director shall forthwith after becoming aware of the fact that he is interested in a transaction entered into or to be entered into by the Company, disclose the interest to the other Directors except if the relevant transaction is between the Director and the Company and is or is to be entered into in the ordinary course of business and on an arm's length basis.
- 6.13.2 The Directors may (subject to such terms and conditions, if any, as they may think fit to impose from time to time, and subject always to their right to vary or terminate such authorisation) authorise, to the fullest extent permitted by law:
  - (a) any matter which would otherwise result in a Director infringing his duty to avoid a situation in which he has, or can have, a direct or indirect interest that conflicts, or possibly may conflict, with the interests of the Company and which may reasonably be regarded as likely to give rise to a conflict of interest (including a conflict of interest and duty or conflict of duties);
  - (b) a Director to accept or continue in any office, employment or position in addition to his office as a Director of the Company and may authorise the manner in which a conflict of interest arising out of such office, employment or position may be dealt with, either before or at the time that such a conflict of interest arises,

provided that for this purpose the Director in question and any other interested Director are not counted in the quorum at any board meeting at which such matter, or such office, employment or position, is approved and it is agreed to without their voting or would have been agreed to if their votes had not been counted.

6.13.3 A Director shall not, by reason of his office, be accountable to the Company for any benefit which he derives from any matter, or from any office, employment or position, which has been approved by the Directors (subject in any such case to any limits or conditions to which such approval was subject).

### 6.14 Votes and Directors' Interests

- 6.14.1 A Director who is in any way, whether directly or indirectly, interested in a proposed or existing contract with the Company must declare the nature and extent of that interest to the other Directors unless it cannot reasonably be regarded as likely to give rise to a conflict of interest.
- 6.14.2 A Director shall not vote, and shall not be counted in a quorum, in respect of any contract, transaction, arrangement or any other proposal in which he has an interest which (together with any interest of any person connected with him) is to his knowledge a material interest (otherwise than by virtue of shares or debentures or other securities of or otherwise through the Company), except that this prohibition shall not apply to:
  - (a) the giving of any security, guarantee or indemnity in respect of money lent or obligations incurred by him or any other person at the request of or for the benefit of the Company or any of its subsidiaries;
  - (b) the giving of any security, guarantee or indemnity in respect of a debt or obligation of the Company or any of its subsidiaries for which he himself has assumed responsibility in whole or in part under a guarantee or indemnity or by the giving of security;
  - (c) any contract or arrangement by a Director to participate in the underwriting or sub-underwriting of any offer of shares, debentures or other securities of the Company or any of its subsidiaries for subscription, purchase or exchange;
  - (d) any contract or arrangement concerning any other company in which the Director and any persons connected with him do not to his knowledge hold an interest in shares (as that term is used in sections 820 to 825 of the UK Act) representing one per cent. or more of either any class of the shares, or the voting rights, in such company;
  - (e) any arrangement for the benefit of Directors or employees of the Company or any directors or employees of its subsidiaries which does not award him any privilege or benefit not generally awarded to the other persons to whom such arrangement relates;
  - (f) any proposal concerning any insurance which the Company is empowered to purchase and/or maintain for or for the benefit of *inter alia* any Directors of the Company,

and the Company may in general meeting at any time suspend or relax any such prohibitions or ratify any transaction not duly authorised by reason of a contravention of a prohibition.

### 6.15 **Qualification Shares**

The Directors are not required to hold shares in order to be a Director.

### 6.16 Retirement

At each annual general meeting of the Company one-third (or the nearest number to one-third) of the Directors shall retire from office by rotation. The Directors to retire in every year shall be those who have been longest in office since their last election but as between persons who

became directors on the same day, those to retire shall (unless they otherwise agree among themselves) be determined by lot. In addition, any Director who would not otherwise be required to retire shall retire by rotation at every third annual general meeting after his last appointment or re-appointment. A retiring Director shall be eligible for re-election. The Company may from time to time by resolution of Directors appoint any person to be a Director. The Directors may also from time to time appoint a Director to fill a vacancy or as an addition to the existing Directors. Any Director appointed to fill a vacancy, shall have a term of appointment that does not exceed the term that remained when the person who ceased to be a Director ceased to hold office or as an addition to the Board, shall hold office only until the dissolution of the annual general meeting following next after his appointment, unless he is reappointed during the meeting. A Director so retiring shall not be taken into account in determining the number of Directors who are to retire by rotation at such meeting.

### 6.17 Executive Office

The Board may from time to time appoint one or more Directors to be the holder of any executive office for such period and on such terms as it decides as it considers necessary or expedient.

### 6.18 Borrowing Powers

The Articles provide that the aggregate principal amount from time to time remaining undischarged of all moneys borrowed by the Company (exclusive of intra-group borrowings) shall not, without the previous sanction of an ordinary resolution of the Company, exceed US\$200 million.

#### 6.19 **Takeover offers**

6.19.1 Where any person (other than the Depositary):

- (a) acquires, whether by a series of transactions over a period of time or not, securities which (taken together with securities held or acquired by persons acting in concert with such person) represent 30 per cent. or more of the voting rights of the Company; or
- (b) who, together with persons acting in concert with such person, holds not less than 30 per cent. but not more than 50 per cent. of the voting rights and such person, or any person acting in concert with such person, acquires additional securities which will increase his or her percentage of the voting rights,

then the Board shall be entitled but not obliged to require such person to extend an offer, on the basis set out in the Articles, to the holders of all issued and outstanding shares of the Company.

- 6.19.2 In respect of any offer(s) made in accordance with the Articles:
  - (a) no acquisition of securities which would give rise to the obligation to make an offer may be made if the making or implementation of such offer would or might be dependent on the passing of a resolution at any meeting of shareholders of the offeror or upon any other condition, consent or arrangement;
  - (b) such offers must be unconditional if the offeror holds securities representing more than 50 per cent. of the voting rights before the offer is made.
- 6.19.3 An offer must, in respect of each class or series or shares, be in cash (or be accompanied by a cash alternative) at not less than the highest price paid by the offeror for shares of that class or series during the offer period and within 12 months prior to its commencement. An offer must be made in writing and publicly disclosed, and must be open for acceptance for a period of not less than 30 days and, if the offer is made conditional as to acceptances and becomes or is declared unconditional as to acceptances, the offer must remain open for not less than 14 days after the date on which it would otherwise have expired.

- 6.19.4 If an offeror shall fail to comply with the relevant provisions of the Articles, or shall fail to comply with such offeror's obligations under the offer, and shall persist in such failure after written notice from the Company to such person or persons, the Board may:
  - (a) require such person or persons to provide such information as the Board considers appropriate;
  - (b) make an award for costs against the defaulter;
  - (c) determine that some or all of the securities held by the defaulter be sold;
  - (d) direct that the defaulter shall not be entitled to exercise any voting rights; and/or
  - (e) direct that no distributions shall be paid in respect of all or any of the shares of the Company held by the defaulter.

#### 6.20 **Compulsory purchase**

- 6.20.1 If an offeror has, by virtue of acceptances of the relevant offer, acquired or contracted to acquire 90 per cent. or more of the voting rights conferred by the shares to which the offer relates, it may, by written notice ("Squeeze Out Notice") to the holders of shares to which the offer relates who have not accepted such offer require them to sell such shares at the same price per share offered by any person identified by the offeror.
- 6.20.2 If a minority shareholder, on the expiration of not less than 30 days from the service of the Squeeze Out Notice, shall not have transferred his shares to the person identified by the offeror, the Directors may authorise any person to execute and deliver on the relevant Shareholder's behalf any necessary transfer in favour of the offeror and, provided the Company has received the purchase money in respect of such shares, the Directors shall thereupon (subject to the transfer being duly stamped (if necessary)) cause the name of the offeror to be entered into the share register as the holder of the relevant shares. The Company shall hold the purchase money in trust for the minority shareholder but shall not be bound to earn or pay interest thereon.

### 7. INTERESTS OF THE DIRECTORS

7.1 The interests (all of which are beneficial unless otherwise stated) of the Directors and their immediate families and the persons connected with them (within the meaning of section 252 of the UK Act) in the Ordinary Shares of the Company or the existence of which could, with reasonable diligence, be ascertained by any Director as at the date of this document and as expected to be immediately following Admission are as follows:

	At the c	date of this o	document	Immediately following Admission		
Name	No. of Ordinary Shares	% of Issued Shares	No. of Ordinary Shares over which Options are granted	No. of Ordinary Shares	% of Ordinary Issued Shares	No. of Ordinary Shares over which Options are granted
Clifford Thomas Elphick (Non-Executive Chairman) <sup>1</sup>	98,684,212	38.71	Nil	88,730,397	31.64	Nil
Colin John Harris (Project Director, Executive)	Nil	Nil	Nil	Nil	Nil	2,388,915
Clinton James Dines (Non-Executive Director)	Nil	Nil	Nil	Nil	Nil	398,153
Michael John Haworth (Non-Executive Director) <sup>2</sup>	125,625,000	49.28	Nil	115,671,186	41.25	Nil
Dave John Elzas (Non-Executive Director)	Nil	Nil	Nil	Nil	Nil	199,076

<sup>1</sup> Clifford Elphick is interested in these Ordinary Shares, which are registered in the name of Guava, by virtue of his interest as a potential beneficiary in a discretionary trust which has an indirect interest in those Ordinary Shares.

<sup>2</sup> Michael Haworth is interested in these Ordinary Shares, which are registered in the name of Garbet, by virtue of his interest as a potential beneficiary in two discretionary trusts which have an indirect interest in these Ordinary Shares.

- 7.2 Save as disclosed above, none of the Directors (or persons connected with the Directors within the meaning of section 252 of the UK Act) has or will have any interest, immediately following Admission, whether beneficial or non-beneficial, in any shares or loan capital of the Company.
- 7.3 There are no outstanding loans granted or guarantees provided by the Company or any company in the Group to or for the benefit of any of the Directors.
- 7.4 Save as disclosed above, and save as otherwise disclosed in this document, no Director has any interest, whether direct or indirect, in any transaction which is or was unusual in its nature or conditions or significant to the business of the Company taken as a whole and which was effected by the Company since its incorporation and which remains in any respect outstanding or under performed.
- 7.5 None of the Directors or any person connected with them (within the meaning of section 252 of the UK Act) 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).

# 8. DIRECTORS' SERVICE AGREEMENTS AND LETTERS OF APPOINTMENT

8.1 Clifford Elphick entered into an agreement with the Company to act as its Non-Executive Director and Chairman on 12 November 2010 with effect from Admission. The appointment is for a minimum period of one year subject to three months' notice by either party at any time and also subject to the Articles. Mr Elphick will receive an annual fee of £75,000 payable in monthly instalments in arrears. In addition, Mr Elphick will be entitled to fees of £4,000 per

annum as a member of the Remuneration Committee and £4,000 per annum as a member of the HSSE Committee. These fees will be reviewed annually if Mr Elphick's appointment is extended by the Board and any increase will be entirely at the discretion of the Company. He will not be entitled to any bonus, pension or other benefits. He is subject to confidentiality obligations and provisions relating to conflicts of interest. In the event of termination of his appointment, howsoever caused, he has agreed he will not be entitled to any compensation for loss of office.

8.2 Colin Harris entered into an agreement with the Company to act as its Executive Director on 12 November 2010 with effect from Admission. The appointment is for an indefinite period subject to three months' notice by either party at any time and also subject to the Articles. Mr Harris will receive an annual fee of £50,000 payable in monthly instalments in arrears. In addition, Mr Harris will be entitled to a fee of £4,000 per annum as a member of the HSSE Committee. These fees will be reviewed annually and any increase will be entirely at the discretion of the Company. Save in relation to the awards to be made on Admission under the LTIP, as set out in paragraph 12.1 of this Part X, and a cash bonus of US\$300,000 in connection with Admission, he will not be entitled to any bonus, pension or other benefits. He is subject to confidentiality obligations and provisions relating to conflicts of interest. In the event of termination of his appointment, howsoever caused, he has agreed he will not be entitled to any compensation for loss of office as a director of the Company.

Colin Harris entered into an agreement with JTS to act as TSA Project Leader with effect from 1 December 2008. His term of employment is for an indefinite period terminable on three months' notice by either the Company or Mr Harris. Under this agreement Mr Harris will devote 4 out of 5 days of his working week to the business of JTS. The Company may at any time and in its absolute discretion terminate the Agreement with immediate effect and make a payment in lieu of notice equal to 3 months' salary. Mr Harris is in receipt of an annual salary of GBP £185,000 payable by equal monthly instalments in arrears. His salary is reviewed annually, with the next review on or before 30 November 2010. Mr Harris also receives a non-discretionary annual fixed bonus of 75 per cent. of his annual salary. The Company may, in its absolute discretion pay to Mr Harris a bonus of such amount payable at such times as may from time to time be determined by the Remuneration Committee, up to a maximum of 20 per cent. of his annual salary. He is entitled to 30 per cent. of his gross annual base salary for the purposes of contributing the same to any existing or new life insurance, private medical cover, vehicle allowance scheme and pension scheme. He is entitled to 25 days' holiday per annum. The Agreement contains detailed provisions regarding confidentiality, intellectual property and other matters and post-termination restrictive covenants applicable for twelve months after the termination.

- 8.3 Clinton Dines entered into an agreement with the Company to act as its Non-Executive Director on 12 November 2010 with effect from Admission. The appointment is for an indefinite period subject to three months' notice by either party at any time and also subject to the Articles. Mr Dines will receive an annual fee of £50,000 payable in monthly instalments in arrears. In addition, Mr Dines will be entitled to a fee of £7,500 per annum as chairman of the HSSE Committee. These fees will be reviewed annually and any increase will be entirely at the discretion of the Company. Save in relation to the awards to be made on Admission under the LTIP as set out in paragraph 12.1 of this Part X, he will not be entitled to any bonus, pension or other benefits as a director of the Company. He is subject to confidentiality obligations and provisions relating to conflicts of interest. In the event of termination of his appointment, howsoever caused, he has agreed he will not be entitled to any compensation for loss of office.
- 8.4 Michael Haworth entered into an agreement with the Company to act as its Non-Executive Director on 12 November 2010 with effect from Admission. The appointment is for an indefinite period subject to three months' notice by either party at any time and also subject to the Articles. Mr Haworth will receive an annual fee of £50,000 payable in monthly instalments in arrears. In addition, Mr Haworth will be entitled to fees of £4,000 per annum as a member of the Remuneration Committee and £5,000 per annum as a member of the Audit Committee. These fees will be reviewed annually and any increase will be entirely at the discretion of the Company. He will not be entitled to any bonus, pension or other benefits. He is subject to confidentiality obligations and provisions relating to conflicts of interest. In the event of

termination of his appointment, howsoever caused, he has agreed he will not be entitled to any compensation for loss of office.

- 8.5 Dave Elzas entered into an agreement with the Company to act as its Non-Executive Director on 12 November 2010 with effect from Admission. The appointment is for an indefinite period subject to three months' notice by either party at any time and also subject to the Articles. Mr Elzas will receive an annual fee of £50,000 payable in monthly instalments in arrears. In addition, Mr Elzas will be entitled to fees of £7,500 per annum as chairman of the Remuneration Committee and £10,000 per annum as chairman of the Audit Committee. These fees will be reviewed annually and any increase will be entirely at the discretion of the Company. Save in relation to the awards to be made on Admission under the LTIP as set out in paragraph 12.1 of this Part X, he will not be entitled to any bonus, pension or other benefits. He is subject to confidentiality obligations and provisions relating to conflicts of interest. In the event of termination of his appointment, howsoever caused, he has agreed he will not be entitled to any compensation for loss of office.
- 8.7 The Company has agreed to grant awards under the LTIP to each of Colin Harris, Dave Elzas and Clinton Dines on Admission. For further details please see paragraph 12 of this Part X.
- 8.8 Save as disclosed above, there are no service contracts in existence or proposed between any Director and the Company or any company in the Group.

# 9. ADDITIONAL INFORMATION ON THE DIRECTORS

9.1 The names of all companies (excluding group companies) and partnerships of which the Directors have been a director or partner at any time in the five years preceding the date of this document and indicating whether they are current or past are set out below:

Director	Current Directorships/Partnerships	Past Directorships/Partnerships
Clifford Elphick	Beerzynbosch (Pty) Ltd Elphridge Farms (Pty) Ltd Entre-Acte Limited Gem Diamonds Limited Gem Diamond Technical Services (Pty) Ltd Jemax Aircraft Maintenance (Pty) Ltd Jemax Aviation (Pty) Ltd Jemax Aviation (Pty) Ltd Jemax Management Services (Pty) Ltd Jemax Properties (Pty) Ltd Kingsmead College Kurland Polo (Pty) Ltd Kurland Properties (Pty)Ltd Kurlandbrik (Pty) Ltd Main Street 22 (Pty) Ltd Margaret's Rest (Pty) Ltd Marrci Investments Eleven (Pty) Ltd Marrci Property Eleven (Pty) Ltd Namma Investments (Pty) Ltd Southacre Investments (Pty) Ltd Willoughby Investments (Pty) Ltd	HSI Limited Tipperary Nursery and Farm (Pty) Ltd

Colin Harris Ncondezi Coal Company Limited Simfer S.A.
Director	Current Directorships/Partnerships	Past Directorships/Partnerships
Clinton Dines	Caledonia (Private) Investments Pty Ltd Kazakhmys plc	BHP Billiton China Ltd BHP Billiton Minerals Asia Inc BHP Billiton (Shanghai) International Trading Ltd Gansu Jin Ao Minerals Besources
		Co. Ltd
Michael Haworth	Garbet Limited Strata Capital UK LLP Strata Holdings Limited Strata Limited Tete Coal Holdings Limited	Ncondezi Coal Company Limited Strata Investments LP Zambezi Energy Corporation Holdings 1 Limited Zambezi Energy Corporation Holdings 2 Limited
Dave Elzas	Adprops (44) (Proprietary) LimitedBLSH Management Ltd BLSH Value Fund BLSH Value Master Fund Ltd Bright Source Investments Pte. Ltd Control Services Corp DTI Inc. Forêt Noir Ventures Ltd Foreview Investments Corp GMG Capital Management Ltd GMG Capital SA GMG Corporate Services Ltd GMG Financial Services Ltd GMG Financial Services Ltd GMG Fund Services Ltd GMG Fund Services Ltd GMG Trust Company (SA)(PTY) Ltd GMG Trust Company (SA)(PTY) Ltd GMG Trust Ltd Galloway Business Ltd Geneva Management Group Ltd Hodiba 2002 B.V. Idex Online SA International Asset Managers SA International Private Capital (Class B) K.D. Group Pte. Ltd Kanostate S.A. Kilimanjaro Investments Services Ltd Mayola Management Company Ltd Montrose Hospitality Limited NTEA Corporation Petroex Suisse SA Providential Finance Inc. SBMH Group Mauritius Ltd SEA Gem Pte. Ltd Smile Telecoms IP Limited WB Investments Ltd	Awen International Corp Cellstop International Limited Central African Power Company SA Citrine Special Opportunities Fund DSM Corporation Ltd Enright Holding Corp Exelco International Ltd FTK International Ltd FTK International Ltd Finserv BV GMG Management Ltd Hattron (India) Limited IP Synergy Finance Inc Ideal Manufacturing Ltd Kienny Investments Inc. Lansford Holdings Limited A.V.V. MB RE Investments Holding Ltd Mainfield Enterprises Inc. Massko Services S.A. Mauridiam Investment and Consulting Motor Corporation International Limited Noga Capital Group Northstar Financial Advisors Ltd Ocean 18 Ltd Phase Holdings Ltd Qilin Capital Group Ramset Trading Corp Sage Capital Markets Limited Sagit Holdings Ltd, BVI Sagit Holdings Ltd, Mauritius Scintillation Investments Smile Telecoms Holdings Limited Stanfield Financial Inc. Sunflower Enterprises Ltd TSC Capital Limited Transcontinental Accounting Services

- 9.2 Save as disclosed below, none of the Directors has:
  - 9.2.1 any unspent convictions in relation to indictable offences;
  - 9.2.2 had any bankruptcy order made against him or entered into any voluntary arrangements;
  - 9.2.3 been a director of a company which has been placed in receivership, compulsory liquidation, administration, been subject to a voluntary arrangement or any composition or arrangement with its creditors generally or any class of its creditors whilst he was a director of that company or within the 12 months after he ceased to be a director;
  - 9.2.4 been a partner in any partnership which has been placed in compulsory liquidation, administration or been the subject of a partnership voluntary arrangement whilst he was a partner in that partnership or within the 12 months after he ceased to be a partner in that partnership;
  - 9.2.5 been the owner of any asset or been a partner in any partnership which owned, any asset which while he owned that asset, or while he was a partner or within the 12 months after he ceased to be a partner in the partnership which owned the asset entered into receivership;
  - 9.2.6 been the subject of any public criticism by any statutory or regulatory authority (including recognised professional bodies); or
  - 9.2.7 been disqualified by a court from acting as a director of any company or from acting in the management or conduct of the affairs of any company.
- 9.3 Save as disclosed in this document, none of the Directors has or has had any interest in transactions effected by the Company since its incorporation which are or were unusual in their nature or conditions or which are or were significant to the business of the Company.
- 9.4 Each of the Directors of the Company, has given an undertaking not to dispose of any of their Ordinary Shares, save in certain specified circumstances, for the period of 12 months from the date of Admission. For further information please refer to paragraph 11 of this Part X.

## 10 SUBSTANTIAL SHAREHOLDERS

10.1 Save as disclosed in sub-paragraph 7.1 above the Company is only aware of the following persons who, at the date of this document and immediately following Admission, represent an interest (within the meaning of DTR Chapter 5) directly or indirectly, jointly or severally, in three per cent. or more of the Company's issued shares (disregarding any Ordinary Shares to be subscribed pursuant to the Placing):

	At the	date of		
	this document		Following Admission	
	Percentage			Percentage
	Number of	of Issued	Number of	of Enlarged
	Ordinary	Share	Ordinary	Share
Name	Shares	Capital	Shares	Capital
Garbet Limited <sup>1</sup>	125,625,000	49.28	115,671,186	41.25
Guava Minerals Limited <sup>2</sup>	98,684,212	38.71	88,730,397	31.64
Blackrock Investment				
Management UK Limited <sup>3</sup>	13,750,000	5.39	13,750,000	4.90

<sup>1</sup> Michael Haworth is interested in these Ordinary Shares, which are registered in the name of Garbet, by virtue of his interest as a potential beneficiary in two discretionary trusts which have an indirect interest in these Ordinary Shares.

<sup>2</sup> Clifford Elphick is interested in these Ordinary Shares by virtue of his interest as a potential beneficiary in a discretionary trust which has an indirect interest in those Ordinary Shares.

<sup>3</sup> Blackrock Investment Management UK Limited holds its Ordinary Shares through Nutraco Nominees Ltd, Security Services Nominees and Chetwynd Nominees Limited.

10.2 None of the persons named in sub-paragraph 10.1 above has voting rights which are different to any other holder of Ordinary Shares. Garbet and Guava have entered into a relationship

agreement, further details of which are set out in paragraph 13.18 of this Part X and which includes the right to appoint a director or directors.

- 10.3 Save as disclosed in this document, so far as the Directors are aware, the Company is not directly or indirectly controlled by any person and there are no other rights with respect to the issued Ordinary Shares of the Company.
- 10.4 Save as disclosed in this document, so far as the Directors are aware, there are no arrangements the operation of which may at a subsequent date result in a change of control of the Company.

## 11. LOCK-IN ARRANGEMENTS

- 11.1 Each of the Directors and Garbet and Guava has undertaken to the Company and Liberum that, save in specified circumstances, they will not dispose of any interest in Ordinary Shares held by each of them for a period of twelve months from Admission. These specified circumstances are:
  - 11.1.1 for the acceptance of any takeover offer by any third party for all of the issued Ordinary Shares of the Company (other than any Ordinary Shares owned by the offeror or any member of its group) which is open to all Shareholders (a "General Offer"); or
  - 11.1.2 the execution and delivery of an irrevocable commitment or undertaking to accept a General Offer; or
  - 11.1.3 the implementation of any scheme of arrangement by the Company or other procedure to effect an amalgamation to give effect to a General Offer; or
  - 11.1.4 a disposal in order to comply with an order of a court of competent jurisdiction,
- 11.2 In addition, each of the Directors and Garbet and Guava has undertaken to the Company and Liberum that, between 12 and 24 months from Admission, any disposal of Ordinary Shares shall be effected through Liberum (subject to Liberum being the Company's Nominated Adviser at that time) in order to maintain an orderly market.

## 12. LONG TERM INCENTIVE PLAN

The Company has approved the LTIP which will be administered by the Remuneration Committee. The LTIP is discretionary and the Remuneration Committee will decide whether to make share awards ("Awards") under the LTIP at any time.

The structure operates through two discretionary trusts ("the Trusts") established for the benefit of current and former employees and officeholders in the Group. The trustee of the Trusts ("the Trustee") is Geneva Management Group (BVI) Limited. The Trusts acquire the shares in the Company to be used under the LTIP by subscribing at zero value.

## 12.1 Eligibility

Any employee or officer of the Company or any company in the Group will be eligible to participate in the LTIP. Individuals ("Participants") will be selected to participate by the Remuneration Committee. No awards have been made prior to Admission. It is intended for Awards to be made in respect of 5,574,135 Ordinary Shares on Admission. It is also intended that further Awards will be made once either Xstrata has exercised the Call Option, the Call Option has ceased to be exercisable or Xstrata notifies the Directors that the Call Option will not be exercised.

The Directors intend that Awards will be made only to senior employees and officers. The Awards to be made on Admission are as follows:

• Colin Harris – Award in respect of 2,388,915 Ordinary Shares.

- Clinton Dines Award in respect of 398,153 Ordinary Shares.
- Dave Elzas Award in respect of 199,076 Ordinary Shares.
- Other senior management within the Key Group Employees in Part III above ("Historic Management") Awards in respect of up to 2,388,915 Ordinary Shares.
- Other senior management ("New Management") Awards in respect of 199,076 Ordinary Shares.

It is also intended for Awards to be made to mid-level management (which does not include any Directors) which will take a different structure described at 12.12 below.

## 12.2 LTIP structure

The LTIP is structured as a split interest scheme. Participants initially acquire ownership of Ordinary Shares jointly with the Trustee (as trustee of the ZIOC Trust 2 but also receive an option ("Participant Call Option") to acquire the Trustee's part ownership in the Ordinary Shares at a point in the future, the exercise of which will give the Participant ownership of the whole of the Ordinary Shares.

On the date of award ("Award Date"), the Participant and the Trustee enter into a subscription agreement to acquire the Ordinary Shares as joint owners with the split of ownership of each Ordinary Share being as follows:

- the proportion of each Ordinary Share that the Participant acquires equates to 0.001 per cent. of the total value up to a given hurdle and 99.999 per cent. of the total value above the hurdle; and
- the proportion of each Ordinary Share that the Trustee acquires equates to 99.999 per cent. of the total value up to the given hurdle and 0.001 per cent. of the total value above the given hurdle.

The hurdle will be determined by the Remuneration Committee in respect of any grant. Save in respect of some of the Awards on Admission, it will usually be set at a level that is greater than the market value of the Ordinary Shares on the date of grant. The Remuneration Committee will take such professional advice as they consider necessary in order to set the hurdle value.

The Participant will pay the market value for his joint ownership of the Ordinary Shares. If an Award does not vest (and ceases to be capable of vesting), the Participant will forfeit his joint ownership of the Ordinary Shares for the nominal acquisition price and the Participant Call Option will lapse. The forfeiture by the Participant is achieved by the Trustee exercising a call option and acquiring the Participant's joint ownership from him. The Remuneration Committee will determine the market value of the Participant's joint ownership.

If an Award vests, the Participant will have the right to exercise the Participant Call Option and become the sole owner of the Ordinary Shares free from any risk of forfeiture or other restriction. By exercising the Participant Call Option, the Participant will become the full owner of Ordinary Shares and therefore cease to be subject to any terms of the LTIP.

Awards will be non-pensionable. Awards will not be granted more than ten years after the date of adoption of the LTIP by the Board.

## 12.3 Vesting Conditions

The Remuneration Committee will determine the conditions required for the Awards to vest ("Vesting Conditions"), including where it considers appropriate, applying performance conditions to Awards.

The proposed Award to Colin Harris in respect of 1,990,762 Ordinary Shares will vest on the later of (i) either Xstrata exercising the Call Option, the Call Option ceasing to be exercisable or Xstrata notifying the Directors that the Call Option will not be exercised; and (ii) the PFS being

completed to the satisfaction of the Directors acting fairly and reasonably. The proposed award to Colin Harris in respect of the remaining shares (398,153 Ordinary Shares) will vest in equal tranches of one-third on the date of Admission and the two anniversaries of Admission.

The proposed Awards to Clinton Dines (398,153 Ordinary Shares) and Dave Elzas (199,076 Ordinary Shares) will vest in equal tranches of one-third on the date of Admission and the two anniversaries of Admission.

The proposed Awards to the Historic Management (in respect of up to 2,388,915 Ordinary Shares) will vest on the later of (i) either Xstrata exercising the Call Option, the Call Option ceasing to be exercisable or Xstrata notifying the Directors that the Call Option will not be exercised; and (ii) the PFS being completed to the satisfaction of the Directors acting fairly and reasonably.

The proposed Awards to the New Management (199,076 Ordinary Shares) will vest in equal tranches of a half on each of the two anniversaries of Admission.

## 12.4 Participant Call Option exercise price

The Remuneration Committee will determine the price payable by the Participant on the exercise of the Participant Call Option.

The exercise price payable in respect of the Awards to be made on Admission to Colin Harris, Clinton Dines, Dave Elzas and the Historic Management (in respect of a total of up to 5,375,059 Ordinary Shares) will be zero. The exercise price payable in respect of the Awards to be made to the New Management (199,076 Ordinary Shares) will be the Placing Price.

The Participant Call Option will lapse if not exercised 10 years from the date of award and in this case the Trustee will exercise its call option to cause the Participant to forfeit his Award if the Participant has not by that time become the sole Shareholder of the Ordinary Shares subject to the Award.

## 12.5 **Issue and transfer of Ordinary Shares**

Ordinary Shares will be issued to the Trustee (as Trustee of the ZIOC Trust 1 immediately prior to the Date of Award and continue to be held as nominee for the joint owners (the Participant and Trustee) unless and until the Participant exercises the Participant Call Option.

On the exercise of the Participant Call Option, the Participant will become the sole owner of the Ordinary Shares and the Trustee will then transfer the full legal ownership of the Ordinary Shares to the Participant.

## 12.6 Scheme Limits

The number of Ordinary Shares which may be issued under the LTIP shall not exceed 5 per cent. of the Ordinary Shares of the Company in issue immediately following Admission unless approved by a special resolution of the Company. For the purpose of this limit, options and other rights to subscribe for Ordinary Shares that have lapsed or been released will not be counted. This is subject to any more detailed restrictions on the powers of the Directors to dilute as set out in paragraphs 4 and 6 of this Part X of this document.

## 12.7 Cessation of Employment

If a Participant's employment or office ceases for any reason whilst holding a Vested Award, the Participant must exercise the Participant Call Option to take the full ownership of the Ordinary Shares within six weeks of the employment ceasing, otherwise the Award will be forfeited (or six months in the event of death).

If a Participant's employment or office ceases as a "Good Leaver" whilst holding an unvested Award, the Award will vest in proportion to the vesting period completed at the date of cessation of employment or office and performance achieved over that period. The remainder of the Award will be forfeited unless the Company's Remuneration Committee otherwise exercises its discretion. The Participant must then exercise the Participant Call Option (to the extent vested) to take the full ownership of the Ordinary Shares within six weeks of the employment or office ceasing (or six months in the event of death), otherwise the Award will be forfeited. A Good Leaver is an employee or director who ceases employment or office due to death, redundancy, disability, sale of the employing company from the group, ill-health or retirement or where the Directors exercise their discretion to determine the Participant to be a Good Leaver.

If a Participant's employment or office ceases as "Bad Leaver" whilst holding an unvested Award, the unvested element of the Award will be forfeited. A Bad Leaver is an employee or director whose employment or offices ceases for any reason other than as a Good Leaver.

## 12.8 Takeover

In the event of a takeover of the Company, merger, scheme of arrangement or certain other similar major corporate events, any Awards (to the extent not already vested) shall vest in full.

Other major corporate events include a sale or transfer by the Company of more than 50 per cent. of the Company's remaining 49.99 per cent. shareholding in Jumelles BVI or a sale or transfer of more than 50 per cent. of the Company's interest in Jumelles BVI's business in the event Xstrata exercises the Call Option.

Broadly, Awards will be forfeited six months following vesting on such event if the participant has not exercised the Participant Call Option and taken full ownership of the Ordinary Shares.

If another company acquires control of the Company, Participants may be required to exchange their Awards for awards over Ordinary Shares in the acquiring company ("Replacement Awards"). In such circumstances, the total market value of Ordinary Shares comprised in the Award and the Replacement Award must be broadly equivalent and the terms of the Replacement Award must be, in so far as practicable, broadly equivalent to the terms of the Award.

## 12.9 Variation of capital

In the event of any capitalisation issue, rights issue, rights offer, consolidation, subdivision, demerger or any other event affecting the Ordinary Shares, the number of the Ordinary Shares comprised in Awards may be adjusted by the Remuneration Committee in such a way as the Company's auditors deem to be fair and reasonable.

#### 12.10 Amendments to the Plan

Although the Remuneration Committee will have the power to amend the provisions of the LTIP, the provisions relating to:

- the maximum number of Ordinary Shares that may be issued under the LTIP; and
- the adjustments to Awards in the event of a subdivision or consolidation of the Ordinary Shares,

shall not be altered to the advantage of Participants without the prior approval of the Shareholders in general meeting (except for minor amendments to benefit the administration of the LTIP, to comply with or take account of a change in legislation or to obtain or maintain favourable tax, exchange control or regulatory treatment for Participants, the Company or any other member of the Group).

## 12.11 **Taxation**

The structure of the LTIP is to minimise the amount of income tax under Pay as You Earn ("PAYE") and national insurance contributions ("NICs") payable by the Company for UK taxpayers.

The price payable by the Participant on the acquisition of the Participant's joint ownership of the Ordinary Shares at the date of Award adjust if the market value is determined by HMRC in the UK to be higher than the nominal price originally paid by the Participant. In this case the price payable by the Participant shall be equal to such market value determine by HMRC.

The LTIP includes an indemnity by the Participant for any PAYE and NICs or equivalent overseas taxes payable in relation to the Awards. The Company and the Trustee have the authority to sell Ordinary Shares and to withhold funds from the Participant's salary in order to meet the Participant's tax indemnity.

## 12.12 Middle Management

A proportion of the 2,388,915 Ordinary Shares to be issued to the ZIOC Trust 1 on Admission for Historic Management will be used for the purpose of Awards being made by the Trustee to middle management which will not include any Directors. These Awards will not follow the same structure and terms set out above but will be in the form of a nil cost share option, exercisable immediately for a zero exercise price. If not exercised, such an Award will lapse six (6) months after a major corporate event (such as a takeover), six (6) months after the optionholder ceases employment for any reason and ten (10) years from the date of grant.

# 13. MATERIAL CONTRACTS

The following contracts (not being contracts entered into in the ordinary course of business) have been entered into by the Group within the period of two years immediately preceding the date of this document or were entered into prior to this but contain provisions under which the Group has an obligation or commitment which is, or may be, material to the Group as at the date of this document:

## Agreements in connection with the Placing

- 13.1 The Placing Agreement dated 17 November 2010 between the Company, the Directors, the Selling Shareholders and Liberum, whereby Liberum is appointed as agent of the Company and the Selling Shareholders to use its reasonable endeavours to procure subscribers for the New Shares and purchasers for the Sale Shares at the Placing Price and to act as its corporate broker in relation to the Placing and Admission. Pursuant to the Placing Agreement, the Company, its Directors and the Selling Shareholders have given certain warranties to Liberum regarding, inter alia, the accuracy and completeness of information in this document and the Company has given Liberum an indemnity. The Placing is not underwritten. The Placing Agreement is conditional, inter alia, on Admission taking place no later than 8.00 a.m. on 18 November 2010 (or such later date as may be agreed by the Company and Liberum and the Company, which shall be no later than 3.00 p.m. on 30 November 2010), its Directors and the Selling Shareholders complying with certain obligations under the Placing Agreement. Under the Placing Agreement, the Company has agreed to pay to Liberum a corporate finance fee of £150,000, a commission of 4.5 per cent. of the aggregate value of the New Shares at the Placing Price (with a further 0.5 per cent. payable at the discretion of the Company), together with all costs and expenses and VAT thereon, where appropriate, and to issue warrants to acquire, at the Placing Price, new Ordinary Shares equal in value to 5 per cent. of the aggregate number of New Shares allotted to placees under the Placing, exercisable within twelve months of Admission. The Selling Shareholders have also agreed to pay a commission of 4.5 per cent. of the aggregate value of the Sale Shares at the Placing Price (with a further 0.5 per cent. payable at the discretion of the Selling Shareholders).
- 13.2 A nominated adviser and broker agreement dated 17 November 2010 between the Company, the Directors and Liberum pursuant to which the Company has appointed Liberum to act as its Nominated Adviser and broker to the Company for the purposes of the AIM Rules for Companies. The Company has agreed to pay Liberum an annual retainer fee of £60,000

(payable quarterly in advance). The agreement contains certain undertakings by the Company and the Directors and indemnities given by the Company in respect of, *inter alia*, compliance with all applicable regulations. The agreement may be terminated by either the Company or Liberum without cause on one month's prior notice. The agreement is conditional upon Admission.

## Warrant Deed

13.3 Under a deed of warrant dated 17 November 2010 the Company has conditional on Admission granted to Liberum a warrant to subscribe for, at the Placing Price, new Ordinary Shares equal in value to 5 per cent. of the aggregate number of New Shares allotted to placees under the Placing, exercisable within twelve months of Admission.

## Xstrata Agreements

- 13.4 Please refer to the summary of the Heads of Agreement at paragraph 8 of Part II.
- 13.5 Please refer to the summary of the Call Option Deed at paragraph 2 of Part II.
- 13.6 Please refer to the summary of the JVA at paragraph 3 of Part II.
- 13.7 Please refer to the summary of the Deeds of Adherence at paragraph 4 of Part II.
- 13.8 Please refer to the summary of the Deed of Novation at paragraph 6 of Part II.
- 13.9 Please refer to the summary of the Amendment Agreements at paragraph 1 of Part II.
- 13.10 Please refer to the summary of the Further Funding Letter at paragraph 7 of Part II.
- 13.11 Please refer to the summary of the Waiver Letter at paragraph 5 of Part III.

## Shareholders' Agreement

13.12 On 11 December 2009, Garbet, Guava and the Company entered into a shareholders' agreement regulating Garbet and Guava's holding of ordinary shares in the Company (the "Shareholders' Agreement"). The Shareholders' Agreement regulates the rights of Garbet and Guava in respect of their respective shareholdings in the Company. The Shareholders' Agreement contains provisions on board composition, promotion of the Company's business and the transfer of Ordinary Shares, amongst other things. In addition, the parties undertake to enforce and to comply with the Call Option Deed and the JVA and not take any action which would trigger any change of control provisions or tag-along provisions in the Company's previous articles without the prior written consent of the other (such consent not to be unreasonably withheld or delayed). In accordance with its terms, the Shareholders' Agreement will terminate and cease to have effect from Admission.

## **Subscription Agreement**

13.13 On 10 December 2009, the Company and Blackrock Investment Management UK Limited, F&C Fund Management Limited, F&C Management Limited, F&C Asset Managers Limited, Permal Europe Ltd and Garbet (together, the "Subscribers"), entered the Subscription Agreement. Under the terms of the Subscription Agreement, the Subscribers subscribed for 12,500,000 Ordinary Shares in aggregate.

The Company agreed to give representations and warranties to the Subscribers about the Ordinary Shares, the Company and the information in the private placement memorandum dated 10 December 2009 and also provided certain undertakings. Pursuant to the Subscription Agreement the Company undertook to use reasonable endeavours to work towards a liquidity event (including, but not limited to, an admission of Ordinary Shares to an internationally recognised stock exchange) by 1 January 2011 or, where the PFS has been extended in time and/or scope, by 1 April 2011.

In the event that a liquidity event is not achieved by the relevant date, the Company also undertook to issue to each of the Subscribers at the end of every 30 days from the relevant date until a liquidity event is achieved, such number of further Ordinary Shares as is equivalent to one per cent. of the number of Ordinary Shares subscribed for by such Subscriber. In accordance with its terms, the Subscription Agreement will terminate and cease to have effect from Admission save for any matters, undertakings or conditions which shall not have been observed or performed by the relevant Subscriber prior to such termination.

## **Deed of Repurchase**

13.14 A deed of repurchase dated 26 November 2009 between the Company and Guava, pursuant to which Guava sold to the Company 10,526,315 Ordinary Shares held by it for a consideration of US\$16 million. Following the sale and purchase of the 10,526,315 Ordinary Shares, the Company was obliged to cancel such shares in accordance with the Company's previous articles of association.

## Loan Agreement

13.15 A loan agreement dated 15 October 2010 between Jumelles BVI, Garbet and Guava, pursuant to which Garbet and Guava made loan facilities available to Jumelles BVI in the amounts of US\$12,764,540 and US\$8,875,114, respectively, (the "Loan Facilities") in order to enable Jumelles BVI to fund the mining, prospecting and exploration operations of MPD Congo and for general working capital requirements. The Loan Facilities are unsecured and interest free, unless the Company fails to make a repayment whereupon an interest rate of two per cent. per annum above LIBOR will apply. It was agreed that these loans would not be repayable until the earlier of (i) Xstrata exercising the Call Option (at which point Xstrata would provide sufficient funds for repayment) and (ii) Jumelles BVI and/or its shareholder(s) having arranged sufficient alternative financing in order for Jumelles BVI to be able to continue as a going concern after repaying the loans. As at the date of this document, Garbet has advanced US\$8,512,764,540 and Guava has advanced US\$8,512,794 to Jumelles BVI under the Loan Facilities.

#### Jumelles BVI Shareholders' Agreement and Deed of Termination

13.16 On 19 September 2007, Garbet, Guava, their then respective shareholders and Jumelles BVI entered into a shareholders' agreement to regulate Garbet and Guava's (being the shareholders of Jumelles BVI at the date of signature) relationship with Jumelles BVI ("Jumelles BVI SHA"). The Jumelles BVI SHA contained, *inter alia*, provisions on board composition, reserved matters and the transfer of shares in Jumelles BVI. On 2 July 2009, all of the parties to the Jumelles BVI SHA entered into a deed of consent and waiver confirming, *inter alia*, their consent to the termination of the Jumelles BVI SHA and that all of their rights under the same had been satisfied in their entirety ("Deed of Termination"). Under the terms of the Deed of Termination, each party irrevocably waived any rights or claims that they might have under the Jumelles BVI SHA along with any claims that they may have had in the past or might have in the future under the Jumelles BVI SHA.

## Zanaga Mining Convention

13.17 Please refer to the summary of the 2007 Mining Convention and the 2010 Addendum at paragraph 2 of section C of Part V.

## **Relationship Agreement**

13.18 The Company, Garbet and Guava have entered into a relationship agreement dated 16 November 2010 ("Relationship Agreement") which is conditional upon Admission, in order to regulate the ongoing relationship between the Company and Garbet and Guava. The principal purpose of the Relationship Agreement is to ensure that the Group is capable of carrying on its business independently of either Garbet and its subsidiaries ("Garbet Group") or Guava and its subsidiaries ("Guava Group") and that transactions and relationships with either the Garbet Group or the Guava Group are at arm's length and on normal commercial terms.

The Relationship Agreement will continue for so long as the Ordinary Shares are admitted to trading on AIM and in respect of Garbet, for so long as Garbet owns or controls in aggregate 10 per cent. or more of the issued shares or voting rights of the Company and in respect of Guava, for so long as Guava owns or controls in aggregate 10 per cent. or more of the issued shares or voting rights of the Company and the issued shares or voting rights of the Company and in respect of Guava, for so long as Guava owns or controls in aggregate 10 per cent. or more of the issued shares or voting rights of the Company.

Under the Relationship Agreement, Garbet, Guava and the Company have agreed that, among other things that Garbet and Guava each have the right to:

- (a) appoint up to two Non-Executive Directors to the Board for so long as they hold an interest in 25 per cent. or more of the issued shares or voting rights of the Company; and
- (b) appoint up to one Non-Executive Director for so long as they have an interest in 10 per cent. but less than 25 per cent. of the issued shares in the Company,

and in each case to appoint and remove such Shareholder Directors by notice in writing to the Company.

Garbet and Guava have also agreed that they will not exercise their voting or other rights and powers to: (i) amend the Company's Articles or Memorandum in a way which would be inconsistent with the terms of the Relationship Agreement or which would result in a breach of the Relationship Agreement; or (ii) vote on any transaction with the Garbet Group or the Guava Group (as the case may be) or (iii) prejudice the Company's status as a listed company or its suitability for listing after Admission or the Company's ongoing compliance with the AIM Rules provided this will not prevent either Garbet or Guava (as the case may be) from accepting a takeover offer or making a takeover offer for the entire shares of the Company and delisting the Company's shares.

In addition, the Garbet and Guava have undertaken to enforce and to comply with the Call Option Deed and have severally undertaken that they will not, and that they will procure that their holding companies will not, take any action which would trigger any applicable change of control provisions in the Call Option without the prior written consent of the other parties to the Relationship Agreement (such consent not to be unreasonably withheld or delayed in the case of Garbet and Guava).

The Company has also undertaken to each of Garbet and Guava that it shall at all times comply with the provisions of the Xstrata Transaction documents in all material respects and has indemnified each of Guava and Garbet against any and all losses, liabilities, costs, charges and expenses which either of them may suffer pursuant to a claim by Xstrata under the Xstrata Transaction documents by reason of a breach by the Company of such documents following Admission.

Notwithstanding the termination of the remaining provisions, the obligations of Garbet and Guava to comply with the relevant Xstrata Transaction documents and to procure compliance with the Call Option Deed shall continue for so long as the relevant Xstrata Transaction documents have not been terminated or lapsed.

## 2009 Liberum Engagement Letter

13.19 Pursuant to an engagement letter dated 9 December 2009 ("2009 Liberum Engagement Letter"), the Company appointed Liberum to act as its introductory agent in connection with the private placement conducted by the Company in December 2009. In consideration of the Company paying Liberum 3.5 per cent. of the value of the Ordinary Shares for which investors agreed to subscribe under the placement, together with Liberum's costs and expenses and any VAT thereon, Liberum agreed, *inter alia*, to use its reasonable endeavours to procure investors to subscribe for Ordinary Shares in the Company. Under the terms of the 2009 Liberum Engagement Letter, the Company gave certain warranties as to the accuracy and sufficiency of the information it provided to Liberum, including that information contained in the 2009 private placement memorandum in respect of the Company. In addition, the Company gave an indemnity to Liberum in respect of its engagement and the 2009 private placement. As at the date of this document, the Company had paid to Liberum an aggregate of US\$788,156 pursuant to the 2009 Liberum Engagement Letter.

## 2010 Liberum Engagement Letter

13.20 Pursuant to an engagement letter dated 11 November 2010 ("2010 Liberum Engagement Letter"), the Company agreed to appoint Liberum to act as its nominated adviser, financial adviser, bookrunner and broker in respect of the Placing and Admission. The fees payable by the Company for Liberum's services are set out in the summary of the Placing Agreement and the nominated adviser and broker agreement set out above. Under the terms of the 2010 Liberum Engagement Letter, the Company gave certain warranties as to the accuracy and sufficiency of the information it provides to Liberum in connection with the engagement. In addition, the Company gave an indemnity to Liberum in respect of its engagement and the Admission. The 2010 Liberum Engagement Letter is terminable by either party with or without cause at any time.

## **RBC Engagement Letter**

13.21 Pursuant to an engagement letter dated 11 August 2009 ("RBC Engagement Letter"). Jumelles BVI, Garbet and Guava (together the "Consortium") appointed Royal Bank of Canada Europe Limited ("RBC") as its joint financial adviser in connection with a proposed private placement in respect of Jumelles BVI. Under the terms of the RBC Engagement Letter, RBC provided Jumelles BVI with financial advice and assistance in connection with a proposed private placement and the Consortium agreed to pay RBC a non-refundable monthly retainer fee of US\$25,000 in respect of any month in which RBC performed work under the scope of the RBC Engagement Letter, together with RBC's costs and expenses and any VAT thereon. In addition, certain transaction fees were payable by the Consortium, if during the term of the RBC Engagement Letter, certain transactions were closed. Under the terms of the RBC Engagement Letter, the Consortium gave certain warranties, inter alia, as to the accuracy and sufficiency of the information contained in the Jumelles BVI 2009 information memorandum and presentation and the sale of securities. In addition, the Consortium gave an indemnity to RBC in respect of its engagement and the private placement. The RBC Engagement Letter expired on 31 December 2009. The Company settled all sums owing under the RBC Engagement Letter by paying RBC US\$1.134 million in November 2009.

## 2009 Strata Capital Engagement Letter

13.22 Pursuant to an undated engagement letter entered into in or around August 2009 ("2009 Strata Engagement Letter"), Jumelles BVI appointed Strata Capital UK LLP ("Strata Capital") to act as its joint financial adviser in connection with a proposed private placement. Under the terms of the 2009 Strata Engagement Letter, Strata Capital provided Jumelles BVI (and subsequently the Company) with financial advice and assistance in connection with the 2009 private placement and Jumelles BVI agreed to pay Strata Capital a fee equal to 1.25 per cent. of the gross proceeds of any securities issued by way of private placement prior to the expiry or termination of the 2009 Strata Engagement Letter, together with Strata Capital's costs and expenses and any VAT thereon. Under the terms of the 2009 Strata Engagement Letter, Jumelles BVI gave certain warranties, inter alia, as to the accuracy and sufficiency of the information contained in the 2009 information memorandum and presentation and the sale of securities. In addition, Jumelles BVI gave an indemnity to Strata Capital in respect of its engagement and the private placement. The 2009 Strata Engagement Letter expired in August 2010. As at the date of this document, Jumelles BVI and the Company had paid to Strata Capital an aggregate of US\$695,000 pursuant to the 2009 Strata Engagement Letter in connection with the private placement conducted by the Company in 2009.

## 2010 Strata Capital Engagement Letter

13.23 Pursuant to an engagement letter dated 12 November 2010 ("2010 Strata Engagement Letter"), the Company appointed Strata Capital to provide financial advice and assistance in connection with the Admission and the Placing. Under the terms of the 2010 Strata Engagement Letter, the Company has agreed to pay Strata Capital a corporate finance fee of US\$600,000 on Admission, together with Strata Capital's costs and expenses and any VAT thereon. Under the terms of the 2010 Strata Engagement Letter, the Company advice and sufficiency of the information it provided to Strata Capital. In addition, the Company gave an indemnity to Strata Capital in respect of its engagement. The

2010 Strata Engagement Letter can be terminated by either party at any time with or without cause.

## **Restructuring deeds**

- 13.24 A deed dated 2 July 2009 between Mr Christian Okouna, MPD Congo, Jumelles M Limited, Jumelles BVI, Guava, Garbet, Inter-Ocean Management Limited as corporate trustee of the Apple Trust, African Resource Holdings Ltd and GMG Trust Ltd as trustee of the Guava Minerals Trust, pursuant to which the one per cent. interest held at the time by Mr. Okouna in MPD Congo was restructured so that Mr. Okouna indirectly held an equivalent interest in MPD Congo in the form of shares in Guava.
- 13.25 A deed dated 12 October 2009 between Jumelles BVI, Guava, Garbet, Arlington Investment Holdings Limited ("Arlington"), Novatrust Limited as trustee of the JNJ Trust ("JNJ"), GMG Trust Ltd as trustee of the Guava Minerals Trust, Inter-Ocean Management Limited as corporate trustee of the Apple Trust and African Resource Holdings Ltd, pursuant to which (i) the then 2.5 per cent. interest held by Arlington in Jumelles BVI was restructured so that Arlington indirectly held an equivalent interest in Jumelles BVI in the form of shares in Guava, and (ii) the 0.5 per cent. interest then held by JNJ in Jumelles BVI was restructured so that JNJ indirectly held an equivalent interest in Jumelles BVI in the form of shares in Guava.

## Settlement of Proposed Jumelles BVI Share Option

13.26 It was previously intended that Paul Frawley, a former employee of Jumelles BVI, would be granted an option to acquire such number of notional shares representing a total of 0.25% of the issued share capital of Jumelles BVI, under a proposed share appreciation bonus plan. Pursuant to a letter agreement between Jumelles BVI and Mr Frawley dated 12 January 2010, the Company made a payment of US\$325,000 to Mr Frawley in full and final settlement of all and any claims or other rights of action arising against Jumelles BVI or the Group in respect of any right that Mr Frawley might have to be granted options in respect of Ordinary shares.

## **Call Option**

13.27 Pursuant to a call option entered into on 17 November 2010 between Francois du Plessis ("FDP") (in his capacity as a partner of Strata Capital UK LLP) and the Company, FDP will be granted an option over 398,153 Ordinary Shares, as he is not entitled to participate in the LTIP. The exercise price per Ordinary Share will be the Placing Price. The vesting conditions and other terms of the option are substantially the same as for New Management under the LTIP, as summarised in paragraph 12 of this Part X.

## **CREST** and Depositary Arrangements

#### 13.28 **Depositary Agreement**

Please refer to the description in paragraph 19.2 of this Part X".

#### 13.29 Registrar Agreement

Please refer to the description in paragraph 19.3 of this Part X.

In addition, the following contracts are material subsisting agreements which relate to the assets and liabilities of the Group notwithstanding that they were contracts entered into in the ordinary course of business or have been entered into by the Group outside the period of two years immediately preceding the date of this document:

13.30 Pursuant to a services agreement dated 18 March 2008 ("SGIO Services Agreement"), MPD Congo has retained the non-exclusive services of SGIO for the provision of temporary personnel for the Zanaga Project (for example, drivers, bricklayers and security guards) as required from time to time. In consideration for such services, MPD Congo has undertaken to

compensate SGIO in accordance with a fixed fee and related employment costs table annexed to the agreement which currently equates to an average annual contract value of approximately US\$1.5 million in respect of approximately 370 SGIO employees. The SGIO Services Agreement had an initial term of 1 year and is annually renewable on a tacit basis for additional one year contract terms. In addition to the customary obligations of SGIO (i.e. furnishing staff with the requisite level of skill and expertise), MPD Congo has the right to monitor SGIO's fulfilment of its statutory employment, social security and tax obligations in respect of the temporary staff put at MPD Congo's disposal for the duration of the agreement.

13.31 A drilling services contract dated 28 September 2009 between MPD Congo and Foraco SAS ("Foraco"), pursuant to which Foraco provides MPD Congo with drilling and related services in respect of the Zanaga Project within the Zanaga Licence Area. MPD Congo agreed to pay Foraco a €500,000 deposit, Foraco's mobilisation (and demobilisation) costs and drilling fees on the basis of, *inter alia*, the meterage drilled and hours worked, in accordance with certain agreed rates. In addition, MPD Congo agreed to pay the customs duties payable on the equipment, Foraco's transit costs and to fund or provide certain items and services as set out in the contract. Under the terms of the contract, there is an exclusion of liability for consequential losses and each party indemnifies the other party in respect of the death or personal injury of its own employees and damage and loss to its own equipment. The contract is terminable by MPD Congo giving written notice if Foraco fails to remedy a breach within 15 day's of notice of the same. In addition, MPD Congo may terminate the contract for convenience by giving Foraco seven days notice, subject to payment of a reasonable termination charge.

# 14. RELATED PARTY AGREEMENTS

In addition to those related party agreements set out in Parts VIII and IX of this document, please refer to the summary of the Relationship Agreement at paragraph 13.18 of this Part X and the engagement letter between Strata Capital (UK) LLP and the Company at paragraph 13.23 of this Part X.

# 15. LITIGATION

There are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened) of which the Company is aware, which may have or have had during the 12 months immediately preceding the date of this document a significant effect on the financial position or profitability of the Company or the Group.

In the ordinary course of its business, the Group is party to a number of labour disputes and certain challenges from alleged owners and/or occupiers of land in respect of the Congolese government's expropriation process. The Directors believe that these claims are either *de minimus* in nature, or not the Group's responsibility, and are not unusual in the context of the Group's operations.

## 16. WORKING CAPITAL

In the opinion of the Directors, having made due and careful enquiry, and taking into account the net proceeds of the Placing, the working capital available to the Company and the Group is sufficient for its present requirements, that is, for at least the next 12 months from the date of Admission.

# 17. NO SIGNIFICANT CHANGE

Save for the agreement of Xstrata to fund up to US\$56.49 million for phase II of the PFS and the related expenditure, there has been no significant change in the trading or financial position of the Group since 30 June 2010, being the date to which the last unaudited interim accounts were made up.

# 18. TAXATION

## 18.1 United Kingdom Taxation

The following paragraphs are intended as a general guide only for certain UK tax consequences for Shareholders who are the beneficial owners of Ordinary Shares or Depositary Interests in the Company and who are resident and, in the case of individuals, ordinarily resident and domiciled in the UK for tax purposes, holding Ordinary Shares or Depositary Interests in the Company as investments and not as securities to be realised in the course of a trade. They are based on current legislation and what is understood to be current HMRC practice as at the date of this document and may not apply to certain Shareholders, for example, but not limited to, Shareholders who have acquired Ordinary Shares or Depositary Interests in connection with an office or employment with the Company. Any prospective purchaser of Ordinary Shares or Depositary Interests in the Company who is in any doubt about his tax position or who is subject to taxation in a jurisdiction other than the UK, should consult his own professional adviser immediately.

## 18.1.1 Taxation of the Company in the UK

The Directors intend to conduct the affairs of the Company so that for UK corporation tax purposes, it will not be regarded as resident within the UK nor as carrying on a trade through a permanent establishment located in the UK. On that basis and on the assumption that it has no UK source income the Company will have no liability in respect of UK corporation tax on its income or capital gains.

## 18.1.2 Taxation of UK Resident Shareholders

(a) Taxation of Chargeable Gains

For the purpose of UK tax on chargeable gains, the issue of the Placing Shares to the Depositary or on the issue of Depositary Interests by the Depositary will be regarded as an acquisition of a new holding in the Ordinary Shares of the Company.

To the extent that a Shareholder acquires Ordinary Shares issued to him or the beneficial interest in Depositary Interests in the Company, the Ordinary Shares or Depositary interests so issued will, for the purpose of tax on chargeable gains, be treated as acquired on the date of issue. The amount paid for the Ordinary Shares or Depositary Interests in the Company will generally constitute the base cost of a Shareholder's holding.

A disposal or deemed disposal of Ordinary Shares or Depositary Interests in the Company by a UK resident Shareholder may give rise to a chargeable gain (or allowable loss) for the purposes of UK capital gains tax ("CGT") (where the Shareholder is an individual) or UK corporation tax on chargeable gains (where the Shareholder is within the charge to UK corporation tax), depending on their circumstances and subject to any available exemption or relief.

As regards an individual Shareholder, the principal factors that will determine the extent to which a gain will be subject to CGT are (i) the extent to which he realises any other capital gains in the tax year of assessment in which the gain arises, (ii) the extent to which he has incurred capital losses in that or any earlier tax year of assessment and (iii) the level of the annual allowance of tax-free gains in the tax year of assessment in which the disposal takes place.

Subject to the availability of any such exemptions, reliefs and/or allowable losses, a gain on disposal of Ordinary Shares or Depositary Interests by individuals, trustees and personal representatives will generally be subject to CGT at the rate of 28 per cent. (except where the gain is realised by an individual who is not subject to tax at the higher rate; such an individual is subject to CGT at 18 per cent.).

Subject to the availability of any exemptions, reliefs and/or allowable losses, a disposal of Ordinary Shares or Depositary Interest in the Company by companies subject to UK corporation tax will generally be subject to UK corporation tax at the rate of 28 per cent. Indexation allowance may be available to reduce any chargeable gain arising on such disposal but cannot act to create or increase a loss.

(b) Dividends and other Distributions

The Company will not be required to withhold UK tax at source when paying a dividend.

Shareholders who are resident in the UK for tax purposes will generally be liable to UK income tax or corporation tax in respect of dividends paid by the company.

Dividends received by an individual Shareholder who is resident or ordinarily resident for tax purposes in the UK will be chargeable at the dividend ordinary rate, the dividend higher rate or the dividend additional rate. A tax credit equal to 10 per cent. of the gross dividend (also equal to one ninth of the cash dividend received) should be available to set off against a Shareholder's total income tax liability on the dividend provided they own less than 10 per cent. of the Company's issued Ordinary Shares.

The dividend ordinary rate is 10 per cent. and this applies to any taxpayer who is subject to income tax at the basic rate only. The tax credit attaching to the dividend meets tax due at the dividend ordinary rate and such a taxpayer is not subject to further UK tax on the dividend.

The dividend higher rate is 32.5 per cent. and this applies if and to the extent that the taxpayer is subject to higher rate income tax. After offset of the tax credit attaching to the dividend a higher rate taxpayer will have to account for additional tax equal to 22.5 per cent., of the gross dividend (which also equals 25 per cent., of the cash dividend received).

Those with taxable income above £150,000 will be taxable at a dividend additional rate of 42.5 per cent. The effect of the tax credit will be that individuals subject to this higher rate will have to account for additional tax at the rate of 32.5 per cent, of the gross dividend (which also equals approximately 36.1 per cent. of the cash dividend received).

Individual Shareholders, who although UK resident, are not domiciled in the UK for tax purposes, may not be taxable on dividends paid by the Company in certain circumstances. These individuals should seek independent advice on their tax position.

Although a UK resident corporate Shareholder can be subject to UK corporation tax on dividends paid by the Company, such Shareholders should (subject to antiavoidance rules) be exempt from corporation tax on dividends paid by the Company, provided the dividend falls within one of the exempt classes set out in Part 9A of the Corporation Tax Act 2009. Corporate shareholders should seek independent advice on their position.

Shareholders who are not resident for tax purposes in the UK should obtain their own tax advice concerning tax liabilities on dividends received from the Company.

Non-UK resident Shareholders will not generally be able to claim repayment from HMRC of any part of the tax credit attaching to dividends paid by the Company. A Shareholder resident outside the UK may also be subject to foreign taxation on dividend income under local law. Shareholders who are not resident for tax purposes in the UK should obtain their own tax advice concerning tax liabilities on dividends received from the Company.

(c) Inheritance Tax

The Ordinary Shares or Depositary Interests beneficially owned by an individual may (subject to certain exemptions and reliefs) be subject to UK inheritance tax. A

gift of such shares by, or on the death of, an individual Shareholder may give rise to a liability to UK inheritance tax even if the Shareholder is neither domiciled in the UK nor deemed to be domiciled in the UK for UK inheritance tax purposes.

Generally UK inheritance tax is not chargeable on outright gifts to individuals if the transfer is made more than seven complete years prior to the death of the donor. For inheritance tax purposes, a transfer of assets at less than full market value may be treated as a gift and particular rules apply to gifts where the donor reserves or retains some benefit or acquires some benefit at a later time.

(d) Stamp Duty and Stamp Duty Reserve Tax

There is generally no charge to stamp duty or Stamp Duty Reserve Tax ("SDRT") on the issue of Ordinary Shares, subject to the special rules referred to below.

To the extent that documents for transfer are executed in the UK or relating to any matter or thing done or to be done in the UK, the transfer or sale of Ordinary Shares will be liable to *ad valorem* stamp duty, generally at the rate of 0.5 per cent, (rounded up to the next multiple of five pounds ( $\pounds$ 5)) of the amount or value of consideration paid, where this is over  $\pounds$ 1,000. Stamp duty is normally paid by the purchaser or transferee of the Ordinary Shares.

As the Ordinary Shares are being issued by a non-UK Company, provided certain conditions are satisfied, including that the Ordinary Shares are registered on a register outside the UK and are not paired with shares issued or raised by a UK company, the Ordinary Shares are not chargeable securities for SDRT purposes and therefore there would be no SDRT on an agreement to transfer such Ordinary Shares.

Agreements to transfer Depositary Interests in the Company will generally be subject to SDRT at the rate of 0.5 per cent of consideration for the transfer and the transferee is liable for the tax. The relief which may apply to transfers of depositary interests in non-UK securities will not apply on the basis that the Ordinary Shares will not be listed on a recognised stock exchange in addition to their listing on AIM.

The above statements are intended as a general guide to the current stamp duty and SDRT position and do not relate to persons such as market makers, brokers, dealers, intermediaries and persons connected with Depositary arrangements and clearance services.

If you are in any doubt as to your tax position, or are subject to tax in a jurisdiction other than the UK, you should consult your professional adviser.

## 18.1.3 UK Anti-Avoidance Rules

Under certain circumstances, UK resident individuals may become liable to UK income tax, for example, pursuant to the UK's anti-avoidance rules contained in Section 720 of the Income Tax Act 2007 entitled "Transfer of Assets Abroad". It is considered that these sections should not apply because the Placing is a genuine commercial transaction with no tax avoidance purpose.

UK resident or ordinarily resident Shareholders who, together with persons connected with them, hold more than 10 per cent, share or interest in the capital or income of the Company should be aware that under certain circumstances, a proportion of chargeable gains made by non-UK companies can be attributed to UK resident direct or indirect shareholders under the provisions of section 13 of the Taxation of Chargeable Gains Act 1992.

# 18.2 British Virgin Islands Taxation

The following paragraphs are a general statement about the taxation of the Company in the BVI, and the tax position under BVI law of Shareholders who are resident or ordinarily resident in the UK in relation to the payment of dividends, capital gains, stamp duty and SDRT. The statements below do not constitute advice to any Shareholder on his or her personal tax

position, and may not apply to certain classes of investor (such as persons carrying on a share dealing trade in the UK). Any investors who are in doubt as to their tax position should consult their professional adviser.

- 18.2.1 The Company is exempt from most forms of taxation in the BVI, provided the Company is not trading in the BVI, and does not have employees working in the BVI.
- 18.2.2 All dividends, interest, rents, royalties, and other expense amounts paid by the Company, and capital gains realised with respect to any shares, debt obligations or other securities of the Company, are exempt from all provisions of the Income Tax Ordinance and Payroll Taxes Act 2004 (as amended). There is no BVI withholding tax on dividends.
- 18.2.3 Additionally, no estate, inheritance, succession or gift tax is payable with respect to any shares, debt obligations or securities of the Company. However, under the EU Savings Tax Directive, EU resident individuals who receive bank interest or other interest from investments held in the BVI may be subject to withholding tax at the current rate of 20 per cent., and 35 per cent., from 1 January 2011. At this time the Directive does not affect interest paid to companies. In the case where interest is subject to withholding tax, banks and/or other paying agents will deduct tax at source.
- 18.2.4 Save in respect of an instrument relating to the transfer to or by the Company of an interest in land situate in the BVI or any transactions in respect of the shares, debt obligations or other securities of the Company whilst holding any land in the BVI, and notwithstanding any provision of the Stamp Duty Act, all instruments relating to transfers of property to or by a company, all instruments relating to transactions in respect of the shares, debt obligations or other securities of a BVI company, and all instruments relating to the business of a company, are exempt from the payment of BVI stamp duty.

## 19. DEPOSITARY INTERESTS

The Company has entered into depositary arrangements to enable investors to settle and pay for interests in Ordinary Shares through the CREST system. Pursuant to arrangements put in place by the Company, the Depositary will hold the Ordinary Shares on trust for the investors and will issue dematerialised Depositary Interests to CREST accounts representing the underlying Ordinary Shares.

The Depositary Interests are independent securities constituted under English law and are held on a register maintained by the Depositary. The Depositary Interests have the same ISIN number as the Ordinary Shares which they represent and do not require a separate listing on AIM.

The Depositary Interests will be created pursuant to and issued on the terms of the Deed Poll. Prospective holders of Depositary Interests should note that they will have no rights in respect of the underlying Ordinary Shares, or the Depositary Interests representing them, against CREST or its subsidiaries. The Deed Poll also sets out the procedure for holders of Depositary Interests to vote at general meetings of the Company and to exercise their rights as Shareholders. Each Depositary Interest will be treated as one Ordinary Share for the purposes of determining, for example, eligibility for any dividends.

Ordinary Shares will be transferred to the Custodian and the Depositary will issue Depositary Interests to participating members and provide the necessary custodial services.

In relation to those Ordinary Shares held by Shareholders in uncertificated form, although the Company's register shows the Custodian as the legal holder of the Shares, the beneficial interest in the Ordinary Shares remains with the Depositary Interest Holder (the Shareholder), who has the benefit of all the rights attaching to the Ordinary Shares as if the Depositary Interest Holder were named on the certificated share register itself.

Each Depositary Interest will be treated as one Ordinary Share for the purposes of determining, for example, eligibility for any dividends. The Depositary Interests will have the same ISIN number as the underlying Ordinary Shares. The Depositary Interests can then be traded and settlement will be within the CREST system in the same way as any other CREST securities.

Application has been made for the Depositary Interests to be admitted to CREST with effect from Admission.

### 19.1 Deed Poll

Prospective subscribers for and purchasers of the Ordinary Shares are referred to the Deed Poll available for inspection at the offices of the Depositary or by written request to the Depositary (subject to a reasonable copying charge). In summary, the Deed Poll contains, amongst other things, provisions to the following effect which are binding on holders of Depositary Interests.

The Depositary will hold (itself or through its nominated Custodian), as bare trustee, the Ordinary Shares issued by the Company and all and any rights and other securities, property and cash attributable to the Ordinary Shares and pertaining to the Depositary Interests for the benefit of the holders of the relevant Depositary Interests.

Holders of the Depositary Interests warrant, among other things, that the securities in the Company transferred or issued to the Custodian on behalf of the Depositary and for the account of the holders of Depositary Interests are free and clear of all liens, charges, encumbrances or third party interests and that such transfers or issues are not in contravention of the Company's Articles nor any contractual obligation, law or regulation. The holder of Depositary Interests indemnifies the Depositary for any losses it incurs as a result of breach of this warranty.

The Depositary and the Custodian must pass on to Depositary Interest holders and exercise on behalf of Depositary Interest holders all rights and entitlements received or to which they are entitled in respect of the Ordinary Shares which are capable of being passed on or exercised. Rights and entitlements to cash distributions, to information to make choices and elections and to attend and vote at meetings shall, subject to the Deed Poll, be passed on to the holders of Depositary Interests upon being received by the Custodian and in the form in which they are received by the Custodian together with any amendments and additional documentation necessary to effect such passing on.

The Depositary shall re-allocate any Ordinary Shares or distributions which are allocated to the Custodian and which arise automatically out of any right or entitlement of Ordinary Shares already held by the Custodian to holders of Depositary Interests pro rata to the Ordinary Shares held for their respective accounts provided that the Depositary shall not be required to account for any fractional entitlements arising from such re-allocation and shall donate the aggregate fractional entitlements to charity.

The Deed Poll contains provisions excluding and limiting the Depositary's liability. For example, the Depositary shall not be liable to any holder of Depositary Interests or to any other person for liabilities in connection with the performance or non-performance of its obligations under the Deed Poll or otherwise, except to the extent that any losses result from its own negligence or wilful default or fraud. Furthermore, except in the case of personal injury or death, the Depositary's liability to a holder of Depositary Interests will be limited to the lesser of:

- the value of the Ordinary Shares and other deposited property properly attributable the Depositary Interests to which the liability relates; and
- that proportion of £5 million which corresponds to the portion which the amount the Depositary would otherwise be liable to pay to the Depositary Interest holder bears to the aggregate of the amounts the Depositary would otherwise be liable to pay to all such holders in respect of the same act, omission or event which gave rise to such liability or, if there are no such amounts, £5 million.

The Depositary is not liable for any losses attributable to or resulting from the Company's negligence or wilful default or fraud or that of the CREST operator.

The Depositary is entitled to charge holders of Depositary Interest fees and expenses for the provision of its services under the Deed Poll.

Each holder of Depositary Interests is liable to indemnify the Depositary and any Custodian (and their agents, officers and employees) against all liabilities arising from or incurred in connection with, or arising from any act related to, the Deed Poll so far as they relate to the property held for the account of Depositary Interests held by that holder, other than those resulting from the wilful default, negligence or fraud of the Depositary, or the Custodian or any agent, if such Custodian or agent is a member of the Depositary's group, or, if not being a member of the same group, the Depositary shall have failed to exercise reasonable care in the appointment and continued use and supervision of such Custodian or agent.

The Depositary may compulsorily withdraw the Depositary Interests (and the holders of Depositary Interests shall be deemed to have requested their cancellation) if certain events occur. These events include, amongst other things, where the Depositary believes that ownership of the Depositary Interests may result in a taxation or pecuniary, fiscal or material regulatory disadvantage to the Depositary or the Custodian or where the Depositary Interests are held by a person in breach of the law or the Company's Articles. If these events occur the Depositary shall make such arrangements for the deposited property as it sees fit, including sale of the deposited property and delivery of the net proceeds thereof to the holder of the Depositary Interests in question.

The Depositary may terminate the Deed Poll by giving not less than 30 days' prior notice. During such notice period holders may cancel their Depositary Interests and withdraw their deposited property and, if any Depositary Interests remain outstanding after termination, the Depositary must as soon as reasonably practicable, among other things, deliver the deposited property in respect of the Depositary Interests to the relevant Depositary Interest holders or, at its discretion sell all or part of such deposited property. It shall, as soon as reasonably practicable deliver the net proceeds of any such sale, after deducting any sums due to the Depositary, together with any other cash held by it under the Deed Poll pro rata to holders of Depositary Interests in respect of their Depositary Interests.

The Depositary or the Custodian may require from any holder, or former or prospective holder, information as to the capacity in which Depositary Interests are owned or held and the identity of any other person with any interest of any kind in such Depositary Interests or the underlying Ordinary Shares and holders are bound to provide such information requested. Furthermore, to the extent that the Company's Articles require disclosure to the Company of, or limitations in relation to, beneficial or other ownership of, or interests of any kind whatsoever, in the Ordinary Shares, the holders of Depositary Interests are to comply with such provisions and with the Company's instructions with respect thereto.

Holders of Depositary Interests are responsible for the payment of any tax, including stamp duty reserve tax on the transfer of their Depositary Interests.

## 19.2 **Depositary Agreement**

A depositary services and custody services agreement dated 12 November 2010 between the Company and the Depositary (the "Depositary Agreement") relating to the Depositary's appointment as Depositary and Custodian in relation to the Ordinary Shares and the provision of depositary and custodian services in connection with the Depositary Interests.

The Depositary agrees that it will comply, and will procure certain other persons comply, with the terms of the Deed Poll and that it and they will perform their obligations in good faith and with all reasonable skill, diligence and care. The Depositary assumes certain specific obligations, including the obligation to arrange for the Depositary Interests to be admitted to CREST as participating securities and to provide copies of and access to the register of Depositary Interests. The Depositary will either itself or through its appointed Custodian hold the deposited property on trust (which includes the Ordinary Shares represented by the Depositary Interests) for the benefit of the holders of the Depositary Interests as tenants in common, subject to the terms of the Deed Poll. The Company agrees to provide such assistance, information and documentation to the Depositary as is reasonably required by the Depositary for the purposes of performing its duties, responsibilities and obligations under the Deed Poll and the Depositary Agreement. In particular, the Company is to supply the Depositary with all

documents it sends to its Shareholders so that the Depositary can distribute the same to all holders of Depositary Interests. The agreement sets out the procedures to be followed where the Company is to pay or make a dividend or other distribution.

The Company is to indemnify the Depositary for any loss it may suffer as a result of performing of the Depositary Agreement except to the extent that any losses result from the Depositary's own negligence, fraud or wilful default. The Depositary is to indemnify the Company for any loss the Company may suffer as a result of in connection with the Depositary's fraud, negligence or wilful default save that the aggregate liability of the Depositary to the Company over any 12 month period shall in no circumstances whatsoever exceed twice the amount of the fees payable to the Depositary in any 12 month period in respect of a single claim or in the aggregate.

Subject to earlier termination, the Depositary is appointed for a fixed term of one year and thereafter until terminated by either party giving not less than three months' notice.

In the event of termination, the parties agree to phase out the Depositary's operations in an efficient manner without adverse effect on the Shareholders and the Depositary shall deliver to the Company (or as it may direct) all documents, papers and other records relating to the Depositary Interests which is in its possession and which is the property of the Company.

The Company is to pay certain fees and charges, including a set up fee, an annual fee, a fee based on the number of Depositary Interest per year and certain CREST related fees.

The Depositary is also entitled to recover reasonable out-of-pocket fees and expenses.

## 19.3 **Registrar Agreement**

The terms of the registrar agreement dated 12 November 2010 between the Company and the Registrar (the "Registrar Agreement") under which the Company appoints the Registrar to maintain the Company's principal share register in the BVI and provide certain other services as are summarised below.

The Registrar will perform the services of registrar using reasonable skill and care. The Registrar will perform certain specific services in its capacity as Registrar, including for example, to receive and register transfers and all other documents needed to maintain the registers, to prepare and issue new share certificates and to prepare and dispatch dividend and interest warrants.

The Company is to indemnify the Registrar for any loss it may suffer as a result of its performance of the Registrar Agreement, except to the extent such loss arises as a result of the fraud, negligence or wilful default of the Registrar. In addition, the Company must indemnify the Registrar against any loss it may suffer arising out of any payment made or received by it pursuant to the performance of its obligations under the Registrar Agreement. The Registrar shall not be liable to the Company for any loss sustained by the Company for whatever reason provided that the Registrar shall remain liable for any loss arising as a result of fraud, negligence or wilful default by the Registrar. The aggregate liability of the Registrar to the Company over any 12 month period shall in no circumstances whatsoever exceed twice the amount of the fees payable to the Registrar in any 12 month period in respect of a single claim or in the aggregate.

Subject to earlier termination, the Registrar Agreement shall continue for a fixed term of one year. The Registrar Agreement can be terminated by either party on the giving of three months' written notice after the expiry of the initial one year fixed term, at any time by notice on an insolvency event occurring in relation to the other party or at any time if either party commits a material breach of its obligations which that party has failed to make good within 30 days of receipt of notice from the other party.

The Company is to pay certain fees, including a set-up fee, an annual maintenance fee and certain CREST-related fees. The Registrar is also entitled to recover reasonable out-of-pocket expenses.

# 20 U.S. CONSIDERATIONS

- 20.1 The distribution of this document and the offer of Ordinary Shares in certain jurisdictions may be restricted by law and therefore persons into whose possession this document comes should inform themselves about and observe any such restriction, including those in the following paragraphs which relate to the United States. Any failure to comply with those restrictions may constitute a violation of the securities laws of any such jurisdiction. This document does not constitute an offer to subscribe for or buy any of the Ordinary Shares to any person in any jurisdiction to whom it is unlawful to make any such offer or solicitation in such jurisdiction.
- 20.2 The Ordinary Shares have not been, and will not be, registered under the Securities Act or the applicable securities laws and regulations of any state of the United States and, subject to certain exceptions, may not be offered or sold in the United States or to or for the account or benefit of US Persons. Accordingly, Liberum may offer Ordinary Shares only through qualified affiliates or agents to US Persons located inside the United States who are reasonably believed to be IAIs that are also QIBs and QPs or to non-US persons outside the United States in "offshore transactions" pursuant to Regulation S. Further, as described below, there are certain restrictions concerning the Ordinary Shares which affect potential US investors.
- 20.3 Under the Placing, Ordinary Shares will be offered (i) outside the United States to non-US Persons, and (ii) in the United States to IAIs who are also QIBs and QPs pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act. Certain restrictions that apply to the distribution of this document and the Ordinary Shares being issued under the Placing in certain jurisdictions are described in this paragraph 20.
- 20.4 By receiving this document, each investor and any person confirming his agreement to purchase the Placing Shares on behalf of an investor, is deemed to represent and warrant to Liberum and the Company that:
  - 20.4.1 in agreeing to subscribe for Placing Shares under the Placing, the investor is relying on this document or any supplementary admission document (as the case may be) or any regulatory announcement issued by the Company, and not on any other information or representation concerning the Company or the Placing. Such investor agrees that none of the Company, Liberum nor any of their respective officers or directors will have any liability for any such other information or representation and irrevocably and unconditionally waives any rights it may have in respect of any such other information or representation;
  - 20.4.2 it is:
    - (a) an IAI that is also a QIB and a QP;
    - (b) not a broker-dealer which owns and invests on a discretionary basis less than US\$25 million in securities of unaffiliated issuers;
    - (c) not an underwriter within the meaning of Section 2(a)(11) of the Securities Act;
    - (d) acquiring such Ordinary Shares for its own account, or for the account of one or more IAIs each of which is also a QP; and
    - (e) not formed for the purpose of investing in the Ordinary Shares or the Company and, after the purchase of the Ordinary Shares, no more than 40 per cent. of its assets will be invested in securities of the Company and provide notice of the transfer restrictions to any subsequent transferee; or
    - (f) not a US Person and is purchasing the Ordinary Shares outside the United States in an offshore transaction;

- 20.4.3 if it is a US Person, it acknowledges that the Company has not been registered under the Investment Company Act and the Ordinary Shares have not been and will not be registered under the Securities Act and represents to and agrees with the Company and Liberum that, for so long as the Ordinary Shares are outstanding, it will:
  - (a) offer, resell, pledge or otherwise transfer the Ordinary Shares in the United States or to a US Person only to an IAI that is also a QIB and a QP in a transaction exempt from the registration requirements of the Securities Act; each such Investor further understands that the Ordinary Shares will bear a legend with respect to such transfer restrictions; or
  - (b) in an offshore transaction to a non-US person in accordance with Rule 903 or Rule 904 of Regulation S under the Securities Act, and in each case in accordance with any applicable securities laws of any State of the United States;
- 20.4.4 under the Articles, the Directors have the power to require the sale or transfer of the Ordinary Shares if the sale or transfer of Ordinary Shares is made other than in compliance with the restrictions stated herein. Such power may be exercised amongst other things in order to prevent the Company from being in violation of or required to register under the Investment Company Act;
- 20.4.5 it understands that the Company may receive a list of participants holding positions in the Ordinary Shares from the clearing and settlement systems; and
- 20.4.6 it acknowledges that the Company, Liberum and their affiliates, and others will rely upon the truth and accuracy of the above acknowledgements, representations and agreements and agrees that, if any of the acknowledgements, representations or agreements deemed to have been made by it by its purchase of Ordinary Shares is no longer accurate, it shall promptly notify the Company and Liberum. If it is acquiring any Ordinary Shares as a fiduciary or agent for one or more investor accounts who are IAIs that are also QIBs and QPs, it represents that it has sole investment discretion with respect to each such account, and that it has full power to make the above acknowledgements, representations and agreements on behalf of each such account.
- 20.5 Prospective purchasers are hereby notified that sellers of the Ordinary Shares may be relying on the exemption from the provisions of Section 5 of the Securities Act.
- 20.6 Each time the Company sends an annual report to the owners of Ordinary Shares, the Company shall include a reminder to US Persons who purchased in the initial distribution or US Persons who have acquired securities from such persons that: (i) each such holder is required to be an IAI who is also a QIB and a QP who has furnished to the Company the required transferor certificate; (ii) the Ordinary Shares can only be transferred to another IAI who is also a QIB and a QP which has complied with the foregoing; and (iii) the Company has the right to force any such holder who is not a IAI who is also a QIB and a QP who has furnished to the Company has the right to force any such holder who is not a IAI who is also a QIB and a QP who has furnished to the Company the required transferor certificate to sell or redeem its Ordinary Shares.

## 20.7 Transfer restrictions

#### Due to the following restrictions, purchasers of Ordinary Shares in the United States or who are US Persons are advised to consult legal counsel prior to making any offer for, resale, pledge or other transfer of the Ordinary Shares.

Each purchaser of the Ordinary Shares offered in the United States or to a US Person will be deemed to have acknowledged that it has received a copy of this admission document and such other information as it deems necessary, if any, to make an investment decision and will be deemed to have represented and warranted that:

20.7.1 it is (i) an IAI that is also a QIB and a QP or a broker-dealer acting for a IAI that is also a QP and a QIB, (ii) acquiring such Ordinary Shares for its own account or for the account of one or more IAIs that are also QIBs and QPs with respect to whom it has the authority to make, and does make, the representations and warranties set forth herein, (iii) it is not an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and (iv) is aware and each beneficial owner of such Ordinary Shares has been advised that the sale of Ordinary Shares to it may be being made in reliance on an exemption from the Securities Act;

- 20.7.2 it understands that the Ordinary Shares have not been and will not be registered under the Securities Act or with any securities regulatory authority of any state or territory of the United States and are being offered in the United States only to IAIs who are also QIBs and QPs in a transaction not involving any public offering in the United States within the meaning of the Securities Act. The purchaser understands and agrees that the Ordinary Shares may not be reoffered, resold, pledged or otherwise transferred except (i) to a person whom the purchaser and any person acting on its behalf reasonably believes is an IAI that is also a QIB and a QP purchasing for its own account or for the account of an IAI that is also a QIB and a QP in a transaction exempt from the registration requirements of the Securities Act or (ii) in an "offshore transaction" to a non-US Person in compliance with Rule 903 or Rule 904 of Regulation S;
- 20.7.3 it acknowledges that the Ordinary Shares (whether in physical, certificated form or in uncertificated form held in CREST) offered and sold hereby are "restricted securities" within the meaning of Rule 144(a)(3) under the Securities Act, and that no representation is made as to the availability of the exemption provided by Rule 144 for resales of Ordinary Shares. The purchaser understands that the Ordinary Shares may not be deposited into any unrestricted depository receipt facility in respect of Ordinary Shares established or maintained by a depository bank, unless and until such time as such Ordinary Shares are no longer restricted securities within the meaning of Rule 144(a)(3) under the Securities Act, provided that this restriction does not apply to the depositary arrangements made to enable investors to settle and pay for interests in Ordinary Shares through the CREST system;
- 20.7.4 it understands that any offer, sale, pledge or other transfer of the Ordinary Shares made other than in compliance with the above-stated restrictions may not be recognised by the Company;
- 20.7.5 it further understands that under the Articles, the Directors have the power to require the sale or transfer of the Ordinary Shares if the sale or transfer of Ordinary Shares is made other than in compliance with the restrictions stated herein. Such power may be exercised amongst other things n order to prevent the Company from being in violation of or required to register under the Investment Company Act;
- 20.7.6 it represents that if, in the future, it offers, resells, pledges or otherwise transfers the shares, it shall notify such subsequent transferee of the transfer restrictions and it will require such transferee to execute a certificate acknowledging the same and it will deliver it to the Company;
- 20.7.7 it is not an affiliate (as defined in Rule 501(b) under the Securities Act) of the Company, and is not acting on behalf of an affiliate of the Company;
- 20.7.8 if it is acquiring the Ordinary Shares for the account of one or more investors, it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account; and
- 20.7.9 the Ordinary Shares (to the extent they are in certificated form), unless otherwise determined by the Company in accordance with applicable law, will bear a legend substantially to the following effect:

THE SECURITY EVIDENCED HEREBY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE US SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (1) TO A PERSON WHOM THE SELLER AND ANY PERSON ACTING ON ITS BEHALF REASONABLY BELIEVES IS AN INSTITUTIONAL ACCREDITED INVESTOR WITHIN THE MEANING OF RULE 501(A)(1), (2), (3) OR (7) UNDER THE SECURITIES ACT (AN "IAI") THAT IS ALSO A QUALIFIED INSTITUTIONAL BUYER ("QIB") WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT AND A QUALIFIED

PURCHASER (AS DEFINED IN SECTION 2(A)(51) OF THE US INVESTMENT COMPANY ACT OF 1940, AS AMENDED (THE "INVESTMENT COMPANY ACT")) (A "QP") PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF AN IAI THAT IS ALSO A QIB AND A QP IN A TRANSACTION EXEMPT FROM THE REGISTRATION **REQUIREMENTS OF THE SECURITIES ACT; OR (2) IN AN OFFSHORE TRANSACTION** TO A NON-US PERSON COMPLYING WITH RULE 903 OR RULE 904 OF REGULATION S UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES OR ANY OTHER JURISDICTION. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THE FOREGOING, THIS SECURITY MAY NOT BE DEPOSITED INTO ANY UNRESTRICTED DEPOSITORY RECEIPT FACILITY IN RESPECT OF ORDINARY SHARES OF THE COMPANY ESTABLISHED OR MAINTAINED BY A DEPOSITORY BANK; PROVIDED THAT THIS RESTRICTION DOES NOT APPLY TO THE DEPOSITARY ARRANGEMENTS MADE TO ENABLE INVESTORS TO SETTLE AND PAY FOR INTERESTS IN ORDINARY SHARES THROUGH THE CREST SYSTEM. EACH HOLDER, BY ITS ACCEPTANCE OF THIS SECURITY, REPRESENTS THAT IT UNDERSTANDS AND AGREES TO THE FOREGOING RESTRICTIONS.

# Prospective investors are hereby notified that sellers of Ordinary Shares may be relying on the exemption from the provisions of Section 5 of the Securities Act.

In addition, until 40 days after commencement of the Placing, any offer or sale of the Ordinary Shares within the United States by a dealer (whether or not participating in the Placing) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with an exemption from registration under the Securities Act.

The Company, Liberum and their respective affiliates and others will rely upon the truth and accuracy of the representations and warranties contained in this paragraph 20.

#### 20.8 Certain U.S. federal income tax considerations

This disclosure is limited to the U.S. federal tax issues addressed herein. Additional issues may exist that are not addressed in this disclosure and that could affect the U.S. federal tax treatment of the Ordinary Shares. This tax disclosure was prepared in connection with the promotion or marketing of the Ordinary Shares, and it cannot be used by any U.S. Holder for the purpose of avoiding penalties that may be asserted against the U.S. Holder under the Internal Revenue Code of 1986, as amended (the "Code"). U.S. Holders should seek their own advice based on their particular circumstances from an independent tax adviser.

The following is a description of certain U.S. federal income tax consequences to the U.S. Holders described below of acquiring, owning and disposing of Ordinary Shares, but it does not purport to be a comprehensive description of all tax considerations that may be relevant to a particular person's decision to acquire the Ordinary Shares. This discussion applies only to a U.S. Holder that holds Ordinary Shares as capital assets for tax purposes. In addition, it does not describe all of the tax consequences that may be relevant in light of a U.S. Holder's particular circumstances, including alternative minimum tax consequences and tax consequences applicable to U.S. Holders subject to special rules, such as:

- certain financial institutions;
- dealers or traders in securities who use a mark-to-market method of tax accounting;
- persons holding Ordinary Shares as part of a hedging transaction, straddle, wash sale, conversion transaction or integrated transaction or persons entering into a constructive sale with respect to the Ordinary Shares;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- entities classified as partnerships for U.S. federal income tax purposes;
- tax-exempt entities, including an "individual retirement account" or "Roth IRA"; or

• persons that own or are deemed to own ten percent (10 per cent.) or more of the Company's voting stock.

U.S. Holders should consult their tax advisers concerning the U.S. federal, state, local and foreign tax consequences of acquiring, owning and disposing of Ordinary Shares based on their particular circumstances.

This discussion is based on the Code, administrative pronouncements, judicial decisions, and final, temporary and proposed Treasury regulations all as of the date hereof, any of which is subject to change, possibly with retroactive effect.

A "U.S. Holder" is a holder who, for U.S. federal income tax purposes, is a beneficial owner of Ordinary Shares and is:

- a citizen or resident of the United States;
- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds Ordinary Shares, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships holding Ordinary Shares and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of holding and disposing of the Ordinary Shares.

Unless otherwise indicated, this discussion assumes that the Company is not, and will not become, a passive foreign investment company (for further information please refer to paragraph 20.8.3 below).

## 20.8.1 Taxation of Distributions

Distributions paid on the Ordinary Shares, other than certain pro rata distributions of Ordinary Shares, will be treated as dividends to the extent paid out of the Company's current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Because the Company does not maintain calculations of its earnings and profits under U.S. federal income tax principles, it is expected that distributions generally will be reported to U.S. Holders as dividends. Subject to applicable limitations, dividends paid by qualified foreign corporations to certain non-corporate U.S. Holders at lower rates than other types of ordinary income if certain conditions are met. Because the Ordinary Shares are not tradable on an established securities market in the United States and there is no income tax treaty between the British Virgin Islands and the United States, the Company does not expect to be a qualified foreign corporation for this purpose. U.S. Holders should consult their tax advisers regarding the availability of the reduced tax rate on dividends.

The amount of the dividend will be treated as foreign-source dividend income and will not be eligible for the dividends-received deduction generally available to U.S. corporations under the Code. A dividend will be included in a U.S. Holder's income on the date of the U.S. Holder's receipt of the dividend. The amount of any dividend income paid in a currency other than U.S. dollars will be the U.S. dollar amount calculated by reference to the exchange rate in effect on the date of receipt, regardless of whether the payment is in fact converted into U.S. dollars. If the dividend is converted into U.S. dollars on the date of receipt, a U.S. Holder should not be required to recognise foreign currency gain or loss in respect of the dividend income. A U.S. Holder may have foreign currency gain or loss if the dividend is converted into U.S. dollars after the date of receipt. In general, foreign currency gain or loss will be treated as U.S.-source ordinary gain or loss for foreign tax credit purposes.

### 20.8.2 Sale or Other Disposition of Ordinary Shares

For U.S. federal income tax purposes, gain or loss realised by a U.S. Holder on the sale or other disposition of the Ordinary Shares will be capital gain or loss, and will be longterm capital gain or loss if the U.S. Holder held the Ordinary Shares for more than one year. The amount of the gain or loss will equal the difference between the amount realised on the disposition and the U.S. Holder's tax basis in the Ordinary Shares disposed of, in each case as determined in U.S. dollars. This gain or loss will generally be U.S.-source gain or loss for foreign tax credit purposes.

The initial tax basis of the U.S. Holder's Ordinary Shares will be the U.S. dollar value of the non-U.S. dollar denominated purchase price determined on the date of purchase. If the Ordinary Shares are treated as traded on an "established securities market," a cash basis U.S. Holder (or, if it elects, an accrual basis U.S. Holder) will determine the U.S. dollar value of the cost of such Ordinary Shares by translating the amount paid at the spot rate of exchange on the settlement date of the purchase.

#### 20.8.3 Passive Foreign Investment Company Rules

Although the Company has not made a determination as to whether it is a PFIC for U.S. Federal income tax purposes, there is a significant likelihood that it will be classified as a PFIC for U.S. federal income tax purposes. In general, a foreign corporation is a PFIC for any taxable year if: (1) 75 per cent. or more of its gross income consists of passive income (such as dividends, interest, rents and royalties) or (2) 50 per cent. or more of the average quarterly value of its assets consists of assets that produce, or are held for the production of, passive income.

If the Company was a PFIC for any taxable year during which a U.S. Holder held the Ordinary Shares, gain recognised by a U.S. Holder upon a disposition (including, under certain circumstances, a pledge) of Ordinary Shares would be allocated ratably over the U.S. Holder's holding period for such shares. The amounts allocated to the taxable year of disposition and to years before the Company became a PFIC would be taxed as ordinary income. The amount allocated to each other taxable year would be subject to tax at the highest rate in effect for that taxable year for individuals or corporations, as appropriate, and an interest charge would be imposed on the tax attributable to the allocated amount. Further, to the extent that any distribution received by a U.S. Holder on the Ordinary Shares exceeds 125 per cent. of the average of the annual distributions on such shares received during the preceding three years or the U.S. Holder's holding period, whichever is shorter, that distribution would be subject to taxation in the same manner as gain, described immediately above.

## 20.8.4 Qualified Electing Fund Election and Mark-to-Market Election

Where a company that is a PFIC meets certain reporting requirements, a U.S. shareholder can avoid the adverse consequences described above by making a "qualified electing fund" ("QEF") election to be taxed currently on its proportionate share of the PFIC's ordinary income and net capital gains. If a U.S. Holder elects to treat the Company as a QEF, excess distributions and gain will not be taxed as if recognised ratably over the U.S. Holder's holding period, and there will be no interest charge applicable to deferred tax. Instead, a U.S. Holder that makes a QEF election is required, for each taxable year, to include in income the U.S. Holder's pro rata share of the ordinary earnings of the QEF as ordinary income and a pro rata share of the net capital gain of the QEF as capital gain, regardless of whether such earnings or gain have in fact been distributed. Consequently, in order to comply with the requirements of a QEF election, a U.S. Holder must receive a "PFIC Annual Information Statement" (as described in United States Treasury Regulation Section 1.1295-1(g)(1)) from the Issuer which includes, inter alia, an annual information statement setting forth the Issuer's ordinary earnings and net capital gains, calculated according to U.S. federal income tax principles, for the Company's taxable year. The Company intends to make a determination of whether it is a PFIC after the close of each taxable year. If the Company determines that it is a PFIC for any taxable year, it will provide, upon written request from any U.S. Holder, a "PFIC Annual Information Statement" (as described in United States Treasury Regulation Section 1.1295-1(g)(1)).

If the shares of a PFIC are "regularly traded" on a "qualified exchange," a U.S. Holder may make a mark-to-market election with respect to the shares. If a U.S. Holder makes the mark-to-market election, for each year in which the Company is PFIC, the holder will generally include as ordinary income the excess, if any, of the fair market value of the Ordinary Shares, at the end of the taxable year over their adjusted tax basis, and will be permitted an ordinary loss in respect of the excess, if any, of the adjusted tax basis of the Ordinary Shares over their fair market value at the end of the taxable year (but only to the extent of the net amount of previously included income as a result of the mark-to-market election). If a U.S. Holder makes the election, the holder's tax basis in the Ordinary Shares will be adjusted to reflect the amount of any such income or loss. Any gain recognised on the sale or other disposition of Ordinary Shares will be treated as ordinary income. The Ordinary Shares will be considered "marketable stock" if they are traded on a qualified exchange, other than in *de minimis* quantities, on at least 15 days during each calendar quarter. AIM may constitute a qualified exchange for this purpose provided it meets certain trading volume, listing, financial disclosure, surveillance, and other requirements set forth in applicable U.S. Treasury regulations. However, the Company cannot be certain that its Ordinary Shares will continue to trade on AIM or that the Ordinary Shares will be traded on at least 15 days in each calendar guarter in other than de minimis guantities. U.S. Holders should be aware, however, that if it is determined that the Company is a PFIC, the interest charge regime described above could be applied to indirect distributions or gains deemed to be attributable to U.S. Holders in respect of any of the Company's subsidiaries that also may be determined to be a PFIC, and the mark-to-market election generally would not be effective for such subsidiaries, as described below.

In addition, if the Company is a PFIC and, at any time, has a non-U.S. subsidiary that is classified as a PFIC, U.S. Holders of Ordinary Shares generally would be deemed to own, and also would be subject to the PFIC rules with respect to, their indirect ownership interests in that lower-tier PFIC. If the Company is a PFIC and a U.S. Holder of Ordinary Shares does not make a QEF election in respect of a lower-tier PFIC, the U.S. Holder could incur liability for the deferred tax and interest charge described above if either (1) the Company receives a distribution from, or disposes of all or part of its interest in, the lower-tier PFIC or (2) the U.S. Holder disposes of all or part of its Ordinary Shares. The Company intends to use its best efforts to cause any lower-tier PFIC to provide to a U.S. Holder the information that may be required to make a QEF election with respect to the lower-tier PFIC. A mark-to-market election under the PFIC rules with respect to Ordinary Shares would not apply to a lower-tier PFIC, and a U.S. Holder would not be able to make such a mark-to-market election in respect of its indirect ownership interest in that lower-tier PFIC. Consequently, U.S. Holders of Ordinary Shares could be subject to the PFIC rules with respect to income of the lower-tier PFIC the value of which already had been taken into account indirectly via mark-to-market adjustments. Each U.S. Holder should consult its own tax advisor to determine whether a mark-to-market election is available and the consequences of making an election if the Company or its subsidiaries were characterized as a PFIC.

#### 20.8.5 Deemed Sale Election

Based on estimates of the Company's income and assets and the nature of its business, if the Company is a PFIC, it is possible that it will cease to be treated as a PFIC in future taxable years. However, because a shareholder of a foreign corporation that no longer qualifies as a PFIC continues to be treated as holding stock of a PFIC, U.S. Holders will continue to be subject to the rules discussed above with respect to any "excess distribution" and any gain realised on a sale or exchange of Ordinary Shares unless such U.S. Holder makes a "deemed sale election" ("DSE"). If a U.S. Holder makes a DSE, such U.S. Holder will be treated as having sold its Ordinary Shares on the last day of the last taxable year during which the Company was treated as a PFIC ("PFIC Termination Date"). Such U.S. Holder will not be treated as holding stock in a PFIC unless the Company becomes a PFIC after the PFIC Termination Date. Any gain realised as a result of making the DSE will be taxable under the PFIC regime as described above. Any loss realised on making the DSE may not be recognised. U.S. Holders should note that the Company does not intend to monitor its PFIC status or to

inform U.S. Holders of any change in such status. Prospective purchasers should consult their tax advisors regarding the Company's PFIC status and the availability and advisability of making a DSE in their particular circumstances.

## 20.8.6 PFIC Reporting Requirements.

If a U.S. Holder owns Ordinary Shares during any year in which the Company is a PFIC and the U.S. Holder recognises gain on a disposition of Ordinary Shares or receives distributions with respect to the Ordinary Shares, the U.S. Holder generally will be required to file an IRS Form 8621 with respect to the Company, generally with the U.S. Holder's Federal income tax return for that year. Additionally, recently enacted legislation creates an additional annual filing requirement for U.S. persons who are shareholders of a PFIC. The legislation does not describe what information will be required to be included in the additional annual filing, but rather grants the Secretary of the U.S. Treasury authority to decide what information must be included in such annual filing. If the Company were a PFIC for a given taxable year, then U.S. Holders should consult their tax advisers concerning their annual filing requirements.

U.S. Holders should consult their tax advisers regarding whether the Company is a PFIC and the potential application of the PFIC rules.

## 20.8.7 New Legislation.

Newly enacted legislation requires certain U.S. Holders who are individuals, estates or trusts to pay a 3.8 per cent. tax on, among other things, dividends and capital gains from the sale or other disposition of shares of common stock for taxable years beginning after December 31, 2012. In addition, for taxable years beginning after March 18, 2010, new legislation requires certain U.S. Holders who are individuals to report information relating to an interest in the Ordinary shares, subject to certain exceptions (including an exception for Ordinary Shares held in accounts maintained by certain financial institutions). U.S. Holders are urged to consult their tax advisers regarding the effect, if any, of new U.S. federal income tax legislation on their ownership and disposition of the Ordinary Shares.

#### 20.8.8 Information Reporting and Backup Withholding

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting, and may be subject to backup withholding, unless (1) the U.S. Holder is a corporation or other exempt recipient or (2) in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding.

The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely furnished to the IRS.

## 21. GENERAL

- 21.1 The gross proceeds of the Placing of the New Shares are expected to be approximately £31.06 million, with net proceeds expected to be approximately £27.91 million. The total costs and expenses relating to the Placing payable by the Company are estimated to be approximately £3.14 million (excluding VAT).
- 21.2 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 the Placing letters. All the Placing Shares have been placed firm with placees. The Placing is not being guaranteed or underwritten by any person.
- 21.3 KPMG Audit plc of 15 Canada Square, London E14 5GL has given and not withdrawn its written consent to the inclusion in this document of reference to its name in the form and context in which it appears.

- 21.4 The auditors of the financial statements of the Company for the year ended 31 December 2009 and of Jumelles BVI for the years ended 31 December 2007, 31 December 2008 and 31 December 2009 were KPMG Audit plc of 15 Canada Square, London E14 5GL.
- 21.5 Liberum which is acting as nominated adviser and broker to the Company has given and not withdrawn its written consent to the inclusion in this document of reference to its name in the form and context in which it appears.
- 21.6 SRK which is acting as competent person to the Company, has given and not withdrawn its written consent to the inclusion of the competent person's report in Part VII of this document and the references to its name in the form and context in which they appears in this document. SRK has no material interest in the Company.
- 21.7 CRU Strategies has given and not withdrawn its written consent to the inclusion of its report in Part IV of this document and the references to its name in the form and context in which they appear in this document. CRU Strategies has no material interest in the Company.
- 21.8 When information has been sourced from a third party this information has been accurately reproduced. So far as the Company and the Directors are aware and are able to ascertain from information provided by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.
- 21.9 The percentage dilution as a result of the Placing is 7.8 per cent.
- 21.10 The accounting reference date of the Company is 31 December.
- 21.11 It is expected that definitive share certificates will be despatched by hand or first class post by 26 November 2010. In respect of uncertificated shares, it is expected that Shareholders' CREST stock accounts will be credited at 8 a.m. on 18 November 2010.
- 21.12 The Directors are unaware of any exceptional factors which have influenced the Company's activities.
- 21.13 There are no patents or other intellectual property rights, licences or particular contracts which are or may be of fundamental importance to the Company's business.
- 21.14 Save as disclosed in this document, the Group has not made any investments since 1 January 2007 up to the date of this document, nor are there any investments by the Group in progress or anticipated which are significant.
- 21.15 No person directly or indirectly (other than the Company's professional advisers and trade suppliers or as disclosed in this document) in the last twelve months received or is contractually entitled to receive, directly or indirectly, from the Company on or after Admission (excluding in either case persons who are professional advisers otherwise than as disclosed in this document and persons who are trade suppliers) any payment or benefit from the Company to the value of £10,000 or more or securities in the Company to such value at the Placing Price or entered into any contractual arrangements to receive the same from the Company at the date of Admission and there are no payments aggregating over £10,000 made to any government or regulatory authority as similar body made by the Company or on behalf of it, with regards to the acquisition of or maintenance of its assets.

17 November 2010